SOCIAL STRATIFICATION AND THE DIFFUSION OF INNOVATIONS AMONG THE SUKUMA OF TANZANIA

by

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Social Stratification and the Diffusion of Innovations Among the Sukuma of Tanzania.

Thesis directed by Professor Robert A. Hackenberg.

This dissertation is a secondary analysis of material collected by Dr. G.O. Lang in the four districts of Nzega, Shinyanga, Maswa, and Kahama in Tanzania during the early summer of 1970. It has a dual goal: (a) to apply concepts of structured social inequality to a contemporary African society that has traditionally been described as being rather egalitarian, and (b) to relate the diffusion of some recent innovations to patterns of social stratification.

Present forms of social inequality among the Sukuma are seen as the result of historical changes in their political, economic, and social structure during the time of European colonialism. They are also influenced by the contemporary bureaucratic and political structure of the modern nation of Tanzania.

Various concepts of social inequality as they have been developed in Western social science are examined and their applicability to the study of an African society discussed. Special attention is given to the Marxian theory of social classes, to the functionalist approach of social stratification, and to some non-functionalist theories as presented by Lenski and Dahrendorf.

Eventually a multidimensional model of social stratification is developed and applied to the analysis of the Sukuma. It has two dimensions--a "modern" one which indicates differences in control power,

and a "traditional" one of differences in wealth and prestige. Each dimension is subdivided into three "strata".

It is found that appointed modern officials and school headmasters frequently have a high modern status, and that elected modern officials and progressive farmers are primarily found in the middle modern stratum. Large cattle owners, progressive farmers, some traditional officials, and some modern elected officials have a high traditional status, while most appointed officials have a low traditional status. Within the sample there is virtually no continuity between the traditional and the modern upper stratum. Appointed officials frequently combine a high modern with a low traditional status, while local elected officials tend to combine a medium or high traditional with a medium modern status. It is suggested that the middle traditional stratum acts as a seedbed for individuals with aspirations for advancement in the modern state system, and who may have a crucial role in the process of social change. The combination of high traditional with low modern status, on the other hand, might be interpreted as a rejection of the value system associated with the modern dimension of social stratification, and vice versa.

Hypotheses about the relationship between social status, status inconsistency and the acceptance of innovations are developed and tested with the diffusion patterns of some farming and cattle innovations and the diffusion of some information about a planned change program. It is found that the diffusion patterns of various innovations differ from each other due to the differential importance of the factors of wealth, access to information, and mandatory initial adoption of the innovation. It is also found, that innovations

diffuse in a curvilinear fashion, that initially the middle stratum is more innovative than the others, but that eventually the highest rate of adoption of an innovation is found among high status individuals and the least adoption in the lower stratum.

Finally an attempt is made to show the theoretical usefulness of a stratification approach to the study of change in contemporary agrarian societies: (a) it takes into account the internal differentiation of a community as opposed to the assumption of internal homogeneity in the anthropological concept of the "little community"; (b) it provides a larger frame-work for the analysis of social differentiation than does the role concept alone; and (c) it analyzes social inequality and social differentiation in non-Western societies and some of their consequences in terms that are less culture-bound and more comparative than many concepts currently in use in anthropology.

This abstract is approved as to form and content. I recommend its publication.

Signed _____

Robert A. Hackenberg

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The criticisms of Professor Robert A. Hackenberg, Professor Gottfried O. Lang, and Dr. Colby R. Hatfield in the early stages of my dissertation spurred me to greater efforts in order to show the feasibility of my approach to the problem of social inequality and its effects on social behavior.

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Boulder, Colo., July 26, 1974. Gertrud Schanne-Raab

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CHAPTER I

INTRODUCTION

In 1969 Dr. G. O. Lang from the University of Colorado went to Tanzania, East Africa, to participate in a program for the economic development of central Tanzania under the joint sponsorship of the Food and Agricultural Organization of the United Nations and the Tanzanian government. The project staff was composed of a number of experts from different disciplines who all were to cooperate in the introduction of improved methods of range management and cattle husbandry.

The peoples of central Tanzania (Sukuma, Nyamwezi, Gogo, etc.) have traditionally been subsistence farmers who grow some cash crops on the side and also have cattle. However, while they have accepted the idea of growing a cash crop into their economic system, they so far have resisted all attempts to change their attitudes towards cattle and to take over new methods of controlled cattle production.

Dr. Lang, the staff sociologist, was asked to find out the cultural and social factors that would inhibit the introduction of improved cattle husbandry, to make suggestions as to how the social obstacles to change might be overcome, and which areas should be selected for demonstration projects from a sociological point of view. In order to gather the necessary information a survey of the study area was conducted during the early summer of 1970. 1086 individuals in seventy seven wards (smallest administrative units) in

the four districts of Nzega (Tabora Region), Shinyanga, Maswa, and Kahama (all Shinyanga Region) were interviewed. Because of the alleged importance of formal and informal leaders for the acceptance of an innovation in a community the sample was not drawn randomly. Instead, a number of actual or potential decision-makers in each ward were selected as respondents.

After Dr. Lang's return to the United States the data were analyzed and a preliminary report was written (Lang 1971). During this time I had the opportunity to get acquainted with the material. In the course of the analysis a number of questions arose that were not directly related to the immediate purpose of the report and therefore could not be pursued further at that time. For example, the Sukuma have always been described as a rather egalitarian and homogeneous society. However, the initial analysis of the data suggested that social differences did exist which could not be explained as differences between internally homogeneous communities but were very likely due to other structural features of Sukuma society. Apart from such obvious distinctions as that between modern officials and traditional farmers in terms of source of income, location in a national decision-making hierarchy, etc. there were differences in wealth, education, interest in national affairs, acceptance of innovations in the houses and the fields, etc. that seemed to be worth further attention.

There are, of course, several ways to study social differences and their implications for the process of social change, especially the process of modernization. One can focus on the individual, interpret change as the result of individual decisions and study social

psychological factors that influence the diffusion of innovations (Lerner 1958; Smith and Inkeles 1966; Stephenson 1968; Rogers 1969; Inkeles 1969; Inkeles and Smith 1970; Schnaiberg 1970; Armer and Youtz 1971; Armer and Schnaiberg 1972). But an anthropologist can also look at certain features of the social system that influence and limit the decisions which can be made by individuals (Hinderink and Kiray 1970; Cancian 1972). These two approaches to the same problem, the socio-psychological one and the sociological one, are complementary to each other in that they study two sides of the same coin. They ask different sets of questions, none of which can be reduced to the other one and both of which are equally important and valid (Kaplan 1968: 25; White 1949: 233 - 281).

The first analysis of the Sukuma material mainly concentrated on socio-psychological factors relevant to the diffusion of innovations and the interaction between change agents and client population. The following dissertation therefore will take a closer look at the other side of the coin and analyze features of the social structure that are pertinent to the problem of accepting innovations, particularly the relationship between systems of social inequality and diffusion of innovations.

Social Stratification

Social Status

The units of a society in sociological terms are statuses and roles, the "homo sociologicus" (Dahrendorf 1958). Although the words "individuals" and "persons" will be used occasionally, they will

mostly refer to individuals as performers of social roles and occupants of social statuses instead of as unique human beings.

Ralph Linton (1936) was the first to introduce the concepts of social status and social role into anthropology. He defines status as "a position in a particular pattern" that is distinct from the individual that may occupy it at that particular moment. It rather is the "collection of rights and duties" with which an individual is confronted in society whenever he interacts with other individuals (113). As there are many different patterns of interaction, each individual occupies a number of different statuses at the same time. His total status is the sum of all the statuses he occupies. The composition of that total status will be different for each individual and therefore unique, as there are very likely no two individuals in a society with identical patterns of interaction and with identical positions in each.

Each status has a role associated with it because the role is "the dynamic aspect of a status" (113). While a status is assigned to an individual, a role refers to the acting out of the rights and duties of that status, i.e., actual behavior.

Linton's concepts of status and role were later elaborated by other social scientists, especially Merton (1957), Nadel (1957), and Dahrendorf (1958). Merton refines Linton's role concept by pointing out that there may be more than a single role associated with each status (a "role-set") depending on different types of interactions with other statuses (e.g., the status of teacher entails the roles of teacher--student, teacher--parents, teacher--teacher relationships in its role-set) (Merton 1957: 369). Similarly, the sum

total of all the statuses of an individual is referred to as a "status-set" (370). In Merton's terms the social structure of a society is made up of role-sets, status-sets, and status-sequences (statuses occupied in sequential order, not at the same time) (370). The analytical advantage of distinguishing multiple roles associated with each status and multiple statuses for each individual lies in the fact that possible sources for social tension and conflict inherent in the social system itself can be pointed out very easily (370 - 384).

Nadel's concept of social roles implies expected and actual behavior, the rules of social conduct as well as their applications, which designate social relationships among the members of a society (1957: 11; 29). A status, on the other side, is a mere quasi-role, pointing to a position in a social field that is only part of a role (28 f.). Nadel's definition of social roles is wider than that of Linton or Merton, because it includes both roles and statuses. However, this merging of terms implies the danger of losing a potentially valuable tool for the analysis of certain aspects of a social structure. Nadel's theory is geared toward the study of social networks and patterns, where enacted roles are more important in the course of the analysis than are statuses. On the other side, for a study of hierarchical arrangements of social groups and social positions and their effects on behavior, the concept of social status will be useful, because it allows a more direct reference to location in a social system and expected behavioral patterns than does the role concept.

Dahrendorf suggests to restrict the concept of status to "positions in a hierarchical scale of social prestige", (1958: 355). The term "social position" which is broader than status should then be used in the same way as Linton's conept of status "to designate each location in a field of social relationships" (190). It can be perceived as an element of a social structure that is principally different from the individual that occupies it at that moment. Each social position also has a social role attached to it that refers to the set of behaviors expected of its occupants (347). Here Dahrendorf differs from Linton in that he applies the term of social role to expected behavior patterns, while Linton uses it as a reference to actual behavior. According to Dahrendorf role performance is the enacting of rules set by the society. Therefore the rules are of primary importance to sociological analysis and should be treated as an analytical category, i.e. as a role, while actual behavior can be studied in terms of conformity and nonconformity to the rules.

By definition the concepts of social role and social status imply interaction and relationships with other roles and statuses. Positions are located in a field of other social positions, each of which is unique in that particular field. By recording precisely each occuring interaction and categorizing it it is possible to arrive at the description of the total pattern of interaction that is characteristic for that particular social field and to make predictions about future behavior.

This approach of studying relationships between social positions treats all environmental factors as properties of other social positions. As each position is unique, it is the largest unit in the

analysis of a social field and cannot be combined with others into larger units. Therefore this approach is only practical in the study of small groups with limited numbers of positions, e.g., households, voluntary associations, peer groups, etc.

In order to analyze patterns of behavior in a whole society a further level of abstraction is necessary. While an individual's position in any field of social interaction may be unique, the elements that contribute to this position are not. It is possible to isolate some of the factors that determine an individual's total social position (i.e., his social status) as structural features of the society. Thus only a particular combination is unique but not the structural features themselves.

One aspect of social positions that could be used as a basis for a further classification is their obvious inequality. Social inequality is not an arbitrary attribute of social positions but a structural feature of many societies. As it pervades the whole society, it is a more general determinant of social behavior than e.g., a position in a specific small group. Social inequality appears in many different forms, e.g., performance of different tasks in the context of the division of labor in a society, ownership vs. non-ownership of certain goods, membership vs. non-membership in social groups, differences in age or sex, etc. Of special interest are those forms of social inequality that lead to a ranking of positions in superior and inferior ones, because they tend to have a broad effect on social behavior and make it possible to arrange a large number of social positions into relatively few categories. The total system of ranked social inequality in a society is called social stratification.

Sources of Social Inequality

The question for the origin or the ultimate source of social inequality, and therefore social stratification, basically is a philosophical one. Many theoreticians claim to have found the true source without reference to comparisons of historical societies.

Greek philosophers, e.g., Plato and Aristotle, explained inequality among men as a fact of human nature: some people were born to be masters, and others were born to be slaves. Society merely had the duty to see to it that everybody would be educated according to his natural gifts and then assigned a suitable place in the social system (Plato 1955: 370; 433).

Rousseau saw inequality as an unnatural and therefore immoral and unjust trait of human societies. In the natural state of human life everybody was happy, could satisfy his needs, and all men were equal. This state changed with the invention of private property. It is thus not only the source of social inequality but the source of all evil in society (Rousseau 1950: 234). This same argument was picked up by many economists during the 19th century (s. Dahrendorf 1961: 10 f.) and also by Marx and Engles. These two authors feel that there are two sources of social inequality which are closely related: private property and division of labor (Marx and Engels 1962: 66), both of which are equally unjust and tend to alienate man from himself. Therefore in the ideal communist state of the future there will be neither private property nor a division of labor (Marx 1968: 536 ff.).

Structural-functionalists (e.g. Davis and Moore 1945; Parsons 1954; Svalastoga 1965; Tumin 1967) see social inequality as a neces-

sary feature of any society. It contributes to the functioning of the society, because it fulfills a need of the society (Davis and Moore 1945: 242) or because it is the expression of the value system of the society (Parsons 1954: 397 f.).

Dahrendorf tries to explain the origin of social inequality in non-functional terms. He also sees inequality as inevitable feature of any society, but based on a society's norms and sanctions: Those who have the power to enforce conforming behavior in others rank highest. Eventually, conformity will be rewarded with prestige and wealth which are thus secondary features of inequality (Dahrendorf 1961: 26 f.).

Service (1962) and Fried (1967; 1968) arrange various forms of social organization in an evolutionary sequence in such a way that specific forms of social inequality are associated with certain evolutionary stages of human societies. In hunting-and-gathering bands we only find the universal differentiation according to age and sex. Otherwise all individuals are equal: There is virtually no division of labor (beyond that of age and sex), and there are as many positions of prestige available as there are individuals (Fried 1967: 33). According to Service bands and tribes are basically egalitarian, but chiefdoms are typically inegalitarian. They have not only achieved a system of division of labor as an adaptation to different environments, but also have a central agency (the chief) that controls the flow of goods between the different parts of the society. These factors, the division of labor and the existence of a power center, are the causes of the rise of chiefdoms and lead to

the ranking of individuals in relationship to the power center (Service 1962: 144; 150f.).

Fried distinguishes different types of inegalitarian societies above the level of hunting-and-gathering bands, where the sources for differentiation vary widely: ranked societies, where positions are rewarded different amounts of prestige and where there are fewer positions of high prestige available than there are individuals who could handle them (1967: 52; 1968: 466 ff.), and stratified societies which are characterized by

> the differential relationships between the members of the society and its subsistence means--some of the members of the society have unimpeded access to its strategic resources while others have various impediments in their access to the same fundamental resources (1968: 470).

Thus the source of stratification is economic power, not necessarily in the form of private property but in the more general form of superior access to vital subsistence means.

It now seems that social inequality may be the result of a large array of different factors: economic conditions, role differentiation, power, etc. Even authors whose conclusions primarily apply to Western societies (e.g., Rousseau, Marx, Dahrendorf) do not agree as to the causes of social inequality and social stratification. They only agree that it exists and that it can be pointed out in all realms of social life. Most likely, several factors contribute to the development of inequality as part of the social structure of a society. Their specific combinations may differ between societies. Instead of pointing at one factor as a priori determinant of social inequality, it therefore seems to be more profitable to find the important factors through a historical analysis (albeit a cursory

one) of the society in question. With regard to the Sukuma this task will be attempted in chapter III.

Consequences of Social Inequality

If social inequality is part of the structure of a society, it must also have effects on patterns of social behavior. Structural-functionalists tend to emphasize the positive functions of structured forms of social inequality towards the maintenance of the society, because it provides a mechanism to select the most qualified people for important positions and to channel rewards to the right persons (Davis and Moore 1945). Karl Marx, on the other side, stresses the dysfunctional aspects of inequality which lead to exploitation of the poor by the rich, social deprivation, and alienation of the worker from his work and his self (Marx 1968).

These two authors mark the extremes of the large range of possible positions with regard to the effects of social inequality. Their statements are very general without sound empirical support. Empirical studies of specific consequences of social inequality tend to point at potentially disruptive aspects without at the same time demanding the abolition of the whole social structure as only remedy. At times, it is also difficult to say whether a particular consequence of inequality is functional or dysfunctional either for the society or the individual actor. For example, the existence of different speech patterns at first sight is eufunctional for the society. Command of only one pattern, however, might become dysfunctional for an individual, if he want to move up the social ladder but otherwise is of no importance to him (Burling 1970: 117 ff.).

In Western societies social scientists have paid much attention to the relationship between social stratification and other realms of social life and have found repeatedly that members of different strata behave differently in many ways. Dahrendorf (1959), for example, concerns himself with the relationship of social status and perception of society: workers frequently tend to have a dichotomic view of society (e.g., those who work vs. those who don't work for their living), while middle and upper class people see many more differences in the structure of a society and arrange them in a hierarchical fashion.

Other studies have explored the influence of social stratification on language behavior, school performance, and relative social deprivation (Bernstein 1964; Horobin et al. 1967; Robinson and Rackstraw 1967; Swift 1967; Bernstein and Henderson 1969; Schiller 1970). Bernstein (1964) first pointed out differences between various codes of language behavior. A "restricted" code is frequently used for interactions with peers and in the home environment, while an "elaborated" code is required for school. Working class children tend to have only learned the restricted code, while middle class children are taught both codes by their parents and are even encouraged by them to use the elaborated one at home. As schools exclusively depend on the use of the elaborated code, working class children are at a disadvantage and usually perform worse and have a higher rate of school failure than do middle class children. Inferior school performance limits the range of jobs available to them (or to Blacks in the United States) and provides them with fewer chances for social advancement than middle or upper class children.

Homans (1961) reports findings about the relationship between social status and normconformity: Individuals that rank in the middle of a given hierarchy conform most highly to group norms and are most eager to receive the group's support. High ranking as well as low ranking individuals, however, show higher amounts of non-conforming behavior, although for different reasons. Low status people often can't gain anything by conforming behavior, but they also don't lose anything through non-conformity, because the group's sanctions are not effective twoards them any more. High status people have already demonstrated their social worthiness in the past and are now given more leeway with regard to slightly deviant behavior. While they will gain little by conformity, they even might be able to establish new norms and to increase their status by non-conforming behavior. On the basis of that same assumption Rogers (1971) suggests that successful changes are more likely and more successfully introduced into a social group by the upper stratum from where they diffuse downward through the social system than vice versa through social outsiders.

Similar studies in African societies have been relatively scarce, because there is still a discussion going whether one can talk about African societies as being stratified or not (s. chapter IV). Fallers (1964) suggests that social differences existed and continue to exist primarily with regard to political authority but not yet in other realms of social life. Many studies, of course, have focused on national elites and their distinct, extremely Westernized behavior (Table ronde 1970; Kitching 1972b; Lloyd 1966; Damachi 1972). But usually no systematic comparisons have been made between the

elite and other social strata, although they are considered to be very different from each other.

The Sample

The present study is a secondary analysis of part of the material collected by Dr. Lang in 1970. Out of the large amount of information in the original study I picked those variables that seemed to suit most the purpose of this dissertation: to describe patterns of social differentiation among the Sukuma in terms of a theory of social stratification, and to see in which ways social stratification influences the diffusion of a selected number of innovations. Thus two sets of information will be presented: one relating to social stratification which includes 1067 individuals, and one relating to the acceptance of farming and cattle innovations and the diffusion of information about a planned innovation with subsamples of various sizes.

The original sample had to be selected on a non-random basis in order to interview as many powerful and potentially influential people as possible. Therefore various types of officials and other prestigeous persons are overrepresented in the sample compared to their share of the total population, while less important people (e.g., farmers without cattle) are underrepresented. Thus the results of my analysis will be distorted in such a way that the lower end of the observed stratification system will be smaller and the upper categories larger than could be expected, if the sample had been drawn randomly. However, this distortion is not at all disadvantageous to the purpose of the study: social differences that would

otherwise hardly show because of the smallness of the group can now be pointed out more clearly.

In selecting respondents for this secondary analysis a few individuals had to be dropped from the original sample of 1086. I excluded all people that could not be assigned to one of the fifteen categories of respondents. I also disregarded individuals who had not indicated their sex and eight women, because they were too few to be compared with the male population, and because some of the questions (e.g.,"How many wives do you have?") were not applicable to them. After these omissions 1067 individuals were left to be included in the study. 837 people said that they were farmers and could therefore be considered for the diffusion of farming innovations, and 484 owned cattle and could be included in the subsample for studying the diffusion of cattle innovations.

As many of the variables are nominal, I had to use simple non-parametric statistics. Using the SPSS program (Nie, Bent and Hull 1970) I mainly relied on frequency counts and cross tabulations of two or more variables. On all cross tabluations significance tests (χ^2) were performed and measures of association computed. Although the method of cross tabulating variables is very clumsy and much less sophisticated than obtaining correlations or other measures of covariance, it seemed most suited for the kinds of variables with which I had to work. It also allowed me to make and describe a large number of detailed observations that otherwise would be lost.

I have divided this dissertation into several parts. In chapters II and III I will present some background information on Tanzania in general and on Sukumaland in particular in order to illuminate some of the changes that led to the present social structure and to give a picture of the setting of changes among the Sukuma in the context of national development. Chapter IV will be devoted to a broad discussion of various theories of social class and social stratification and how they might be applied to the study of a developing society such as the Sukuma. Also some hypotheses will be presented about social stratification among the Sukuma. In chapthers V and VI I will turn to the actual data. Chapter V will describe the contemporary social structure of the Sukuma with regard to the two dimensions of social stratification of traditional and modern status as it appears from the analysis of our sample. Chapter VI will be devoted to an analysis of the patterns of acceptance of farming and cattle innovations as influenced by social stratification and will also look at one case of diffusion of information within the social system. In the final chapter VII I will summarize my findings and discuss their potential relevance to anthropological studies of social change and applied anthropology.

CHAPTER II

TANZANIA--A DEVELOPING NATION

In the present chapter I shall present an overview of the political and social setting of Tanzania and of the country's development problems. This will provide some necessary background information for the later analysis of the Sukuma, necessary because changes in any single part of a society do not happen in a social vacuum. Especially in the case of Tanzania do socialist ideology and national development planning act as social constraints for internal changes.

For the purpose of the present analysis I want to deal with three aspects of Tanzanian society: African socialism, which provides the ideological frame-work for all development programs; specific development projects by the independent nation; and the relationship between the national center, where large-scale planning and decision-making takes place, and the rural periphery, where these plans have to be implemented.

African Socialism

It has been said that according to Marx, African societies cannot achieve socialism unless they go through the stages of capitalism and class struggle (s. Potekhin 1964: 105). Proponents of such arguments tend to take Marx's analysis of the social conditions in Western Europe at his time (i.e., the analysis of a situation limited in time and spaee) as the description of necessary and univer-

sally valid relationships, and assume that therefore the process of achieving a socialist society always has to follow the same pattern.

By its advocats - e.g., Leopold Senghor, Kwame Nkrumah, Tom Mboya, and Julius Nyerere - "African" socialism is considered to be different from "scientific" socialism in that it takes into account the specific African situation after having achieved freedom from colonial rule.

Socialism in general evolves around the attempt to abolish the exploitation of man by man. "Scientific" socialism (i.e., the Soviet version) specifies a few details: exploitation takes the form of class exploitation, classes being defined by their relationship to the means of production. Therefore the decisive condition for achieving socialism is the abolition of private ownership of the means of production and its replacement by state ownership (s. Potekhin 1964).

Although Tanzania was not a socialist country before independence, she exhibits some features that are close to the goals of scientific socialism: land as the major means of production has not been privately owned (except in the case of a few tribes such as the Chagga and the Haya), and whatever industrialization there is happens under state auspices with little private domestic capital (and therefore private ownership) involved. But Tanzania also shows some deviations from the scientific ideal: industrial workers are not the proletariat but the privileged ones among the working population, and Tanzania wants to build a socialist state without putting major

emphasis on industrialization, but rather on rural development instead[1] (Nyerere 1968b; Hopkins 1970: 7 f.).

Over the years Nyerere has repeatedly emphasized that his country's major goal is development within the frame-work of socialism. In 1962 he claimed that socialism is foremost an "attitude of mind", an attitude which was already present in traditional African society's "ujamaa"[2] (1968a). He set African socialism apart from existing European political philosophies and from scientific socialism, but he did not yet make any suggestions as to how this attitude of mind could be transformed into practice. Naturally, people were confused and interpreted "ujamaa" in many different ways (Burke 1964).

In 1967 Nyerere used several occasions to develop his views of African socialism further. In the "Arusha Declaration" his perception of a socialist society largely follows conventional socialist lines: absence of exploitation, just wages, public ownership of the means of production and exchange in the nation, and democracy (1968b: 15 ff.). He stresses the idea that a socialist society can only be built by people who practice the principles of socialism themselves. But at the same time he points out that it is not of primary importance to build up an industry; instead, emphasis has to be laid on rural development and self-reliance without dependence on foreign

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[1] In 1970 the average monthly wage of industrial workers was more than twice as high as the cash income of the agricultural population (ILO 1973: 567; 672).

[2] "Ujamaa" refers to a system of kinship obligations in traditional society. Nyerere, however, uses it as a synonym for "African socialism".

capital investments. Development should depend on the hard work and the intelligence of the people themselves rather than on money.[1]

A recurring theme in Nyerere's essays on socialism is not the reduction of material exploitation (which is of prime importance for European socialists) but the creation of a society of equal human beings. Socialism and equality are seen as inseparable concepts:

> Socialism is, in fact, the application of the principle of human equality to the social, economic, and political organization of society (1968d: 79).

More specifically, in a poor country like Tanzania socialist development has to mean that everybody can get enough before anybody can have more than others. Nyerere summarizes this view:

> The essence of socialism is the practical acceptance of human equality. That is to say, every man's equal right to a decent life before any individual has a surplus above his needs; his equal right to participate in government; and his equal responsibility to work and to contribute to the society to the limits of his ability (1968e: 103).

So far African socialism is a combination of Western ideas on equality, democracy, freedom, and lack of exploitation. However, a philosophy solely based on ideas that can be associated with the former colonial master will not mobilize people after independence. Reference to the African past is important. This is the purpose of "ujamaa".

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[1] We should not forget that in 1967 the renewed emphasis on rural development and self-reliance was at least partially a pragmatic response to outside circumstances. Tanzania had engaged in very costly development schemes financed by foreign aid. However, during the years of 1965 and 1966 West Germany and Great Britain had cut down their aid because they did not approve of Tanzania's foreign policy (Hydén 1968: 48). Therefore Tanzania had to think of new ways of developing on the basis of her own resources.

"Ujamaa" emphaiszes some features of traditional African life: a certain feeling of mutual rights and obligations among the members of the extended family, common ownership and consumption of basic goods, and the universal obligation to work for the common good. Up to this point "ujamaa" follows the traditional meaning of that word: obligations and rights along kinship lines.

But Nyerere's reinterpretation of that term implies more: the set of mutual obligations and rights is extended to include the whole nation, and insufficiencies of the past--particularly poverty and the inferior status of women--have to be corrected and overcome (1968a; 1968f).

There are, however, some characteristics of the concept of "ujamaa" that make its application difficult:

(a) The assumption that the traditional family was basically an egalitarian institution would require some specification. A family is made up of individuals who have unequal relations with each other.[1] Unequal relations are important for the social control of all members of the group--a feature of traditional society which young people especially do not find very attractive and try to escape (Burke 1964: 207).

(b) Ujamaa requires the extension of family relations beyond the family level to a realm of social interaction which traditionally

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[1] Referring to Mali, Hopkins (1969: 460) points out that the only egalitarian institution in traditional society was the youth association which crosscut family ties. The same seems to be true for many parts of East Africa, too, e.g., for the Sukuma. Maybe Nyerere's emphasis on the family is due to his own experiences in his native tribe where age grades, etc. were absent (s. Hopkins 1971 for a description of his tribal background).

was covered by other institutions (e.g. age grades, chiefdoms), or which did not exist at all. By focusing so much on the extended family the concept of ujamaa neglects other institutions of mutual help and cooperation that could as well or even better serve as reference points for socialism in traditional African societies.

It now becomes apparent that the ideology of African socialism as a unique form of socialism serves several purposes: African countries such as Tanzania do not simply want to copy European developments with all their desirable (e.g., increased standard of living) and undesirable (e.g., increased differences between rich and poor) features. They want to emphasize their particular historical situation of independence from a colonial master vs. the European situation of overcoming feudalism. They do not want to exchange one colonial master for another by committing themselves to a particular pre-fabricated national ideology which eventually would lead to the neocolonialist dependence upon one source of foreign aid. On the domestic level African socialism is an attempt to increase the self-esteem of the people against the former colonial powers and to get them involved in national issues (Nyerere 1968a; 1968b; Mboya 1964; Burke 1964; Roberts 1964; Dumont 1968; Tordoff and Mazrui 1972).

National Development

There are three dimensions to the concept of development: economic, political, and social. The close relationship between them has repeatedly been noted by social scientists (Spicer 1952; Rotenhan 1966; Neuloh 1969; Feldman 1969; Arensberg and Niehoff 1971).

Sometimes the terms development and modernization are used as synonyms. However, I would like to avoid the latter term in the present context because it too often has been equated with Westernization (Lerner 1958), which is a path that Tanzania does not want to take. Its use would therefore only lead to confusion that should be avoided.

During colonial times development efforts concentrated on increases in economic production. The need for complimentary changes in the political and social structure was not realized until the late 1940's. Ehrlich (1965/66) blames the present poverty and underdevelopment of Tanzania on the lack of coordinated and people-oriented planning during the colonial period. Modern Tanzania plans to advance at an equal pace in all three dimensions in order to build a socialist state (Malecela 1972).

Tanzania is a poor country. In 1970 the per capita national income was US$ 91, among the lowest in Africa (UN 1972: 594). It has few mineral resources to build up a heavy industry. Eighty per cent of the population still live in rural areas, a feature which is typical for preindustrial societies. Wages have risen since the early 1960's, but so have consumer prices (Jackson 1971). Although half of the population is less than twenty years old and the need for formal education has officially been stressed, only thirteen per cent of the young people receive various kinds (primary and secondary) of school education (ILO 1973: 14; UN 1972: 772).

In economic terms the goal of development is the reduction of poverty (Nyerere 1968b: 17 f.) through increased production, particularly in agriculture, which will eventually result in higher

incomes and the formation of capital for further development. As was mentioned earlier, Tanzania also wants to avoid too strong a reliance on foreign aid. At the same time she attempts to restrict the development of a domestic group of capitalists by imposing rules that prohibit additional private earnings of high-ranking public servants. Although the immediate benefits of these economic policies are limited, they might be helpful in the long run in achieving an independent socialist state (Helleiner 1971/72: 201 f.).

The goal of political development is a participatory democracy. Individuals should be aware of their positions within a nations, they should participate in at least local political matters, and should develop a new view of their relationship to the nation. The state should not be looked upon merely as a patriarchal institution that distributes rewards and solves all problems for its citizens (an attitude inherited from colonial times), but the citizens themselves should learn to contribute their ideas to the common good and should first rely on their own judgements and efforts before turning to the state (s. Nyerere 1968b: 31 f.; Hydén 1968: 240; Miller 1970a: 548).

The social dimension of development refers to the creation of new patterns of cooperation in order to foster economic development in a socialist manner and in order to prevent the emergence of social classes (Nyerere 1968b; 1968f).

During the years since independence Tanzania has tried a number of different ways to promote new cooperative patterns. Marketing cooperatives for cotton and coffee have had a long and often success-

ful history beginning in colonial times (Dryden 1968: 87 - 97; Lang et al. 1969). Although many cooperatives went through a crisis during the mid-60's when cases of mismanagement were discovered, they are still viable institutions. Their primary concern is the common processing and marketing of products grown by individual farmers. The goal of the government is to eventually expand cooperation in marketing to the realm of production (Nyerere 1968f).

During the first years after independence, self-help schemes were much propagated in an effort to involve individual citizens in the task of nation-building and modernization. Village communities were encouraged to get together under the guidance of TANU (Tanganyika African National Union) and the TANU-dominated Village Development Committees to solve their problems through communal efforts--mainly through the contribution of voluntary labor (Bienen 1970: 336). Self-help, however, was only a limited success. It saved the government a substantial amount of money (s. Hydén 1968: 50), but many projects were never completed. There are several reasons for the partial failure of that program: (a) the planning rested with the Village Development Committees and was not coordinated with neighboring communities or with plans for the whole regions, (b) due to the economic structure of rural Tanzania (mainly subsistence farming) the capital input into these schemes was very low and often not sufficient for an efficient operation of the project, and (c) enthusiasm eventually faded away after the returns did not meet the initial high expectations (Yeager 1972).

At the same time the government invested in so-called villagization schemes--artificially created villages with people from

different tribes designed to produce cash crops in a highly mechanized fashion. It was assumed in the planning of these schemes that individuals who were taken out of their traditional environments and resettled in new areas would be more receptive to modern ideas and would be more devoted to the task of nation-building than people living in their traditional village settings.

The government promised to provide the settlers with all necessary goods and services until the first harvest. The initial capital and the machinery were also provided by the government. However, in 1966 the plan to establish any more of those villages was dropped. There were several reasons for the failure of villagization projects: (a) the required capital investments exceeded Tanzania's financial capacities; (b) many schemes were badly planned and doomed to fail economically from the very beginning; and (c) villagization merely increased the people's dependence on the government but did not nurture local intiative, which eventually led to dissatisfaction with non-fulfilled government promises (s. Yeager 1972: 393; Hydén 1968: 48 ff.; Bienen 1970: 337 ff.; Ingle 1972: 51; Temu 1973: 73).

In 1967 a new plan for the social organization of rural development was published. In "Socialism and Rural Development" Nyerere proposed "ujamaa" farms (1968f). This new approach tried to avoid some of the negative aspects of earlier development schemes and at the same time to employ their positive experiences. It is a plan for commercial cooperative farming on a voluntary basis using traditional village settings without direct government investments. Ujamaa farms are integrated into larger development plans and should

receive preferential indirect government assistance, e.g., extension services, loans, etc. (United Republic of Tanzania 1969: 26).

However, the studies of various ujamaa settlements collected by Proctor (1971) show that this latest approach frequently suffers from the same shortcomings as the village development schemes: bad planning, dependence on government help and suppression of local initiative. Feldman (1969) points out some additional problems, e.g., commercial farmers tend to cooperate in the production of a cash crop only so long as cooperation is economically more feasible than individual work (e.g., in order to qualify for government loans or to run machinery more economically). But they would stop cooperating when they felt that it would only hamper their individual initiative.

Since the publication of these early studies of ujamaa farms and communities, the movement towards the establishment of more such villages has increased. In 1973 c. fifteen per cent of the total population of Tanzania lived in ujamaa villages. However, the response varies greatly between regions. Particularly in the regions of Mwanza and Shinyanga, where the majority of the population is Sukuma, the response has been very low (Temu 1973: 72 f.). Whether the ujamaa approach to development will eventually be more successful than earlier development programs still remains to be seen.

Nyerere (1968a; 1968f) expresses concern about increasing differences between various sectors of the Tanzanian population. Although there is no split between owners and non-owners of the means

of production (land, tools. labor, and capital),[1] other differences do exist and may eventually--if allowed to go unchecked--lead to the formation of new classes: urban vs. rural population because of the differences in urban wages and prices for agricultural products, and the accessibility of social facilities (schools, hospitals, etc.) to the urbanites; more developed vs. less developed regions because new industries tend to be attracted to areas furthest advanced already, as there they are insured an adequate labor supply and a market for their products.[2]

Some of Nyerere's policies attempt to curtail a further development of social classes which would lead away from the goal of a socialist society. At least since 1967 rural development has received greater support than has industrialization (1968f), which should help to decrease differences between areas that are more industrialized and those that are not. A widespread primary education is considered more important than the training of relatively few. The latter type of education followed a British pattern that was not geared to the needs of Tanzania and which therefore produced a non-functional educated elite (1968c). And specific income policies have been put into effect: minimum wages, salary cuts for top government positions in

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[1] As was pointed out earlier, land was in most places held according to usufruct rights, i.e., rights to the products of the land but not to the land itself; simple tools are privately owned and are not signs of special wealth; the universal obligation to work did not have many exceptions in traditional society; and capital for major investments can ususally be provided only by the state itself. The few rich people, e.g., Asians, tend to transfer their earnings out of the country instead of investing locally.

[2] Myrdal refers to this process as "cumulative inequality". (s. Staniland 1970: 623)

1967, raises of lower level salaries, and restrictions on additional incomes for high government officials (Hopkins 1971: 7; Jackson 1971; Helleiner 1971/72). During the 60's Tanzania had tried to reward individual farmers for their acceptance of new ideas and techniques by calling them "progressive farmers" and giving them preferred treatment with regard to agricultural extension services, availability of loans, etc. In the late 60's, however, it was realized that this practice implied an unequal treatment of farmers favoring the rich ones who could afford to take risks. In order to avoid the rise of a "class of rural capitalists", this practice was eventually discontinued (Temu 1973: 73). Whether the various policies initiated to curb the development of social classes will eventually be effective cannot yet be assessed.

Center--Periphery Relations

So far I have looked at Tanzanian development from the viewpoint of the nation as a whole, at the level where most development plans are made. But they are carried out somewhere else, i.e., at the local level. In the discussion of various development programs it became clear that the failure of many projects was partially caused by misunderstandings between the farmers and the government about their mutual roles in development. The government wanted the farmers to get involved and show initiative, whereas the farmers expected an improvement of their economic situation through government aid. For the same problem to appear so many times, there must be a fault in the system connecting the local and the national level. Therefore

I will now describe the various levels of state organization and their relationships to each other.

At first, some definitions are necessary. "Center" and "periphery" frequently have the connotations of order and disorder. However, this is not the way these terms will be used here. Center will refer to the national center of administrative and party hierarchies, where far-reaching decisions are made and where the strongest control power rests. Local level or periphery marks the other extreme in the national decision-making and control hierarchy. For the purpose of this study the locus of least control and most restricted decision-making will be the ward, which is the smallest unit where government as well as party representatives still operate (s. Hydén 1968; Baker 1970; Staniland 1970; Hatfield 1972).

There are two institutions that connect the center with the periphery and could be used as channels for communication: the government bureaucracy and TANU, the only party in mainland Tanzania. Particularly TANU has been referred to as a "two-way all-weather road of communication" (Bienen 1970: 347 ff.).

Tanzania has undergone several attempts at restructuring her internal organization. The present one is not the colonial setup anymore nor does it copy the traditional structure. Internal boundaries are drawn arbitrarily and do not follow any historical or ethnic lines (v. Sperber 1970; Bienen 1970; Dryden 1968).

The mainland of Tanzania is organized into eighteen regions, which are further subdivided into districts, divisions, and wards.[1]

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[1]Zanzibar has a regional organization of its own and is connected to the mainland at the top level only: The ruler of Zanzibar

Although wards are composed of a number of smaller villages and scattered hamlets, these are not recognized as independent units for administrative purposes. TANU is organized at the same levels as the civil service, but recognizes smaller local units. Each ward is divided into a number of cells of approximately ten houses, which elect one of their members as their leader. Both organizations, TANU and the civil service, are closely linked at each level of organization.

Cell leaders do not receive salaries or compensations for their jobs. Although they are party officials, their formal contacts with the next higher level of the ward are not restricted to party lines. Their duties include serving as liaison between the ward and their cell members (i.e., between both TANU and government hierarchy on the one side and their cells on the other), maintaining peace and order in their cells, collecting dues, and being members of the local Development Committee.[1] It seems that cell leaders often are not

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is also the First Vice President. The island also has its own party, the Afro-Shirazi-Party, which takes the place of TANU.

[1] O'Barr gives a complete list (1972: 440): It is the duty of cell leaders:

1. to explain to the people the policies of TANU and government,
2. to articulate people's views and opinions and communicate them to TANU and government,
3. to be responsible for the collection of party dues,
4. to persuade people who are not members to become members of TANU,
5. to play their role in safeguarding the peace and security of this country by seeing to it that laws and regulations are obeyed,
6. to urge people to pay their taxes properly,
7. to foster strong cooperation amongst the members in the party cell,
8. to take overall charge of the affairs of the party in that cell,
9. the cell leader is the delegate of the cell to the Branch Annual Conference,
10. the cell leader is a member of the Village (Ward) Development Committee.

elected on the basis of their personal innovativeness and interest in change, but on the basis of their ability to handle internal problems of the cells and to keep life as undisturbed as possible (s. O'Barr 1972: 440 ff.; Ntirukigwa 1971: 43).

At the ward level we find a series of different organizations: TANU branch, cooperative societies (primary societies), the administration under the Ward Executive Officer (WEO), and the Ward Development Committee (WDC). Cell leaders are members of the WDC and so is the Ward Executive Officer. The committee is chaired by the local TANU chairman but is part of the administrative structure with regard to its functions: use of local taxes, initiation of local development plans, etc. (Bienen 1970: 357; Miller 1970a: 552 f.; v.Sperber 1970: 99).

Party activities at the ward level are multi-faceted and not restricted to political action: family and marital mediation, administrative activities (e.g., writing reports, arranging self-help schemes, etc.), welfare activities, police functions (mainly exercised by TANU Youth League members), and social control (encouragement of tax payments, school attendance, etc.) (s. Miller 1970a: 551). From Miller's study one might get the impression that the local party office dominates community activities. However, as Lang (1971) shows in a quantative analysis, this is not the case everywhere, at least not in Sukumaland. There the WEO, who is a career civil servant, is chosen for help in community problems much more frequently than the TANU chairman (Lang 1971: Table 54).

Both, the government and the party influence cooperative affairs. Whereas the chairmen of primary societies are elected by their local

constituency, each society also has a government salaried secretary who is appointed to this office. For the dissemination of new agricultural ideas which is one of the designated tasks of cooperative societies, however, TANU is often called upon (Miller 1970a: 554).

Divisions existed as a separate administrative level immediately after independence. But in 1963 they were abolished as independently functioning units because of their inefficiency in development planning (Dryden 1968: 119). Nevertheless, in 1969 they were created again with the intent of giving them the same bureaucratic and party structure as the higher levels of the district and the region. This move served two purposes: to decentralize the administrative structure, and to strenghthen the area commissioner's positions, who so far had no line officials under him (Finucane 1972: 592)

The Divisional Secretary, who is a career civil servant, is the administrative head of the division. He replaces the former Divisional Executive Officer, an employee of the District Council. He has to coordinate the work of the representatives of other ministries (e.g., extension workers, medical personnel) who are also employed at this level. He organizes and issues permits for meetings, distributes information about new regulations, etc. During election times he organizes public meetings for the candidates to discuss their platforms, travels around with them, and ensures the orderly proceedings of these meetings (Lang: personal communication). This duty puts the Divisional Secretary in an intermediary position between the administration and the party, particularly since the party structure has not yet followed the administrative reorganization.

At the district level we find an elected body, the District Council. Nowadays TANU membership is a prerequisite for candicacy to that council.[1] The councillors receive a regular allowance for the time that the council is in session. To many, a seat in the District Council is a stepping stone for political and economic advancement (Bienen 1970: 108 f.). The district TANU chairman is ex officio chairman of the District Council. Its major responsibilities are the handling of school fees, payment of teachers, and allowing non-payment of taxes in cases of hardship (Bienen 1970: 109).

The administrative and party structures of districts and regions are organized along the same lines. Area and regional commissioners are the appointed heads of the civil service. They frequently are not career bureaucrats themselves, but have long experience in TANU (Bienen 1970: 139).

Whereas during colonial times provincial commissioners were the top decision-makers and top-magistrates for their provinces, the new commissioners' functions are restricted to executive duties: maintenance of law and order, supervision and coordination of public business (e.g., registration of marriages, approval of public meetings, etc.), approval of village development schemes and coordination of development efforts by the central government. They have no

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[1] The requirement of TANU membership did not exist during the first few years after independence. But in the 1965 elections independent cadidates gained the majority in the District Council of Bukoba. The council was eventually dissolved and new elections were held with TANU candidates only. Afterwards teachers (most of the independent cadidates had been teachers) were not allowed any more to seek a seat in the District Council. The reason given was that they would be in the awkward position of being their own employers, as teachers are employed by the District Council (Hydén 1968: 134 ff.; Bienen 1970: 103).

rights as superiors to representatives of various other ministries who work in their regions or districts (Bienen 1970: 310 ff.; Tordoff 1965: 69). But nevertheless they try to influence them if possible (Finucane 1972: 578 f.).

The commissioners are assigned area (for area commissioners) and administrative secretaries (for regional commissioners). These people are career civil servants and handle most of the administrative work. All contacts with the commissioners have to go through them. For many practical purposes there is no clear division of labor between the commissioners and their secretaries in the actual performance of their various political and administrative functions (Bienen 1970: 319).

The commissioners are ex officio TANU secretaries, even if they were not party members before. In this position their actions and responsibilities overlap with those of the TANU chairmen.

The most important function of Area Commissioners is their chairmanship of the District Development Committee, which is composed of technical staff, District Council Finance Committee members, the district chairman of TANU, and the Executive Officer of the District Council (Bienen 1970: 324). This committee collects all the suggestions for self-help and development schemes from Ward Development Committees and draws up a master plan for the development of the district, which it then hands on to the Regional Development Committee (Bienen 1970: 324 ff.). Practically, however, the commissioners are expected to gain local support for plans proposed by the national center and to make local approaches to development conform to ideas from above (Finucane 1972: 576).

The Regional Development Committee, which is chaired by the Regional Commissioner, has a similar composition as the DDC and also similar functions. Its development plan should be the basis for specific formulations of the central Five Year Plan (Bienen 1970: 329).

At the highest organizational level, that of the nation, the administration is supervised by the Ministry of Regional Administration and Rural Development. At this level we also find a connection between the administration and the party: Nyerere is president of the nation and at the same time head of TANU; the Second Vice President (who is something like a Prime Minister) is also vice president of TANU.

The following Figure 1 (next page) summarizes the past discussion and lists the various levels of the administrative and party structures in Tanzania in a hierarchical order. At the top is the national center and at the bottom of the Figure is the local periphery.

After this description of the bureaucratic and party structures in Tanzania I will turn to the question of the relationships between the various organizational levels.

Between officials on the same level communication is at least possible. Offices are usually built closely together, there are multiple institutionalized links between government and party hierarchies at each level, and there are many informal ways of cooperation. However, the functions of the various officials are not clearly defined and sometimes overlap (Bienen 1970; Dryden 1968; Kitching 1972a; Miller 1970a). Therefore problems are bound to arise which

Level	Positions in party and bureaucracy and their connections
Nation	President, cabinet, National Assmebly. President is head of the nation and of TANU, so is the Second Vice President .
Region	Regional Commissioner, Administrative Secretary, TANU chairman, Regional Development Committee, representatives of other ministries. Regional Commissioner chairs RDC. He is also TANU Regional Secretary. Although head of the civil service, he is not a career civil servant. TANU regional chairman is member of the RDC.
District	Area Commissioner, Area Secretary, TANU chairman, District Development Committee, District Council, representatives of other ministries. Area Commissioner is the appointed head of the civil service, but was not trained as a civil servant. He chairs the DDC. TANU chairman is a member of the DDC. Area Commissioner is TANU District Secretary.
Division	Divisional Secretray, extension workers of various ministries. The administrative and the party structures are not yet fully developed, but will eventually parallel that of the districts and regions.
Ward	Ward Executive Officer, TANU chairman, primary society chairman, Ward Development Committee. WEO is the lowest ranking civil servant. He is a member of the WDC, which is chaired by the TANU chairman.
Cell	100-cell and 10-cell leaders. Cell leaders are lowest ranking party officials, and are members of the WDC. No separate administrative structure present.

Figure 1: Administrative and Party Structure of Tanzania

might make cooperation and communication difficult. Animosities about others' encroachment on one's office occur, which lead to inefficiencies in the functioning of the system.

Communication between different levels is sporadic, particularly between the district and the wards. Hatfield (1972) points out some physical limitations to communication (e.g., lack of suitable vehicles). Miller (1970b) describes the "Land Rover Phenomenon" as a type of unsatisfying one-way communication: officials tour the countryside, give speeches, and spread the news about government policies. But their visits usually are too short to find out whether their presentations have been understood correctly and how the local people feel about particular issues. In addition, other officials also try to make use of the fact that people have gathered already and present specific messages of their own, which are unrelated to the original purpose of the meeting. The different news items then merge into one issue in people's heads simply because of the mode of delivery. Frequently, this kind of communication leads to confusion, mutual distrust, and a further reduction of close contacts.

Of course, certain kinds of information are transmitted upward. But as they might not conform to policies and expectations of the higher levels, they are not received very favorably. Requests for tax esemptions to the District Council, local development plans that do not comply with the District Development Committee's ideas of development, news about the lack of interest of local farmers in proposed innovations and about the failure of development projects are all the type of messages that add additional strains to unsure relationships.

Apparently many different aspects of center--periphery relationships contribute to the failure of so many development programs: the lack of integration between an initial policy decision and its further implementation, conflicting views about the goals of development at the various levels, strained relationships between officials that should cooperate closely, unspecified responsibilities, misuse of authority that inhibits further participation, conflicting policies concerning the relationship between local initiative and national planning, and a general lack of communication to deal with problems early before they become insurmountable (Feldman 1969; Miller 1970a; McLoughlin 1972; Yeager 1972).

A comparison of the two hierarchies of the administration and the party shows that TANU is the more powerful of the two. At least at the highest level this dominance is clearly perceived by administrators. Hopkins (1971) mentions the emergence of several norms that support this position:

1. An administrator must join the political party (at least formally).
2. An administrator must be sympathetic toward national party goals.
3. An administrator must express his sympathy by: (a) placing development foremost in his priorities; (b) accomodating party officials and attempting to work with them.
4. An administrator must defer to political superiors in all policy matters (136 f.).

There are historical as well as structural reasons for the relative strength of TANU and the relative weakness of the state bureaucracy:

(a) TANU was founded during the colonial period and became a mass movement in the strife for independence. Once that goal was achieved, the party did not dissolve but was reorganized in order

to be used for the further development of the country. The administration, however, was mostly the domain of white colonial officers until independence. Afterwards, it suffered from a severe lack of experienced African civil servants to replace expatriate officers adequately. Whereas the party could rely on a large number of people with long experience in party work and an established communication network, administrative positions had to be filled with people that were not yet sufficiently trained for their posts, and therefore these positions lost much of their former power.

(b) Party officials often have a long standing association with their respective areas and know their problems fairly well. Civil servants, instead, are transferred frequently and therefore can neither develop any close connections with their areas nor accumulate the necessary knowledge about them in order to be efficient bureaucrats (Finucane 1972: 575; Hatfield 1972: 372).

(c) The party reaches further than the administration. Its cell system descends to the lowest possible level of organization and affects virtually every Tanzanian. Its suborganizations TYL (TANU Youth League), UWT (United Women of Tanzania), and TANU Elders are geared towards groups that are usually not reached by party organizations. The trade union wing, NUTA, includes industrial workers. Agricultural development work is often done by the party and through party channels instead of the cooperatives. The administration, on the other side, is composed of a fairly small group of specially trained civil servants, and it affects the individual's life only on special occasions (e.g., in obtaining permits, payment of taxes, etc.).

(d) The party claims a special legitimation for getting involved in many issues which otherwise would not be considered party business. The government is a TANU government, its goal of nation-building is the same as TANU's, and therefore the party has to take an active part in all affairs that might contribute to the accomplishment of that goal.

In the further course of this thesis I will not be concerned with organizational levels close to the national center. Instead, I will focus on changes at the local level. I will try to show how members of a specific group, the Sukuma, have responded to various influences, how they have changed over the past decades, and how their social structure reflects and/or modifies national trends.

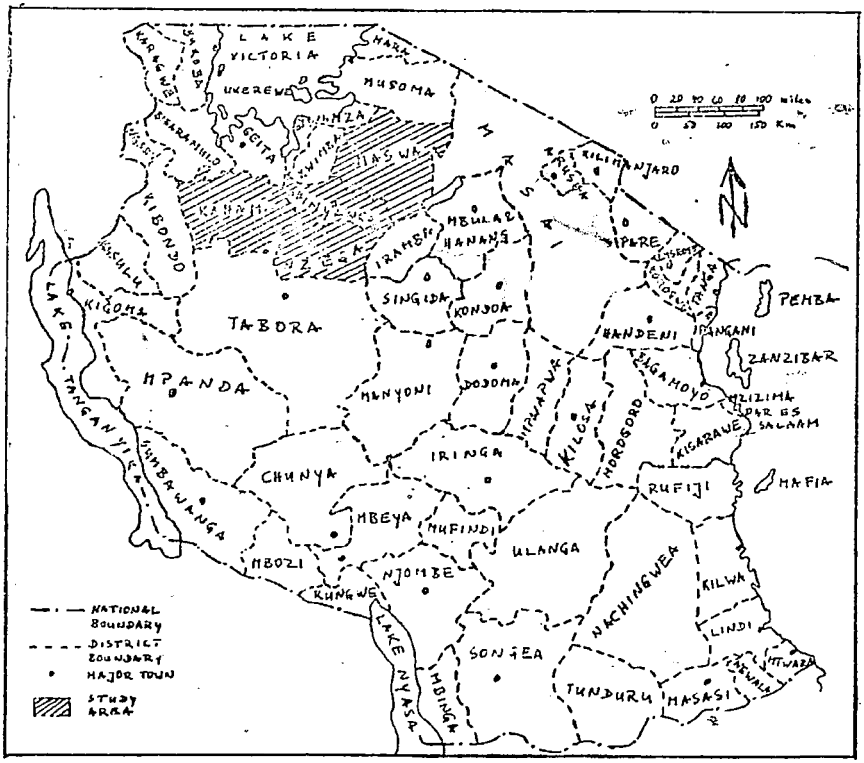
CHAPTER III

THE SUKUMA--A CHANGING SOCIETY

The Sukuma are the largest tribal group in Tanzania. They number about 1.5 million members. They inhabit an area of c. 19 000 sqm in the cultivation steppe south of Lake Victoria, where most of them farm. Their economic, political, and social system has been greatly altered during the past decades since their earliest contacts with European colonialism in the 1880's.

In the following chapter I will discuss changes among the Sukuma. I will go further back in time than in the previous chapter which concentrated on developments in post-independence Tanzania and will take into account the whole period of colonialism. Such an approach seems necessary for a better understanding of contemporary Sukuma society because its present characteristics are influenced not only by modern national developments but also by its own past.

Most changes among the Sukuma happened through the intervention of the colonial powers, the Germans and the British. They were forced to grow cash crops, their political structure was modified several times and eventually abolished, and their integration into a larger social system opened new roads for advancement and increased internal role differentiation. But the outside pressure was not reinforced by internal pressures for changes (e.g., overpopulation, land shortage, etc.) that would have surmounted traditional means of coping with them. Generally, the Sukuma accepted changes slowly and eventually gained the reputation of being very traditional and backward.



Map: TANZANIA

Economic Changes

The landscape of Sukumaland is an almost treeless, undulating plain with granite outcroppings. The best soils for farming are found close to the hilltops and are more frequent in the areas close to Lake Victoria. Further south and east of the lake heavy "mbuga" soils appear more often which are of inferior quality for farming because they have a cement-like texture during the dry season and become water logged and impassable during the rainy season. Rainfall reaches thirty inches per year along the lake shores, but decreases in amount and reliability further away from the lake (McLoughlin 1968: 2; Heijnen 1968: 7 f.; Lang and Lang 1962: 86).

Nowadays most Sukuma are farmers with a mixed systen of subsistence and cash crop farming. Maize, sorghum, cassava, and sweet potatoes are grown for home consumption. Cotton is the major cash crop, rice and groundnuts are of less importance. At present Sukumaland is the main cotton producing area in Tanzania.

Many farmers also have livestock--mainly cattle, but also sheep, goats, and donkeys. Forty per cent of all Tanzanian herds are found in Sukumaland (Rotenhan 1966: 11). Cattle are primarily part of the prestige economy and only marginally involved in the cash economy. Milk is produced in very small amounts (c. one pint per day per cow during the rainy season and nothing during the dry season) and is often sold for cash. Manure is used as fertilizer to a limited degree; it is transported only to the fields close to the homestead, cattle are sent to graze on harvested fields where they then leave their droppings, and old cattle byres are valued as prime locations for new fields (Hatfield 1972: 375). The use of oxen as draft animals

is still rare but will increase as more ploughs are used. Livestock is not bred in order to make a living but is a sign of economic surplus. Cash from cotton sales that is not used for necessary expenses such as clothing, taxes, school fees, etc. is invested in cattle.

Although cattle are adjunct to the cash economy, they are fully integrated into the social system of the Sukuma. They are the major means of capital formation and savings investments because "shillings don't breed" and savings accounts in banks are not yet widely known. Not every Sukuma farmer owns cattle, but cattle lend prestige to their owner. The more cattle a farmer has, the more prestigeous he is. He is able to pay brideprice, which is still given in the form of cattle and through which he gains rights over his children. He is able to build up a large social network through a trusteeship system. He loans out cattle to relatives and friends in distant locations and thereby maintains and strengthens his social relationships. This system also helps the farmer to evade high cattle taxes and to decrease the chances of losing his whole herd in cases of diseases and drought. In addition cattle are considered a form of social security against bad times and for emergencies when they can be slaughtered and sold (Lang and Lang 1962: 97 ff.; Rotenhan 1966: 52 ff.; Ruthenberg 1964: 35 ff.; Paulus 1967: 44; Lang, Roth and Lang 1969: 50 f.; Lang 1971: 13; Hatfield 1972: 375).

Land is not privately owned. Each household has usufruct rights to the products of the land. In most parts of Sukumaland arable land is not considered a scarce commodity. If there is nothing available close to one's father's homestead, a young man can always move to new

land a short distance away.[1] This pattern of land acquisition affects the composition of villages and hamlets. People living in the same village are often unrelated but have kinsmen in many different places (Heijnen 1968: 34 f.).

Before the arrival of the first Europeans the Sukuma were mainly subsistence farmers. The people close to Lake Victoria did have some contacts with the coastal areas through participating in ivory trade. The caravans of Arab, Somali, and Asian traders from the coast came to Mwanza, from where goods were shipped to other places around the lake (Heijnen 1968: 68; Rotenhan 1966: 18).

The Germans arrived in the Mwanza area in 1885. Shortly afterwards they started to promote the growing of cotton as a new source of cash income so that the Sukuma could pay their taxes. As most of Sukumaland was not very attractive to European settlers (neither to the Germans nor later to the British) the production of cotton was left to the individual Sukuma on plots of the own instead of on large foreign plantations. The farmers did not respond enthusiastically to the growing of a cash crop but had to be forced to do so (Austen and Holmes: n.d.). Only much later did the Sukuma integrate the growing of cotton into their economy.

After World War I German East Africa became a League of Nations mandate and was placed under British administration. Due to the un-

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[1] Heijnen is commenting on the fact that land is becoming scarce in the areas around the shores of Lake Victoria. Young people have to move further away into Geita District in order to find suitable land for growing their cotton. There also seems to develop a trend to consider land as private property, because Heijnen mentions that land is occasionally rented out illegally (Heijnen 1968: 19).

certainty of the territory's status the British hesitated to start any efforts toward economic development. After an initial decline cotton production gradually increased. During the 1930's the need for control of erosion and cattle management was recognized, but the implementation of a large-scale development effort had to wait until after World War II.

In 1947/48 the so-called "Sukumaland Development Scheme" was initiated. Its goals were manyfold: (a) control of erosion through control of cattle numbers and cattle grazing and through improved agricultural techniques such as tie-ridging; (b) increase of the cotton production through an increase of areas that could be cultivated and through improved productivity (e.g., use of better seeds and fertilizers) of the areas already under cultivation; (c) redistribution of the population over the whole of Sukumaland away from the densely populated lake shores by propagating migration, opening of new water points and the clearing of tsetse-infested bush (McLoughlin 1968: 10).

This scheme was only partially successful and was eventually terminated even before its planned ending in the late 1950's. Several factors contributed to its failure:

(a) The different goals of the scheme were not coordinated among each other. On the one hand more labor and capital intensive agricultural practices were fostered, while on the other hand new land was made available. Migration had been a traditional Sukuma response to land shortage and was therefore preferred over the other option of intensifying agricultural practices on existing land.

(b) Of the four factors of production--land, labor, capital, and water--land was the most abundant, whereas the others were limited.

Although a Sukuma farmer was idle during part of the year, his family work force was such that he could meet peak labor demands during the planting season, when most work had to be done. If his family was not sufficient, he could ask friends and fellow villagers for help in the work on his food crops, but not in his cotton fields. Although a farmer might have been able to increase his labor input by using hired labor, the returns would often not be worth the additional effort and expense because of the unreliability of the rains. The same was true with regard to capital inputs such as improved seeds, fertilizers, etc. If it did not rain in sufficient quantities at the right times, all the capital would be lost (DeWilde 1967: 426 ff.). Therefore capital and labor intensive agricultural practices were somewhat successful only in the areas near the lake where good land was coming into short supply and where rainfall was more frequent and more reliable. But they were unsuccessful in the newly opened areas, where sufficient returns could be achieved by using traditional methods.

(c) Attempts to control the number of cattle failed because they did not take into consideration the social functions of cattle but treated them as a part of the cash economy. Destocking regulations had to be enforced through fines and were quickly abandoned after the termination of the Development Scheme.

Independently from the colonial development scheme an indigenous response to new economic needs emerged among the Sukuma. While the Sukuma farmer could easily grow cotton on small plots without help from other people, he could not process the seed cotton himself. In order to take the seed cotton to the ginneries, the grower depended

upon a functioning system of middlemen between him and the ginnery. Most of these buyers were non-Sukuma traders, who tried to make as much profit as possible legally and illegally. Even when an illiterate farmer noticed that a buyer shortweighted him, he could not do much to change the situation or to prove his point.

In 1952 a young Sukuma, Paul Bomani, started a new system of cotton marketing. He employed the help of the traditional young men's association to establish independent buying posts and to prove that the official buyers cheated the Sukuma farmers. He then tried to organize the farmers into marketing cooperatives, which would eliminate the middlemen and give the farmers higher prices for their products. The Sukuma responded readily because these new coops met one of their needs and could be easily understood in terms of the traditional system of voluntary associations for specific purposes. By 1959 the now-called Victoria Federation of Cooperative Unions had gained the monopoly in buying cotton from the farmers. It opened ginneries of its own to gain influence over the further processing of cotton. After independence the cooperative system was integrated into the government hierarchy. It gradually expanded its services by providing agricultural extension services to the farmers. However, in spite of its economic success, the cooperative movement has lost some of its support because many people now feel that it is more of a government organization that an organization concerned with the interests of the farmers (Lang, Roth, and Lang 1959; Roth and Roth: n.d.).

After Tanganyika achieved her independence, new efforts towards economic development in Sukumaland were made. Several projects were

erosion control project (United Republic of Tanzania 1964). It was to be funded jointly by Tanzania and the United Nations. Although planned earlier, the project did not start until 1969. After two years, however, when it did not yet show substantial results, Tanzania withdrew her funds and the project collapsed.

In the wake of the Arusha Declaration, development efforts began to focus on cheaper and indigenous means to foster rural development: use of ox-drawn ploughs instead of tractors, use of manure instead of chemical fertilizers, and emphasis on the traditional ethic of village cooperation and mutual aid. The value of some of these innovations has been recognized by the Sukuma, and they are slowly integrated into their economy.

Concerted efforts toward economic development in Sukumaland have started late during the colonial period and have been somewhat erratic. They were successful in so far as the production of a cash crop is now integrated into the agricultural activities of an average Sukuma household. Cotton production has increased steadily over the past twenty five years. Development efforts were, however, unsuccessful in several other respects. The increase in production was achieved through an increase in acreage under cultivation, not through a higher return per acre. In particular, the control of livestock units and cattle grazing and the transfer of livestock from the prestige sector to the cash economy has failed. Instead the number of animals has increased continuously (Ruthenberg 1964: 35; Rotenhan 1966: 23). Although during colonial times changes were compulsory and resistance to change could be interpreted as anti-colonialist, they

were not accepted more readily when initiated by TANU and the independent government (DeWilde 1967: 442 ff.).

Changes in the Political Structure

Administratively, Sukumaland is part of several regions. The districts of Geita, Mwanza, and Kwimba that are predominantly inhabited by the Sukuma belong to Mwanza Region. In neighboring Shinyanga Region the districts of Shinyanga and Maswa are traditional Sukuma areas. After World War II, when new land was opened, Sukuma migrated into less populated Nyamwezi areas such as the districts of Kahama (Shinyanga Region) and Nzega (Tabora Region).

The political system of the Sukuma has been greatly transformed, first through colonial intervention and then through the creation of an independent nation. Changes introduced by the Germans and the British were intended to facilitate their administration. Even the introduction of the council system in the 1950's did not increase popular participation in the governing process but was used to enforce administrative regulations. The participatory element was present in the rising cooperative movement and in the Tanganyika African Association (later TANU), i.e., outside the colonial system. In 1962 the traditional political structure was abolished by decree and replaced by national organizations (s. chapter II).

The traditional political structure was marked by a dual power structure: one based on kinship which involved the whole chiefdom and included the positions of chiefs, chiefdom council, and headmen; and the other based on common residence and age. The second structure was used as a check on the power of the chiefs.

The chiefdom was the ultimate political unit among the Sukuma. The indigenous population did not perceive of the more than fifty chiefdoms that were later integrated into the Sukumaland Federation as a tribal unit, although they had a language, customs, social and economic institutions in common (Liebenow 1959: 232).[1] Each chiefdom was completely autonomous. The chief was a member of a royal clan and succeeded to office in matrilineal fashion.[2] The chiefdom council (banang'oma) and the various village headmen were chosen from his relatives: those male clan members eligible for succession (i.e., the maternal uncles, nephews, etc.) formed the council, while the headmen were appointed by the chief from among his patrilineal relatives (Liebenow 1956: 449 f.).

The chief had two major functions: (a) he was responsible for the well-being of his subjects by protecting them through his magico-religious powers. He had to perform certain rituals during the year that would ensure sufficient rainfall and good crops; he magically protected the people and their crops from diseases; and he led war parties to victories through his protection. (b) The chief's second function was that of supreme judge in his chiefdom. His court mainly dealt with criminal offenses (cattle theft, treason, etc.) not with appeals of the decisions of subchiefs' or headmen's courts (Cory 1954: 8 f.). The chief received gifts and court fees from his

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[1] The Sukuma did not have a word to refer to themselves. "Sukuma" is a Nyamwezi word that means "north" and simply refers to all peoples living north of the Nyamwezi.

[2] In some chiefdoms along the shores of Lake Victoria patrilineal succession was practiced in pre-European times (Varkevisser 1971).

subjects. In return he had to entertain everybody who came to his compound, and he had to feed his people in times of famine. In state affairs he was advised by the members of his council. In court he was helped by non-royal assessors, the chiefdom elders (Liebenow 1959: 328).[1]

The second authority system was effective on the village level. Each Sukuma was a member of an age-related voluntary association. Usually, three such associations existed, subdivided according to sex: the children, young men and young unmarried girls, and old men and married women. The most important of them were the old men (banamhala) and the young men's society (clika or basumba society). The banamhala settled local disputes and supervised the young men. The basumba society constituted the village work force under the leadership of an elected nsumba ntale. They worked communal land for the chief or the headman and could be hired by any villager for labor-intensive tasks. The nsumba ntale was responsible for making the work arrangements and for bargaining about the price, usually meat and beer to be consumed at the end of the workday. In some areas the basumba batale held very powerful positions. They could allocate land to newcomers (otherwise a prerogative of the chief or the headman), and if the people were dissatisfied with a chief, the basumba batale would demonstrate in front of the chief's compound and demand his resignation (Williams 1935; Cory 1954: 79 ff.; Tanner 1955: 160; Liebenow 1959: 237; Perrin Jassy: n.d.).

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[1] Cory (1954) does not mention the existence of a separate chiefdom council, but calls the chiefdom elders "banang'oma", who perform both functions: selection of new chiefs and assistance in court. The difference between Cory's and Liebenow's reports probably reflects

Staying in power in the traditional political system depended upon continuing group support. An office holder, whether chief or nsumba ntale, could not remain in his position unchecked. If people were not satisfied with the official's performance, they could either demand his resignation or move away, thereby reducing his power base. Perrin Jassy (n.d.) describes this types of leadership as "emergent" from the needs and the support of the group.

This political structure was greatly modified by the Germans and the British. The first already changed the system of succession to the chief's office from matrilineal to patrilineal because it was easier to comprehend and facilitated their administration. In some cases the Germans also tried to reduce the number of chiefdoms and to install chiefs of their own liking. But apart from influencing the pattern of succession, they did not interfere in the internal affairs of the individual chiefdoms (Austen and Holmes: n.d.; Liebenow 1959: 238).

The British introduced major changes which eventually undermined the whole traditional political structure. At first they also tried to reduce the number of independent chiefdoms and to influence the selection of new chiefs. But by 1926 there were still 47 chiefdoms in the five districts of Kwimba, Maswa, Mwanza, Shinyanga, and Geita. During that year the chiefdoms were organized into district federations of the chiefs. Finally in 1947 the Sukumaland Federation as paramount political institution for all the five districts was created.

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regional variations rather than differences between right and wrong ethnographic observations.

Although the British fromally retained the chiefly structure in their policy of Indirect Rule, they deprived the chiefs of their former sources of legitimation and of most of their stately functions. They used the chiefs rather as their own administrators than as representatives of the Sukuma. Thereby they undermined the position of the chiefs in relationship to their own people and paved the way for their eventual abolition in 1963.

Traditionally the chiefs had been elected by the chiefdom elders. Under British rule an elected chief could not take office until he was approved by the colonial government. Occasionally British governors chose chiefs on their own not necessarily from among the the legitimate claimants. They also insisted on a certain amount of minimal education for future chiefs and made them take certain courses before they could take office (Liebenow 1959: 248 ff.).

The British allowed the chiefs to retain their magico-religious functions but changed other functions and reduced their traditional sources of authority. Chiefs were not allowed any more to take tribute from their people but received a salary from the colonial administration. Instead of paying tribute, the Sukuma now had to pay taxes to the colonial government through the native authorities. With this regulation the economic tie between a chief and his subjects was severed, and his responsibility for them in times of famine reduced. The traditional court functions were partially taken over by British courts; chiefs and their deputies were only allowed to handle civil cases. The chiefs were given new functions as legislators in the Sukuma Federal Council. In practice this new function meant giving approval to measures proposed by colonial administrators. In

addition they were responsible for the carrying out of the regulations which they had approved and which were often highly unpopular (Cory 1954: 5 ff.; Cory 1951; Liebenow 1959: 241 ff.).

During the 1950's a system of councils was introduced. It was modelled after the traditional system of village organizations. But in composition as well as in function these council differed markedly from their indigenous predecessors and on the whole were not very successful. Councils were established on each administrative level: federation, district, chiefdom, sub-chiefdom, and parish. Partially the members were elected, partially appointed. They were to act as legislators, but often the Provincial Governors and District Commissioners would use them to give popular approval to many unpopular measures of the Sukumaland Development Scheme (Shaw 1954; Maguire 1969: 19 ff.).

These political reforms replaced the traditional "emergent" type of leadership through a "planned" form. The basis of authority for the chiefs and councillors was removed from their society and given to the colonial administration. The response on the part of the Sukuma to this change was political lethargy, while the Native Authorities (chiefs and councils) were identified with the colonial power not with popular participation in the governing process (Perrin Jassy: n.d.).

At the same time when the councils were created, two new associations emerged outside the Native Authority structure which provided possibilities for popular participation and for "emergent" leadership. The cooperative movement--although primarily concerned with economic matters--quickly entered the political scene, after the

administration had tried to suppress its registration as a formal organization. Its leader, Paul Bomani, was also a member of the more politically oriented TAA (Tanganyika African Association) under the leadership of Nyerere. Bomani used the cooperative societies to spread news about political matters and about independence.

These new organizations attracted educated people who did not want to cooperate with the colonial administration in the Native Authorities or who had no chance of success in the traditional power structure, but who were equal or superior to the chiefs in terms of education or income.[1] These people favored the abolition of the chiefly structure because it would hinder progress. It was therefore inevitable that the traditional chiefdom structure which had already been weakened by the colonial system was discontinued shortly after Tanganyika had gained her independence--a political move which met hardly any resistance among the Sukuma.

The post-independence political structure continued some features of the colonial times--the council system (still composed of elected and nominated members) and the administrative hierarchy. The former popular movements of the cooperatives and the party were integrated into the government hierarchies. The modern political structure is still multi-faceted, but it has changed from a duality between ascribed (kinship-based) and achieved positions to one between appointed administrators (Ward Executive Officers, Divisional Secretaries, extension workers, etc.) and elected officials (party chair-

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[1] However, the majority of the educated elite has some connections with the traditional system. Most of them are actually members of chiefly families or related to chiefs and headmen (s. Liebenow 1956: 459).

men, Members of Parliament, District Councillors, etc.), or to one between the interests of the administration and the party.

Ideally the various officials should cooperate. But frequently (as was described in the previous chapter) their rights and responsibilities are not specified clearly. Such a situation leads to confusion and does not reduce political lethargy, which Perrin Jassy had originally attributed to the overpowering influence of planned leadership. It seems that after a short interlude of popular participation in the pre-independence years, now administration, party, and cooperatives are again seen as impersonal power structures beyond the control of the local farmer. Therefore people resign and withdraw from participation in community affairs under state auspices.

The only occasion where people can and do express their sentiments on a large-scale basis are national elections. The outcome of the 1965 national elections demonstrated that the Sukuma are not as uninterested, lethargic, and backward when they feel that they are given a chance of control. The major reason why incumbents were not re-elected was that they were too far away from their homelands and did not represent the interests of their constituencies any more (Geneya 1967: 198 f.).[1]

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[1] In 1970 only few M.P.s stood for re-election in Sukumaland, and most of them were able to keep their seats in the National Assembly (TANU 1970). However, no analysis of Sukuma voting behavior comparable to Geneya's study was available. Saul (1972) only develops a model for the analysis of the 1970 elections without, however, presenting the acutal analysis itself.

Changes in the Social Structure

The social aspects of Sukuma society have changed to a lesser degree than the political structure. Most important is the rise of different occupational groups who do not depend on farming for their living. But the majority of the population still farms. They have managed to adhere to some features of their traditional social system and to use them in adjusting to new demands. Particularly the institution of voluntary associations has been helpful in dealing with new problems. Other traditional institutions have declined in importance or have disappeared in many places, and their functions have been taken over by new organizations. But in general, the reluctance to abandon old institutions and values has contributed to the Sukuma's reputation as traditionalists.

In traditional Sukuma society every household dependend on the work of its members in their own fields for their living. Only chiefs or headmen had additional income in the form of court fees and tribute. But even they were not completely exempt from working in their fields. Most of Sukumaland is still rural. But new opportunities as alternatives to farming have arisen during the colonial period.

Most non-farming jobs during the colonial period were unskilled labor in the foreign-owned sisal estates and at road and railroad construction. But the interest of the Sukuma in labor migration and unskilled labor within their homeland was low, restricted to young people who wanted to earn some cash for specific purposes. It seemed that most Sukuma could meet their cash needs by staying in their villages and producing cotton (Heijnen 1968: 69 f.).

The rate of urban migration to find employment outside of agriculture has also been relatively low. While the rural areas have an almost homogeneous Sukuma population, only one quarter of the inhabitants of Mwanza town, the largest town in Sukumaland, are Sukuma (Heijnen 1968: 51). Besides the possibility of making a sufficient living in the villages, migration to urban areas has been restricted due to the relative scarcity of permanent employment there. Particularly when urban employment is simply seen as an alternative to agricultural work that does not require additional skills, jobs are limited. Sometimes it is possible to advance from unskilled to skilled worker by means of rote-learning; e.g., one can advance from being an unskilled helper to being a full craftsman (Heijnen 1968: 73 f.). But such progress is dependent upon permanent work and cannot be achieved through temporary wage-labor.

Many new jobs, however, cannot be regarded as alternatives to farmwork on the same level of general skills. They require special qualifications in the form of formal education. During colonial times schools were primarily attended by the sons of chiefs and headmen and other wealthy farmers who could afford to pay the school fees (Liebenow 1956: 459). Many of these school leavers became teachers or clerks and junior administrators in the colonial service. These people formed the core of those working towards Tanganyika's later independence during the 1950's Although after 1961 the number of highly qualified government jobs increased in the course of the Africanization of the national administration, the total labor market

shrunk by twenty per cent.[1] As the number of school leavers increased, it has been harder and harder to find employment on the basis of a primary education only. More and more people with Standard VII or VIII education who are not accepted into secondary schools eventually return to farming (Heijnen 1968: 91 f.). At the same time the educational requirements for government positions increased.

Although the differentiation in the labor market is more obvious in urban areas, it is not restricted to them. Government administrators, clerks, teachers, and some craftsmen are also present in rural areas. They constitute a smaller percentage of the total population than in urban environments so that an outside observer might gain the impression of a still very homogeneous group of farmers. But the beginnings of a role differentiation and division of labor are present and likely to increase in the future.

Hatfield (1968: 239 f.) describes two themes as characteristic for traditional Sukuma life: cooperation and egalitarianism. These two forces are intended to ensure a peaceful life within the community. Although their importance has decreased with the rise of a cash economy and increased division of labor, they are still present in modern Sukuma life.

Cooperation actually supplemented the individual's efforts to cope with recurrent and extraordinary demands of life. The basic work unit was the family. But there were times when a subsistence

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[1] Heijnen attributes the shrinkage of the labor market to the introduction of a minimum wage legislation. In order to pay the required minimum wages, employers had to dismiss part of their workers because they could not afford to pay these minimum wages that were higher than the ones paid previously to all of them (1968: 75).

farmer needed more labor than he and his family could provide in order to grow enough food to feed all of them. Particularly during the planting season at the beginnings of the rain, labor demands reached their peak. In such situations a farmer could turn to the community for help. In return he was expected to feed the work party and to help others in their fields when they needed it. Cooperation thus served two purposes: to alleviate an individual's momentary problem and to maintain good relationships among the members of a community.

Sukuma villages traditionally abounded with different types of associations (Varkevisser 1973). Most important were the age-based voluntary associations which had members in practically every household, and there were also dance societies and numerous special-purpose associations organized on a voluntary basis. Members of an association were obliged to help each other. If somebody did not answer a quest for help and did not show up for a cooperative work party, he was fined a goat or some chickens to be consumed by the other members of the group.

Young men's societies, which had constituted the main village work force, have ceased to function or have declined in importance in many areas (Cory 1954: 77; Heijnen 1968: 112). For the cultivation of his food crops the farmer still relies on his family and on mutual aid groups. But work in the cotton fields is frequently done by hired labor. A farmer might ask his relatives or friends in other voluntary associations for help. They will perform the work free of charge but can demand his help in return. Or he has to employ people from

neighboring tribes or local work groups that hire themselves out for payment (Heijnen 1968: 112 ff.).

Apart from providing aid in cultivation work, voluntary associations have been instrumental in dealing with old and new strains experienced by individuals and by groups as a whole. Such societies would spring up around specific needs and would provide a socially acceptable way of handling them. There are societies of orphans, witch-hunters, thieves, etc. that give support to socially disadvantaged people, and thereby prevent tendencies towards the disintegration of the society. The quick success of cooperative societies in the early 1950's can be seen under the same perspective. An individual farmer was helpless against the cotton buyers as long as he stood alone. But the cooperatives made explicit use of exisiting patterns of mutual aid in their response to the specific need of farmers for protection from the exploitative practices of the buyers and middlemen. They also gave a tangible advantage to the Sukuma cotton growers in the form of higher prices. The Sukuma started to become suspicious of the coops when the prices declined (a factor that was beyond the control of the cooperatives) and when the organization changed from a mutual aid society into a bureaucratic government agency (Lang and Lang 1962: 93; Roth and Roth: n.d.).

These different examples show the mode of cooperation and its limits among the Sukuma. They are willing to engage in a common work effort if it gives the individual farmer something which he cannot get through his own efforts: security, just treatment, higher income. But he is reluctant to cooperate if he feels that the profits from his work will be received by somebody else but not by him.

After their past experiences with cooperatives many Sukuma are now suspicious of government sponsored programs that appeal to cooperation, either cooperation in range management and cattle breeding or communal cash crop production in the context of national ujamaa policies (Hatfield: field notes June 9, 1971).

The second theme that penetrated Sukuma society was that of egalitarianism. It implied that nobody should have more than he needed. The basic interest for a Sukuma was to secure enough food for his family until the next harvest and to be able to meet additional demands at special occasions such as birth, death, marriage, etc. A farmer could usually satisfy these needs by working to his capacity during the planting season. Therefore, if somebody managed to achieve a considerably larger harvest than others in the village, he very likely would arouse feelings of suspicion. In order to maintain peace and good relations in the community, he had to distribute his wealth again by staging feasts. If he did not succumb to the covert pressure for letting the community share his wealth, he had to fear accusations of being a witch.[1]

The system of land tenure supported the egalitarian tendencies in Sukuma society. There were no freehold titles to land but usufruct rights to its products. The size of landholdings in traditional Sukuma society therefore did not reflect a person's wealth but was a function of the size of his household.

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[1] Witchcraft accusations in general tended to focus on antisocial individuals who did not conform to the informal rules of the community and were therefore perceived as potentially disruptive (Tanner 1955; Hatfield 1973).

The occupational and income structure of the traditional society was very simple and clear. As discussed earlier, there was practically no full-time division of labor. The few people who received additional income in the form of tribute and court fees were the chiefs and headmen.[1] They were expected not to keep these gifts to themselves but to be generous and to redistribute them again among the members of the village or the chiefdom in the form of public celebrations. This same expectation for being kind and generous does still exist nowadays with regard to the cell leaders (Ntirukigwa 1971: 43; Hatfield: field notes, April 7, 1971).

Already the traditional Sukuma society shows some features that counterbalance strong social control towards egalitarianism: their settlement pattern and the system of cattle trusteeships. The Sukuma did and still do prefer to live relatively isolated in individual homesteads or small hamlets scattered over the countryside. Each homestead (kaya) is surrounded by fields that are cultivated by the owner of the kaya. This settlement pattern inhibits rapid communication and the exercise of strong social control by other villagers.

Although entrusting cattle to other farmers can be seen as a form of cooperation, it is different from cooperation in crop husbandry. Loaning out cattle typically crosscuts village boundaries and thus escapes the control of the village, while cooperation in planting is done on a village basis. It reduces the farmer's economic

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[1] Bafumu also received fees for their services. But most of them had to depend on their own fields as their major source of support (Hatfield 1968).

risks, but it also helps him to maintain social relationships with distant relatives and friends. He thus can build up an ego-centered social network beyond the social control of the community, while at the same time keeping envy with regard to his wealth at a minimum.

In addition to the anti-egalitarian forces traditionally present in Sukuma society some new factors have contributed to weaken the system. Under colonial rule, tribute to the chiefs was replaced by salaries from the colonial government. The chiefs interpreted these salaries as a form of personal income independent of the social responsibilities that were associated with receiving tribute. The money was used for their own and their families' advancement: improved housing, acquiring of luxury items, school attendance of their sons, etc. (Liebenow 1959: 243).

The other factor that contributed to the weakening of egalitarian tendencies was the entry into the cash economy. Farmers resisted the idea of letting the community participate in their incomes from cotton sales. Part of that cash is used to meet necessary expenses such as taxes, school fees, buying clothing, etc. But part of it is invested in cattle and thus transformed into traditional signs of wealth and prestige.[1]

The various old and new anti-egalitarian tendencies have contributed to the rise of social differences within the rural popula-

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[1] The relationship between cotton and cattle is somewhat of a vicious circle, described by Ruthenberg in terms of a cotton cycle: gains from cotton sales are invested in cattle; the number of cattle increases without an increase in pasture; in bad years many animals die; the farmer has to increase his cotton production in order to make up for his losses, thus decreasing pasture even further (1964: 36).

tion, apart from the differences between farmers in general and the rising non-farming population. Social inequality in Sukumaland does not become apparent with regard to cultivated land. The distribution of land (and therefore the distribution of the main food resources), which is geared towards the subsistence needs of the population, does not mean that all Sukuma are equally prosperous. There are distinctions between rich and poor farmers, but they appear in a realm different from the basic food production. While the Sukuma derive the major portion of their diet from their fields, they keep cattle for reasons not directly related to filling their subsistence or their cash needs. Cattle are signs of prestige and wealth that can be displayed in socially acceptable ways. The distribution of cattle and other kinds of livestock among Sukuma households indicates anything but egalitarian features. Rounce (Ruthenberg 1964: 34) noticed, that during the 1940's almost all the cattle in Sukumaland were owned by one half of the households. Rotenhan's study in the districts of Shinyanga, Kwimba, and Ukerewe indicated that fifty per cent of the cattle are concentrated in thirteen per cent of the households. In his sample there were thirty seven per cent of the households that did not own any cattle, and seventeen per cent that did not even have any other kind of livestock (1966: 31). Lang's study which focused on the southern areas of Sukumaland where traditionally more cattle are found due to environmental conditions also indicated that cattle are not evenly distributed among the farming population (1971: 39).

Although one might still want to refer to the Sukuma as a society that has retained a number of its traditional characteristics, changes in its economic, social, and political structure have

taken place which have substantially altered the traditional structures. Therefore it is warranted to study recent developments in Sukuma land not in terms of a homogeneous, traditional society, but as one that has some forms of internal differentiation which very likely will increase in the future. After having presented an ethnographic report about changes during the colonial period and the first decade after independence, it is now time to approach the problem of social differentiation from the perspective of sociological theories of social class and social stratification.

CHAPTER IV

SOCIAL STRATIFICATION

In this chapter I will turn my attention to questions of social differentiation and social inequality as they have been discussed in the sociological and anthropological literature. Eventually I will outline a theoretical frame-work that can be applied to the analysis of contemporary Sukuma society.

Jean-Jacques Rousseau was the first to point out that there are two forms of inequality among humans: a natural and a social one. His term of natural inequality referred to differences in stature, strength, race, etc., i.e., differences in the physical attributes of men. Social inequality, which is the topic of concern in his "Second Discourse", referred to man-made differences that are subject to human intervention and alteration (1950: 196), e.g., differences in wealth, social injustice, etc. Rousseau's distinction has opened the door for a new critical approach to phenomena of social inequality, to question their premises and to attempt to change them.

Dahrendorf (1961) picks up Rousseau's terminology and elaborates it further. He distinguishes two forms of social inequality: social differentiation of otherwise equal positions on the basis of a division of labor, and social stratification according to prestige and wealth as a way of ranking social positions (7). Although division of labor does not in itself imply an evaluation of different positions, it often leads to their ranking into superior and inferior ones.

Stratification and the Study of African Societies

Tuden and Plotnicov (1970) note that Africanists have shown little interest in phenomena of social stratification. Such a statement, however, tends to obscure the state of discussion about the applicability of the concepts of social class and social stratification to Africa. Scholars have been concerned with signs of social inequality, but have often felt that the term "social class" as it was developed in Europe did not apply to the African situation. Social inequality has more often been studied as a phenomenon of the distribution of power in a society by political anthropologists than as a form of social organization comparable to kinship structures or voluntary organizations (Balandier 1970: 91; Fortes and Evans-Pritchard 1940; Fallers 1964: 119).

A number of traditional African societies did exhibit a high degree of social inequality, e.g., in the form of slavery or caste systems such as in the case of Rwanda, where ethnic, economic, and power distinctions followed the same lines (Maquet 1970). On the other hand, the Sukuma have never developed such a system of clear hierarchical distinctions, although their social structure shows influences from the interlacustrine kingdoms. Their chiefs had come from the West and were outsiders. They were not accepted because of the military strenght of their ancestors, but were chiefs because popular consent had accepted these outsiders as impartial arbiters (Cory 1952). Although chiefs and members of chiefly families were among the wealthier people in Sukumaland, wealth and power were certainly not restricted to them nor could they exercise their power in an absolute manner.

With regard to contemporary African societies, participants in the discussion about social classes in Africa have taken one of three positions: there are no classes at all; social classes do exist; and social classes are emerging. Particularly in the French literature these questions have been discussed at length. The starting point usually is, whether the Marxian predictions about the development of a classless society are useful in order to deal with questions of social inequality in society and in order to determine sources for intra-societal conflict in African nations. Marx assumed that all forms of social inequality could be traced back to and are determined by differences in the economic structure. Such inequalities tend to increase and split the society into antagonistic groups with conflicting interests, the social classes, until eventually a class struggle would erupt which would destroy the very basis of the existing society and lead to the creation of a classless society.[1]

The position that social classes do not exist and are not necessary as an intermediary stage in building a socialist society, has been put forward by the ideologues of African socialism, e.g., Nyerere, Mboya, or Senghor. Their arguments were based on the assumption that traditional African societies had been classless and that they still were at the time of independence. If therefore the necessary precautions were taken, i.e., a non-capitalist approach to development was chosen, then this system of classlessness could be maintained. However, a few years later they had to admit that

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[1] I will deal with Marx's concept of class more extensively later on in this chapter.

in addition in their societies were increasing and that classes were emerging (s. chapter II; Riviere 1969: 123 ff.; Saul 1972).

The opposite position that classes do exist has often been associated with political extremism, e.g., with Frantz Fanon (1966; s. also Rivière 1969: 126 ff.). Fanon assigns the role of the revolutionary class to the agricultural population because he assumes that this group will meet the conditions that characterized the industrial proletariat in Europe and made it prone to revolutionary thoughts. However, the ideological zeal for promoting the world revolution tends to neglect peculiarities of African societies (e.g. the connection to the land and the family system that distinguish migrant laborers in Africa from the European lumpenproletariat of the 19th century, or the lack of private ownership of land in many areas) that would limit the application of class theory (Rivière 1969: 127; Jinadu 1973: 293 ff.).

Kitching's argument for the use of the class concept in Africa is based on a different theoretical frame-work. He does not like the assumption that the existence of classes always leads to class struggle. On the basis of economic differences he proposes a model class system for the study of African countries. Most importantly, his model is not restricted to urban areas but takes into consideration that even in rural areas social differences do exist and are perceived as such by the local population. Kitching distinguishes six classes: a ruling class (with a high level of education, a Western standard of living, providing personnel for top government and managerial positions); several classes of urban non-manual and manual workers (white-collar workers, adademics, free professions, teachers,

middle and lower level bureaucrats; skilled and unskilled workers); and several classes among the rural population (particularly a distinction between richer peasants who have special resources, and middle and poorer peasants who do not) (Kitching 1972b: 348 f). Kitching's approach is characterized by its deliberate omission of a feature necessary for a Marxian analysis of social classes, namely it does not designate distinctive interest groups.

Using a similar non-Marxist approach Klein (1969) studied changes in the social structure of a village community near Kampala, Uganda. On the basis of income and prestige he was able to distinguish three classes: an elite of bureaucrats, a middle class of employees commuting to Kampala, traders and some progressive farmers, and a lower class to which the majority of the peasants belong (86 f.). Although he defines class membership on the basis of income, Klein is able to demonstrate that other behavioral features are associated with class distinctions: education, life styles, patterns of social interaction, etc.

Maquet, like Kitching, is more concerned with developing a general model of social inequality in post-independence African societies than with the study of a particular group. He feels that only two conditions must be met in order to describe a society as having social classes: it must be possible to classify all members of a society into at least two categories according to specified criteria, and one of these categories must be perceived as superior to the other (1971: 139). Post-independence African societies tend to have two classes: a national elite, usually urban, and a rural peasant class which comprises 80 to 90 per cent of the total population (179 ff.).

The same facts that lead Meillet to claim a two-class system have led other social scientists to take the third possible position, namely that social classes are only emerging (Meillassoux 1969/70; O'Brien 1971; Balandier 1965; Tuden and Plotnicov 1970), but that no class system has developed yet. They take the Marxist proposition that social classes have to exhibit a class consciousness more seriously. Awareness about their common situation and their being different from other parts of the population is, however, mostly restricted to the members of the "modern elite", i.e., high ranking bureaucrats and politicians. As the majority of the population, particularly the rural groups, have not yet developed a class consciousness, it cannot be studied in terms of a class analysis. The "ruling class" or "modern elite" (French: "classe dirigeante") can be easily pointed out. Its members are characterized by a high educational level (often a university education in England or France), significantly higher salaries than the rest of the population, a Western life style and the power to make large-scale decisions. Inherent in the emerging-class-approach to modern forms of social inequality in Africa is, of course, the assumption that eventually a class with interests opposite to those of the modern elite will develop. Such a development will put a test to the doctrines of African socialism, that Marx's predictions about the development of a socialist society are not applicable to Africa.

Apart from the question, whether social inequality in African societies can be studied in terms of the Marxian class model or in terms of another model, the dimensions of inequality have to be delineated. Kitching uses differences in income as a basis for his

class model (1972b: 327). Fallers feels that the basis of African forms of social inequality is to be found in the political realm of the traditional as well as of the modern social system (1964: 119, 129). Rivière is very careful in suggesting valid dimensions for a study of social classes. He notes that economic distinctions, e.g., occupation and income, are not as important in determining social behavior in African societies as they are in Europe. Social differentiation in Africa is a varied and complex phenomenon which includes such dimensions as prestige, political functions, family relationships, ethnic affiliation, etc. He suggests that a study of social inequality in Africa cannot merely apply a model developed in Europe, but that the specific historical conditions in Africa must be taken into consideration (1969: 142).

Before I attempt to analyze the modern social structure of the Sukuma in terms of class or social stratification, it is important to pay some attention to the concepts of class and stratum. So far I have not tried to discriminate between these terms, but they have been used in many different ways. It is therefore necessary to review the sociological literature on social class and social stratification and to define these terms in an unambiguous way for the purpose of this study.

Concepts of Class and Stratification

In the non-English literature "class" and "stratum" are treated as two theoretically different concepts. Dahrendorf sees "stratum" as a descriptive category and defines it as "a category of persons who occupy a similar position on a hierarchical scale of certain situa-

tional characteristics such as income, prestige, style of life" (1959: IX). Classes, on the other side, "are interest groupings emerging from certain structural conditions which operate as such and effect structure changes" (IX). The concept of social class is understood as an analytical category that has to be seen in the context of a theory of class and class conflict.

Balandier (Rivière 1969: 130) treats "class" as a social reality and "stratification" as a theoretical construct. In his terms stratification refers to means of analysis, through which the object of analysis, the classes, can be studied. Lenski is aware of that distinction but does not make use of it in his own analysis. He treats the terminological difference as one between conservatives and radicals:

> ... conservatives have tended to regard the concept of class as essentially a heuristic device calling attention to aggregations of people with certain common characteristics. Radicals, however, have been much more inclined to view classes as social groups with distinctive interests which inevitably bring them into conflict with other groups with opposed interests (1966: 23).

Although Lenski outlines the differences between the two positions clearly, their labeling as conservative and radical does not touch upon the core of the matter. The distinction between them rather is one between a theory and explanantion of social conflict in a society and the interest in operationalizing a given concept without reference to a specific theory of society.

Ossowski (1963) views the two concepts of class and stratum as designating two different types of social relationships. Class and class theory refer to a system of dependence among different elements of a society, while stratification means a system of gradation, a

ranking of elements in a given hierarchy (145 f,). In a system of dependence the elements can be tied together along two different lines: either through the division of labor and organic solidarity where all elements depend upon each other because they perform different functions, or through a one-sided relationship of exploitation which tends to divide a society into only two opposing classes. Typically the various elements or groups in a system of dependence are characterized by different attributes. In a system of gradation, however, different elements are arranged in a hierarchical order along one or more dimensions and differ in the degree to which they show the same variable. Differences in such a system may or may not be perceived as such by the members of a society (56 f., 147, 152).

Karl Marx

As the theories of Karl Marx play an important role in shaping the concept of social class, it seems warranted to present his views in greater detail. Thereby, some of the basic features of a Marxist view of social class and class structure will become more evident than by sole reliance on recent writers.

The social situation in Western Europe during the 19th century is the historical basis for Marx's discussion of social class. It was a time of major changes in Western societies: the rise of industrial societies with a large wage-earning labor force, population pressure in the rural areas, a high degree of division of labor, the decline of the former guilds and a loss of their social functions, and pronounced discrepancies between the rich and the poor.

Marx interprets the social inequalities of his time in terms of differences between social classes. Although he deals with the concept

of "class" on several occasions, a systematic summary of his views is missing. He had obviously planned to discuss classes extensively in his major work "Das Kapital", but he died before he could finish that particular chapter. It breaks off after he has posed the crucial question of what constitutes a class (1964: 893).

We therefore have to turn to earlier works of Marx and also Engels for more information. There the common view that Marx perceives all societies as being split into two and only two antagonistic classes is not supported. Only in their programmatic pamphlet, the "Communist Manifesto" of 1848, do Marx and Engels predict a polarization of society into the two opposing classes of bourgeoisie and proletariat, the former who will have all economic and political power, and the latter who will not (Marx - Engels 1959: 463). In his historical analyses (Marx 1960; 1961b; 1964) Marx recognizes three or more classes in given societies (specifically: large land owners, capitalists, and workers; sometimes also petty bourgeoisie and smallhold farmers), all of which are characterized by their specific economic situation and their particular relationship to political power and influence.

In other papers (Marx 1959; Marx - Engels 1962) Marx is more explicit with regard to the analytical properties of "class". These attributes do not always appear together at the same time but form a developmental sequence: (a) There are people who share the same economic situation. Although they are recognizable as a group to an outsider, they themselves are not yet aware of their similarities. The merely constitute a "class in itself" ("Klasse an sich"). (b) The next step in the development of a social class is characterized by

the rise of a class consciousness. People become aware of their common economic situation and their common interests, and attempt to organize as a group. This stage is referred to as "class for itself" ("Klasse für sich"). (c) When a class has developed to this point, it is possible and necessary to proceed to social action in order to pursue the specific class interests.A class struggle arises which eventually will lead to a complete change of the existing economic, social, and political structure. At this stage we find antagonistic classes that are distinguishable as such to outsiders as well as to the group members ("Klasse an und für sich") (Bolte 1966: 44).

Although he defines classes at first in economic terms only, Marx feels that the differences between the classes are not restricted to the economic realm. He arrives at that conclusion because of his materialistic view of history: all elements of the societal superstructure, such as life styles, education, political power, etc. are functions of the economic basis of society. A group that is exploited in an economic sense is also at the bottom of the society in all other respects. Class struggle therefore cannot be restricted to changing one realm of life only (e.g., the economic structure) but necessarily has to aim at changing the whole society (1961a: 8 f.).

A class cannot be defined all by itself but only in relationship to other classes. The division of labor in society not only makes individuals dependent upon each other but also ties social classes together. The relationship between two classes can be expressed in two terms: work performed (real work) and private property (accumulated work). Work is performed by the inferior, exploited class, and accumulated by the superior class. If work is not performed, it cannot

be accumulated. Therefore the superior class is dependent upon the inferior one for its very existence, and the inferior one would not have to develop into a class were it not for the exploitation and suppression by the superior one (Marx - Engels 1962: 66).

Summarizing this presentation, "class" in Marx's terminology is defined by (a) an economic situation, (b) a class consciousness, (c) a common organization, (d) the dependence upon other classes for its very existence, (e) specific power relationships, and (f) the relative strictness of class boundaries which makes it possible to point them out clearly in a society. This concept of social class is still the one used by French, German, and East European sociologists (e.g., Balandier, Meillassoux, Dahrendorf, Ossowski).

Marx's concept of social class has been criticized in several ways and his theory of class conflict in capitalist societies been refuted (Dahrendorf 1959). I do not want to repeat Dahrendorf's thorough analysis but only outline a few issues that are important with regard to the study of social inequality in a socialist country in the 20th century.

By definition Marx is able to treat class and social inequality as a unidimensional phenomenon. He states that all social relations are determined by the economic factor of ownership vs. non-ownership of the means of production (i.e., private property). This assertion, however, is purely a hypothetical one on the basis of his materialistic philosophy of history. Whether such a relationship exists in a particular society has to be subjected to empirical validation.

Even in contemporary socialist societies which officially have abolished private ownership of the means of production, many social

inequalities still exist in spite of Marx's predictions that they would disappear (Djilas 1957; Ossowski 1963; Wesolowski 1967; Parkin 1969; Strmiska and Vavakova 1972). These inequalities can take various forms. They are not merely accidental but rooted in the social system itself. Djilas (1957) points at increasing differences between those who have power, i.e., the bureaucrats, high party members, etc. and those who do not in socialist countries of Europe. Meillassoux (1969/70) observes a similar development in African socialist countries. The power of the "new class" is not based on actual ownership but on the ability to control the flow of goods and services, to make decisions about other people and to secure their execution. Another form of inequality is due to the division of labor. Different occupational groups receive different incomes and have different prestige (Wesolowski 1967). Neither income nor prestige differences can be justified on the basis of the ideology of a classless society. Such differences are therefore treated by some authors not as class distinctions but as social stratification, i.e., as a non-ideological ranking of positions (Wesolowski 1967: 24). As I have discussed in chapter II, similar differences in the distribution of power, income, and prestige can be found in post-independence Tanzania.

Social Classes Among the Sukuma?

After having presented Marx's concept of social class and having criticized it in relation to European socialist societies, it is necessary to attempt its application to Sukuma society. I will now take the concept of social class and compare it point by point with our present knowledge about the Sukuma.

(1) Classes are defined by a specific economic situation which determines all other social relationships. The Sukuma system of usufruct rights to the products of the land and the general availability of land to all potential farmers prevented the rise of a feudal system based on private ownership of land, Furthermore, in the traditional system virtually nobody was exempt from the obligation to produce his own food, mainly through his own and his household's work. Although the people had to pay tribute to their chiefs, their relationship with the chiefs was not primarily one of economic dominance and subordination but one of an obligation for protection in emergencies. However, a new group of non-farmers appeared towards the end of the colonial period which was composed of teachers, clerks, bureaucrats, politicians, etc. They are distinct from the majority of the rural population with regard to their economic situation because they receive salaries or wages instead of growing their own food. Some of them also show different life styles, have different educational levels, etc. But the rise of this group has not been determined by their or their fathers' economic situation only, but is the result of a variety of factors such as church affiliation and education in a mission school, membership in a chiefly family where the colonial government enforced the learning of Western skills, etc. Therefore it seems that observable social differences cannot be reduced to economic ones, or that economic relationships did determine other social relationships either in the past or in the present. This situation might change in the future in so far as the children of well-to-do parents are able to pay school fees and thereby gain access to positions with higher economic rewards, prestige, and power.

(2) Class boundaries are strict and limit mobility. During the first years after independence Tanzania had a great need for African personnel to fill the positions of departing British officials. Almost everybody with a Standard VIII education could find an office job. Mobility into non-farming positions and to urban areas where such jobs were more readily available was high. During the late 1960's, however, the job market decreased and now primary school graduates have difficulties finding non-agricultural jobs. But the point has not yet been reached where the non-farming groups merely recruit themselves and are closed to individuals from the rural areas. The danger of the system becoming closed is, of course, always present if the job market does not expand.

(3) Classes are characterized by class consciousness and a common organization. Everybody is aware of the differences between farmers and government officials with regard to their economic situation and their life styles. Occasionally, comments might be heard about the inefficiency of the bureaucracy and that everybody who works for the government or the cooperatives gets rich at the expense of the farmers. But people feel that they cannot do anything about it and become lethargic. The only instance in the past where the Sukuma developed a large-scale organization in order to defend their interests, was the cooperative movement. The cooperatives were directed against the Asian middlemen in the marketing of cotton and were successful in eliminating them. But the cooperatives are now integrated into the state apparatus and are no more a means of expressing the dissident opinions of a suppressed group. The government, on the other hand, emphasizes the need for rural development and thereby

poses as the speaker for the most deprived social groups. The farmers' response to attempts from above at involving them in development efforts has often been withdrawal and resignation instead of unification.

(4) Classes are dependent upon each other for their very existence. The majority of the Sukuma are only partially integrated into a cash economy. They still grow a large portion fo their basic foodstuff themselves and therefore are fairly independent from other groups in the society for their subsistence. When Marx postulated the mutual dependence of social classes, he was referring to highly developed economies where economic relationships could be expressed and were dependent upon the flow of money. While the relatively small portion of the population that lives on salaries and wages is dependent upon money for their income, the farmers use their incomes from cotton sales mainly for additional expenses such as school fees, taxes, etc. rather than for the purchase of staple food items. Most of the money used for salaries, etc. very likely does not even come from agricultural revenues but was produced in urban centers. Therefore the relationship of dependence between the farming and non-farming groups in Sukumaland is relatively weak.

(5) Classes have distinct power realtionships which have to be changed through class struggle. In traditional Sukuma society power was not exclusively a chiefly prerogative. Decisions were made by consensus, and everybody who had paid the entrance fee could participate in the banamhala's delibarations. In contemporary Sukuma society power has shifted to the representatives of national interests, the government and party officials. According to the ideology of

African socialism, their power and their interests are not directed against the farmers but represent them. Acutally, however, major decisions about developmental planning are made by politicians and bureaucrats at the national center, and the local level officials are restricted to representing and carrying out national plans. While their decision-making power is limited, they can rely on the use of official sanctions to enforce the execution of national plans. Their right to formal sanctions distinguishes officials from non-officials, but this line of distinction is not the same as that between farming and non-farming population, or between relatively wealthy and poor people. However, it can be interpreted as the sign of an emerging "new class" of powerful bureaucrats as against the powerless others--a development that is common to many socialist societies.

Although there are some tendencies toward the development of social classes and a class system among the Sukuma, it is not yet possible or meaningful to study social differentiation in Sukumaland in terms of Marx's class analysis. Economic differences do exist, but they do not necessarily indicate differences in other respects. It is especially hard to define differences within the farming or within the non-farming groups in terms of social classes. Therefore it is necessary to look at other approaches to the problem of social inequality that might provide a better tool for our analysis.

Social Stratification

The concept of social stratification has been promoted primarily by structural-functionalists like Talcott Parsons or Kingsley Davis.

Although stratification theory deals with the same reality as Marx's class theory, it looks at it from a different angle. Marx sees social inequality as an evil in society, as a source of conflict and change. Functionalism, on the other side, interprets social inequality as a necessary aspect of the general social system of a society that will always be present. While representatives of a Marxian class theory feel that different classes are dependent upon each other in order to satisfy their own needs and wants, functionalists argue that the units of a system of social stratification are dependent upon each other only in so far as all of them are part of a larger social system and contribute to its maintenance and survival. In a functionalist approach to social inequality the emphasis shifts away from defining relationships of dependence and special interests to studying relationships of order and integration (Dahrendorf 1959: 157 ff.; Ossowski 1963: 147). Dahrendorf summarizes the basic assumption of a structural-functional approach to the study of social structures and their properties:

> (1) Every society is a relatively persistent, stable structure of elements.
> (2) Every society is a well-integrated structure of elements.
> (3) Every element in a society has a function, i.e., renders a contribution to its maintenance as a system.
> (4) Every functioning social structure is based on a consensus of values among its members (1959: 161).

The emphasis on order and integration means an interest in how a social system recruits members for different positions, how it evaluates and ranks them, and how it maintains that structure.

I will now discuss the concept of social stratification as it has appeared in the writings of some structural-functionalists. I do not, however, intend to give a thorough and all-embracing review

of all contributions dealing with stratification from a functionalist point of view, because such an attempt would be a mere replication of Wiehn's study (1968).

Talcott Parsons defines social stratification as

> the differential ranking of the human individuals who compose a given social system and their treatment as superior and inferior relative to one another in certain socially important respects (1954: 69).

The ranking of individuals is rooted in the value system of a society. Every society has values as part of its normative orientation and evaluates individuals in a moral sense in terms of these values. As evaluation implies a hierarchy, each society must have a system of ranking or stratification. The ranking of all individuals as equals is seen as a theoretically extreme case that is very unlikely to exist in reality (Parsons 1954: 70 f., 75, 388, 397 f.). As values contribute to the integration of a society, so must stratification (74). In any society there may be a number of value systems in terms of which an individual can be ranked. Parsons mentions membership in kinship units, personal qualities, achievements, possessions, authority, and power as possible systems of classification.[1] The status of an individual is regarded as the result of the common evaluations in each of these dimensions (75 f). Differences in the stratification systems of different societies are possible, because the various dimensions are not always assigned the same importance, i.e., not only individuals are ranked in relationship to various systems of classification, but also these systems are arranged hierarchically in different fashions in different societies.

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[1] In his second article on social stratification Parsons re-

Kingsley Davis and Wilbert Moore (1945) have a view of social stratification similar to Parsons's view. Their article can be seen as a prime example of a functionalist approach to social inequality that emphasizes aspects of integration and internal cohesion in a society.

They see stratification as a necessary part of the social structure of all societies which has the function of motiviating people to work toward the achievement of certain positions, of allocating these positions to the most qualified, and of ensuring proper behavior of those who hold positions by offering different rewards or rights. Basic to Davis's and Moore's arguments are some assumptions about the structure of societies--that they are composed of a series of different positions, some of which are more important than others for the smooth running of the society. As qualified people to fill these positions are scarce, and as they usually have to endure the hardships of a long training, the occupants of the most important positions have to be rewarded most highly. Stratification is therefore structured social inequality, expressed in a hierarchy of rewards:

> If the rights and perquisites of different positions in a society must be unequal, then the society must be stratified, because that is precisely what stratification means. Social inequality is thus an unconsciously evolved device by which societies insure that the most important positions are conscientiously filled by the most qualified persons (Davis and Moore 1945: 243).

The rewards offered by a society can take different forms: prestige and esteem (243), power, or wealth (246). As these rewards can be

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[1] duces these dimensions to three: qualities, performances, and possessions (389 ff.).

easily observed in a society, it can be said that those positions with the most prestige, power or wealth are also the most important ones for the functioning of the system.

Davis and Moore have been strongly criticized by Tumin (1953), because they are not able to see the disruptive potential of social inequality. Tumin's critique is contained within the theoretical frame-work of functionalism, but it does not insist that all functions of a social institution are positive for the maintenance of the society.

In a later publication Tumin lists several forms of social inequality, only some of which deserve the label "social stratification".[1] Only ranking of individuals or groups according to their functional contribution (either in terms of realization of certain ideals or as contribution to the achievement of desired social goals) and the diffusion and persistence of differences in property, power, and prestige in a society should be called "stratification" (1963: 22 ff). Especially the diffusion of social differences which is seen as the more important form of stratification is not necessary for the functioning of the society but is more likely dysfunctional (25). In other respects Tumin's treatment and definition of the concept of social stratification is similar to other functionalists:

> We means by social stratification the arrangement of any group or society into a hierarchy of positions that are unequal with regard to power, property, social evaluation and/or psychic gratification (1967: 12).

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[1] In his 1967 book on "Social Stratification", however, Tumin abandons this distinction again, and treats stratification and social inequality as synonymous terms (12).

Wiehn (1968: 115 ff.) has criticized the functional approach to the phenomenon of social stratification in a number of ways. In particular, the basic assumptions by Davis and Moore about society's needs, the scarcity of personnel, the need for rewards and the relationship between rewards and important positions are questioned (s. also Lenski 1966: 63). Also Parsons's assumption that stratification is an expression of the value system of a society is questioned, because this assumption would require one to know a society's value system(s) independently of the stratification in order to determine whether social stratification really is the expression of the society's value system or whether it is something else. Ideally, it also would require that there is agreement among the members of the society with regard to the rankings of different values and value systems. Repeatedly Wiehn notes that many assumptions about sources and functions of social stratification cannot be tested, and that major variables cannot be operationalized.

In comparison with the Marxian class concept, stratification theory offers one advantage: it has been accepted that individuals or groups are ranked along several dimensions at the same time. Which of these dimensions is dominant over the others may differ from society to society; e.g., while in Western societies occupation seems to be an important indicator of social rank, in socialist societies the dimension of political power is more dominant.

An interesting hypothesis that has not been given much attention in the theoretical discussion but which has been stated as a social fact, is the one that stratification determines social behavior

(Parsons 1954: 74; Eisenstadt 1971: 62). Later in this dissertation I will this statement as an hypothesis about effects of social stratification that has to be tested.

Sukuma and Social Stratification

In the same way in which I have applied Marx's concept of social class to Sukuma social structure I will now apply the functionalist concept of social stratification.

(1) Stratification is universal. The claim to the universality of social stratification is based on the assumption that all forms of social inequality imply evaluation and ranking, particularly evaluation being a universal phenomenon. The traditional Sukuma society knew some role differentiation with regard to political and ceremonial functions. It also recognized age-based voluntary associations. Although these associations can be ranked in a hierarchical fashion--the banamhala (old men) receive the highest rank and the children's association the lowest--anthropologists have usually excluded social differentiation based on age or sex from the discussion of social stratification, and I will follow the same convention. Differences in political power can only partially be arranged in a hierarchy: the chief is superior to the headman. But the headman is not necessarily superior to the banamhala or the basumba batale. These, to the contrary, provide a check on the headman's power, but are not superior to him. We rather find a dual power structure intended to provide a balance between different forces instead of a hierarchy of authority. With regard to ceremonial functions there

were recognized specialists, but the performance of ceremonies was not restricted to them on all occasions.

Since the colonial times the economic sector differentiated and new occupational roles appeared: government officials, professionals, white collar workers, blue collar workers. Very likely, it is possible to arrange these positions in a hierarchical fashion and to group some of them together as social strata.

(2) Stratification is a hierarchical evaluation of groups along one or more dimensions. While the most obvious differences in traditional Sukuma society, various forms of role differentiation, do not match our concept of stratification and therefore would suggest a limitation of its use, there are other dimensions for evaluation that have not yet been discussed: economic security and prosperity, and prestige. Cattle are a sign of economic prosperity. Even in the traditional social system owners and non-owners of cattle can be distinguished. Prestige is expressed in age, large households, and large personalized social networks. It also is a dimension, where individuals can be evaluated and arranged hierarchically in groups even in a traditional society.

In contemporary Sukuma society some of the dimensions for evaluation have changed; e.g., Prestige can now also be gained through modern achievements such as formal education and jobs dependent upon it. After the abolition of the traditional power structure a new one, based on affiliation with the national government and the party, has been organized. Although there is a clear hierarchical arrangement within the administration and within the party, there is no unambiguous relationship of dominance and subordination between the two.

It seems that the party is superior to the administration because of its larger organization, but there are also indications that administrators occasionally have more actual power than party officials.

(3) Stratification is the expression of the value system of a society. In chapter III I have described egalitarianism and cooperation as dominant values among the Sukuma. At the same time, however, anti-egalitarian elements are visible in their social system. Especially with regard to the accumulation of wealth in the form of private ownership of land or cattle does it seem that inequalities exist and may even become greater than they are now. Rather than being the expression of the society's value system social stratification therefore might develop and exist in opposition to such value systems.

(4) Stratification is a device to motivate people and to select the most qualified ones for important positions. It is not possible to define a most important position in a clear way. With regard to the physical survival of the individual Sukuma, the farmer traditionally held the most important position. But everybody was a farmer, and there was no social distinction. In Sukuma society during the colonial period the chiefs were most important with regard to the administrative approach to Indirect Rule, but the farmers were most important with regard to producing cotton as a cash crop. In post-independence Sukuma society the farmers are still most important from the point of view of producing an item for national exports, but with regard to the integration of the Sukuma into the nation, the officials are most important. Therefore it seems that establishing a hierarchy of positions in terms of their relative importance is an impossible task.

Stratification is supposed to select the most qualified people for a certain position. In traditional Sukuma society recruitment for different positions followed different patterns. Chiefs and headmen were selected on the basis of their kinship affiliation with a royal clan--a mode of selection that is not based on functional qualifications in Davis's and Moore's sense. Becoming a member of the old men's society dependend upon the payment of the entrance fee and not the applicant's ability to maintain peace and to supervise village affairs. Only the basumba batale were chosen by consensus on the basis of their leadership qualifications.

Modern government officials are expected to fulfill certain minimal requirements of formal education for their jobs. As literacy is a necessary skill in a modern bureaucracy, formal education fulfills a functional requirement. However, whether TANU-membership as the most important criterion for nominating candidates for election to public offices is a mechanism of selecting the most qualified people is debatable.

If it is not possible to define a hierarchy of functional importance, it should also be impossible to establish a hierarchy of rewards for social positions. An alternative approach of inferring a functional hierarchy from the distribution of desired and scarce goods in Sukuma society, is not feasible on logical grounds because the assumption about the causal relationship between relative importance of social positions and rewards has already been questioned.

(5) Stratification is dysfunctional. This statement ressembles the Marxian assumption about opposing class interests and class con-

flict. Therefore its discussion has to be the same as that of Marx's assumptions.

(6) Stratification is the focus of self-identity and social behavior. This argument implies that stratification must be perceived as real by the actors in a society. If it only existed in the mind of the researcher as an analytical category, it could not influence social actions.

The distinctions in traditional Sukuma society that cannot be subjected to a treatment in terms of social stratification, e.g., the distinction between members of different age-based voluntary associations, were certainly obvious to the members of the society. Associated with these positions were certain rights and duties that acted as reference points for social interactions. Differences in economic prosperity and prestige were probably also perceived as such by the Sukuma, but studies so far have not paid much attention to the specifics of these dimensions and their subdivisions.

Most of the old distinctions except for the political ones continue to exist and to be important in present-day Sukuma society. In addition, at least some of the new positions seem to emerge as a group (stratum) that shows behavioral patterns that are different from that of other groups. Contacts between officials and farmers are limited and rather tend to separate them as social groups. Differences between them are often increased by the fact that officials frequently come from other areas and have no local ties. They will be transferred again before they can develop too close local connections. Therefore, officials more likely tend to look at people's education, their different styles of life, and their different sources of income as

reference points for their behavior rather than at their contacts with the local farming population.

Many of the assumptions of stratification theory cannot be tested or are not applicable to the Sukuma. Still some differences in traditional as well as in contemporary society can be approached in terms of social stratification: differences exist along various unrelated dimensions; some social differences can be seen as a form of ranking; at least in the contemporary social system different strata can be defined. The degree to which social behavior is influenced by differences of ranking, has to be studied more closely. Different behavioral patterns might take the form of hostility towards other social groups and lead to class conflict but they do not have to do so.

Some Further Problems

The Concept

Up to this point stratification has two meanings associated with it: (a) It is a hierarchy of individuals or social groups in a society. The members of each stratum are more or less equal among each other, interact more frequently with each other than with members of other strata, and their treatment of members of other strata is similar. (b) This hierarchy is characterized by a differential distribution of commodities in the society. Some of these commodities are are ascribed (e.g., kinship affiliation and age), others can be influenced by human actions (e.g., ownership of goods, use of services). The distribution of different items does not have to show the same

pattern, which means that there can be more than one hierarchical arrangement in a given society at a given time.

These two features, however, do not fully describe the potential of the concept of stratification. The pattern of distribution of goods, services, prestige, etc. in a society implies the notion of power by those who have these items, particularly the notion of control power. Possession of a commodity in itself has no social meaning, only its use gives it one. Power becomes socially relevant only when it is exercised in order to achieve one's own ends and/or to influence others. Power in connection with social stratification means: (a) various hierarchical arrangements of strata can be interpreted as arrangements of power; (b) the flow of goods in a stratified social system is controlled by the power of those higher up in the hierarchy.

The aspects of power and control as important features of social stratification have been pointed out by Max Weber, Gerhard Lenski, and Erhard Wiehn. Max Weber has never developed a theory of social stratification. He deals with classes and status groups only twice in his main opus "Wirtschaft und Gesellschaft" (1964): once in order to develop a taxonomy of classes and status groups (223 - 227), and once when he concerns himself with the patterns of power distribution in a society (678 - 689). Classes (based on economic interests) and status groups (based on privileges and social prestige) together with political parties are phenomena of the distribution of power in a society. Power is defined as the chance to achieve one's ends even

against the resistance of others[1] (678). The fact that Weber acknowledges the existence of several modes of the distribution of power means that power can be subdivided into different forms. Economic power and power based on privileges and prestige are not the same conceptually, but in reality they interact a great deal: prestige is used to gain economic power and vice-versa (679).

Lenski tries a synthesis of earlier approaches to the problem of social inequality. He makes reference to Marx's class theory, to Weber's multidimensional distribution of power, and to the structural-functional stratification theory. Lenski defines a stratum (which he calls "social class", a term which I have restricted to a Marxist approach)[2] as "an aggregation of persons in a society who stand in a similar position with respect to some form of power, privilege, or prestige" (1966: 74 f.). Privilege and prestige are, however, not independent variables but functions of power (45). The above definition has therefore to be interpreted as largely referring to similarities in power (75). Various aggregations of persons can be arranged hierarchically according to the degree of power they have. As power can take different forms (e.g., force, institutionalized power = authority, property), different hierarchies can be observed in a single society. An individual may be a member of several "power

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[1] in German: "Unter 'Macht' wollen wir dabei hier ganz allgemein die Chance eines Menschen oder einer Mehrzahl solcher verstehen, den eigenen Willen in einem Gemeinschaftshandeln auch gegen den Widerstand anderer daran Beteiligten durchzusetzen" (678).

[2] Lenski arranges his social classes in class systems. As these systems in no way differ from the dimensions of stratification as discussed earlier, I will continue to use the terms "stratum" and "stratification" when referring to Lenski.

classes", one in each hierarchy, but he does not necessarily hold the same relative position in each.

The various hierarchies that exist in a given society are by no means equal to each other; their relative ranks can differ from society to society. In feudal societies the power system based on property dominates the others, while in socialist societies the political system is of primary importance (80 ff.).

The function of a stratification system--in Lenski's terms--is the distribution of goods and services in the society. In primitive societies (particularly hunting-and-gathering bands) distribution of goods happens according to need. In other societies the distribution of power controls the flow of goods (44). Lenski's assumption that two different forces--power and need--control the distribution of goods in societies with and without surplus has been criticized by Wiehn (1968: 136) who puts sole emphasis on the notion of power in his attempt to develop a theory of social inequality (143 f).

The original concept of stratification can now be extended. The dimensions of social inequality in a stratified society can be interpreted as dimensions of power that control the distribution of goods and services. In traditional Sukuma society, for example, age and membership in the old men's society meant power to control village affairs; ownership of cattle meant power to build up a network of obligations by loaning out animals. In contemporary Sukuma society political position means power to enforce government regulations through the application of official sanctions. Education gives power over illiterates, because it implies new knowledge, access to new information, etc. and it surpasses the possibilities of control by

illiterates. To what extent the flow of goods, particularly that of new items, is controlled by the power systems, has to be studied later. That there might be such a relationship can be inferred from Kitching's observations in other parts of Tanzania (1972b: 345).

Multidimensionality and Status Inconsistency

Lloyd Warner was one of the first who tried to define social strata in empirical terms. Using a functionalist concept of social stratification in which people rank each other as socially superior and inferior Warner tried to study a New England town. He finds four dimensions along which people are ranked: occupation, income, house type, and residential area (Warner, Meeker and Eells 1949: 123). Each of these dimensions is subdivided into seven categories for the actual placement of individuals, and each dimension is assigned a different weight. By achieving a numerical index ("Index of Status Characteristics" : ISC) he arrives at a hierarchy of point ranging from four to eighty four without any natural divisions. In order to define the boundaries of various strata Warner has to rely on the evaluations by his respondents (e.g., the 400's, the good people, those who don't give a damn and are not worth anything). In subdividing the objective ISC in terms of subjective evaluations he has to assume the existence of a value system shared by all members of the community, if his stratification model is to reflect that of the town residents which has influenced their interactions with each other.

As an individual may occupy different relative ranks in different hierarchies for social evaluation, it is necessary to use a multi-

dimensional analysis that takes into account status discrepancies. If we assume that an individual's social status in a stratification system influences his behavior, there is no reason to believe that only the total status (i.e., the sum of all rankings) has this effect, but that the particular arrangement of individual ranks and the discrepancies that may exist between them are of some importance, too.

In a 1954 article Lenski first approached the problem of status inconsistency, formulated some hypotheses about its effects, and tried to test them. The term "status crystallization" means that an individual occupies comparable ranks on all dimensions of social stratification (e.g., education, occupation, income, ethnicity). The lack of comparability is called "status inconsistency" or "status discrepancy". Lenski assumes that status inconsistency produces stress which induces individuals to favor political change, i.e., to vote for a liberal political party.

Lenski's hypotheses have been retested many times, occasionally with somewhat different results (Baumann 1968/69; Stehr 1971; Olson and Tully 1972; Blinkert, Fülgraff and Steinmetz 1972) which led to criticisms of the original concept and also to further refinements. The various critiques, however, never questioned the usefulness of the general concept of status crystallization and status discrepancy, as all accepted the notion that stratification is composed of a multitude of dimensions that are at least partially independent of each other. Criticism rather focused on methodological problems--whether Lenski is really able to measure, what he pretends to measure; whether the mathematically found inconsistencies are also

perceived as such by the members of a society; or whether all types of status inconsistencies are alike:

(a) In order to achieve mutually comparable dimensions and to develop a measure of status inconsistency, Lenski divided the dimensions of income, education, occupation, and ethnicity into equal numbers of ranks. Although this procedure might be necessary for statistical purposes, it is purely arbitrary with regard to the reality of social stratification itself (Doreian and Stockman 1969: 51).

(b) Blalock (1966; 1967a; 1967b) criticizes Lenski's concept from a mathematical point of view. He points out that there are too many unknown factors that influence social behavior. It therefore is almost impossible to single out the effects of status inconsistency unless some very severe restricting assumptions are made. Thus according to Blalock, Lenski is not able to mathematically support his hypothesis that the observed liberal voting behavior is actually (or at least primarily) due to status inconsistency and not to other factors.

(c) Stehr (1971) and Nelson (1973) question whether Lenski's operationalization of status inconsistency is not merely a theoretical construct that does not measure actually experienced inconsistencies. Stehr replicated Lenski's original study in Germany but added questions about subjectively experienced status inconsistencies to his questionnaire. He found that only a small proportion of those who said that they experienced inconsistency were classified as such on the objective scale (Stehr 1971: 45). Obviously the researcher's categories for measuring status inconsistency should be congruent to those of the study population. However, only a primary collection of

data specifically for the purpose of studying status inconsistency can take such considerations into account. A secondary analysis, on the other hand, most likely has to be limited to an objective definition of status inconsistency. A congruency between objective and subjective inconsistency cannot be more than a rough estimate on the basis of the general knowledge of the situation.

(d) Blinkert, Fülgraff and Steinmetz (1972) explore the notion that there are several types of status inconsistency, and that not all of them might have the same effect on social behavior. Inconsistency can be perceived either as deviance of actual status combinations from generally expected patterns ("status deviance"), or as a discrepancy between an individual's ranks on different dimensions ("status diparity"). The authors feel that these two forms of inconsistency have usually not been differentiated. Theoretical discussions tend to focus on the first form, while the effects of the second are actually measured. But the behavioral consequences of the two forms differ widely. Status disparity produces an interest in changing existing conditions, whereas status deviance is often experienced as frightening, combined with a fear of changing the social environment. With regard to the Sukuma I will be talking about status disparity, the discrepancy between rankings on different dimensions of social stratification. It is not possible to deal with the problem of deviance from general expected status combinations, because I have no way of defining these general expectations.

An attempt to apply the concept of status inconsistency to the Sukuma faces a series of problems that will permit only a tentative interpretation of the results: (a) So far only political voting be-

havior has been studied under the aspect of status inconsistency. Although voting for a liberal party, i.e., favoring change, has been associated with inconsistency, voting for something is not the same as actually accepting an innovation. (b) I cannot account for subjectively experienced status inconsisteny. I can only assume that most people are aware of the differences between a traditional and a modern status, and their relative position with regard to both. (c) I cannot exclude the effects of other factors on the acceptance of innovations. There can only be a general awareness that there are important outside factors such a national development plans and specific government campaigns to enforce the desired innovative behavior. (d) So far nobody has tried to study Sukuma society in terms of social stratification and to find valid dimensions of social inequality. As the concept of status inconsistency is dependent upon that of stratification, statements about the effects of inconsistency are necessarily restricted by the validity of findings about social stratification. (e) Status inconsistency among the Sukuma has to take the direction of the discrepancy into account. The major dimensions of social stratification to be studied will be traditional and modern status, two dimensions that are commonly perceived as being antagonistic. A discrepancy between a high modern and a low traditional status therefore might have effects that are quite different from one between a high traditional and a low modern status.

Before paying further attention to questions of status inconsistency the system of social stratification among the Sukuma has to be described in more detail by using the information that was collected during the summer of 1970.

CHAPTER V

SOCIAL STRATIFICATION AMONG THE SUKUMA

An analysis of social stratification in Sukumaland has to take into account the changes which Sukuma society has undergone during the last decades, particularly the disappearance of old positions of authority and the rise of new roles and positions that do not fit into the traditional system. Some of the changes are so recent that their quantitative impact is not yet very great, but they mark important qualitative changes. Although the sample is not representative for the population as a whole, it allows an analysis of such qualitative differences.

The present sample of 1067 male respondents is composed of occupants of fifteen different positions. Most of them are represented in almost every ward, but are not necessarily very numerous there. The list of positions includes (s. also Table 1)[1]:

- Divisional Secretaries: they are administrators and responsible for whole divisions. They are the only category in this sample that cannot be found in every ward.
- Ward Executive Officers: they are the lowest ranking government administrators that still receive salaries. There is one WEO in each ward.

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[1] All tables will be found in Appendix A.

- TANU chairmen: they are the elected heads of the local party branches. Usually there is one party branch and therefore one TANU chairman in each ward.
- TANU secretaries: they are officials appointed to each party branch office in order to do clerical work, etc. They also receive salaries.
- Primary society chairmen: they are the elected heads of the local cooperative societies.
- Primary society secretaries: they have the same position within the local primary society as the TANU secretaries have within the party offices. They are also appointed and paid by the government. As such they are an instrument of government control over cooperatives.
- Ten-cell leaders: they are the lowest ranking party officials elected by units of ten houses. They are members of the Ward Development Committee which makes decisions about local development projects. The number of cell leaders in each ward depends on the number of households in the community and therefore can vary greatly.
- Progressive farmers: this is a title given to farmers as a reward for following the advice of the agricultural extension service and using new agricultural techniques. This reward was originally used as an incentive towards modernization but was discontinued in the late 1960's.
- Large cattle owners: these are farmers known to have large herds of cattle compared with the rest of their communities. The actual number of animals owned could not be asked, partially because of the complex pattern of cattle ownership and trusteeship, and par-

tially because the knowledge about the exact size of one's herd is a farmer's personal secret which he does not share with anybody else.

- Farmers without cattle: these are farmers who were known to the interviewer as having no cattle. The distinction between farmers with and without cattle was important for the purpose of the original study, and it is also socially relevant in terms of prestige, etc.
- Banamhala: they are the village elders, remnants of the former "Old Men's Society". They attempt to settle local disputes before they could be taken to court.
- Bafumu (singular: "nfumu"): they are religious practitioners among the Sukuma. Usually they are farmers and practice their healing on the side.
- Baningi (singular: "ningi"): they are singers and leaders of dance societies. They had an important political position before independence as distributors of news and opinion makers, but their importance has now declined.
- Church related persons: they are usually catechists or local assistants of different church groups. The particular church affiliation of the respondents in this category is not known; it can be Muslim, catholic, or protestant.
- School headmasters: they are usually the headmasters of the local primary schools.

As the original study was geared towards factors influencing agricultural development, one group of people was excluded from the list of possible respondents: local artisans and businessmen. Having

such a separate group of respondents would have added some information to our study of Sukuma social stratification, but it is not necessary in order to assure a certain success of this analysis.

The Variables

In using a multi-dimensional approach to the study of Sukuma social stratification two major sets of status variables have to be distinguished: one that designates status in terms of the traditional social system, and one that defines an individual's place in a modern nationally oriented social hierarchy. It is possible to assign a place to each individual in each hierarchical system.

Traditional Status

Neither in traditional nor in modern Sukuma society is social status a one-dimensional concept. Power and prestige have always depended upon a number of factors. Although kinship affiliation with a chief was an important dimension of social status in the traditional society, information about it cannot be acquired through a general survey. It is sensitive information in so far as nobody wants to be publicly associated with the ousted political system. Such an acknowledgement would endanger a person's aspirations for advancement or a political career.

Information about other dimensions, however, is more readily available. Therefore, traditional status can be operationalized in the following dimensions:

(a) Principal occupation. In traditional society, the survival and prosperity of a household depended upon a man and his family's ability to farm. Only the chief was exempt from cultivating his

fields. Any other Sukuma who did not farm was probably too lazy or too stupid to farm and support himself. At the present time still the majority of the respondents say that they are primarily farmers (Table 2). Such a situation is typical for a preindustrial society like Tanzania. Being a farmer will be interpreted as an asset in terms of a traditional status hierarchy.

(b) age. Knowledge in traditional society was usually associated with old age. The "Old Men" were asked for advice and controlled the village life. Although age-based voluntary associations as an institutional expression of the importance of old age have disappeared in some areas, the village elders are still responsible for arbitrating disputes between villagers. The age distribution in the sample still shows the importance of middle-aged and older people (Table 3), in spite of the fact that on a nationwide basis half of the population is less than twenty years old (ILO 1973: 14).

(c) ownership of cattle. All sources about Sukuma society agree that cattle are a sign of wealth and prestige for the Sukuma. Although it is not possible to obtain precise information about the number of cattle owned, it is possible to distinguish those who own cattle from those who do not (Table 4).

(d) number of wives. Monogamy is only required of practicing Christians by their religion but not by the modern state of Tanzania. A third of the respondents still have two or more wives (Table 5), an achievement that gives them high social status in a traditional way.

(e) size of household. Together with owning many cattle and having amny wives the size of a man's household (kaya) was a sign of

a man's wealth and social importance. A large household meant that he had many helpers in cultivating his fields, and that he probably could produce more than he needed and either sell his surplus or give feasts for the community and thereby increase his prestige. Large households are still characteristic of many Sukuma (Table 6).

Modern Status

Modern Status is not merely the opposite of traditional status (i.e., low traditional status automatically means high modern status) but has to be operationalized in terms of its own. Some information that has commonly been used as a measure for social status cannot be obtained: e.g., income is a meaningful category for measuring social status only with regard to those people who receive salaries. Farmers consider only income from the sales of cash crops as such but do not include that which they grow for their own needs. Therefore information about the income of farmers and non-farmers would not be comparable, even if it had been included in the original questionnaire.

The information that is available to measure modern status relates to various dimensions of knowledge: knowledge to read and write, knowledge of languages, knowledge of other people and other places. It is assumed that knowledge is a form of power, particularly in a society that is changing rapidly. Therefore those who know something have a higher modern status than those woh do not.

Modern status will be operationalized through the following variables:

(a) education. There are two variables in the sample that refer to different aspects of education: formal education and special

training courses. These dimensions are the modern equivalents of age with regard to the acquisition of knowledge. In order to find new non-farming jobs a person has to be able to read and write. Slightly more than half of the respondents in the sample have attended schools (Table 7), but only one fifth had any special training courses (Table 8).

(b) language ability. Tanzania's national language is Kiswahili. It is taught in primary schools and is used to make public speeches, announcements, etc. English is still the language of instruction at secondary schools and at the university. Radio broadcasts are made in both Kiswahili and English. People in rural areas usually speak their local languages, e.g., Kisukuma in the districts of Maswa and Shinyanga, and Kinyamwezi in Kahama and Nzega. As Kiswahili used to be the trade language of East Africa, many people know at least some Kiswahili even if they never went to school. Knowledge of Kiswahili or English is an important dimension of modern status, because it gives a person access to new information (Table 9).

(c) reading. Although the ability to read is dependent upon formal education, reading can be used as a dimension of modern status because it shows a person's interest in affairs outside of his immediate environment and in information that can be applied to the local situation. It does not stop as school attendance does and thus adds additional information (Table 10).

(d) migration. Two variables, frequency of moving and range of migration, are commonly considered to be indicators of modern behavior, while sedentariness is associated with traditionalism. It is assumed that a person that has moved many times and has seen many

different places is more interested in national matters and is more open to new ideas, i.e. he is more knowledgeable and therefore should rank higher in a modern sense than a person who has always remained in the same place (Tables 11 and 12).

(e) An important dimension in determining modern social status would be a person's position in relationship to a national power hierarchy, particularly party and administration. However, there is not enough information available beyond that of a respondent's formal position (which was the basis for selecting him as part of the sample). Information about party membership, participation in party or community affairs, membership in committees, etc. would be required in order to operationalize this dimension of power satisfactorily. Even a respondent's known position does not always allow one to define his relative position of power clearly--e.g., a school headmaster in relationship to the Ward Executive Officer or the TANU chairman, the secretary of a primary society compared to the society's chairman, the party chairman as compared to the WEO. As relative power cannot be operationalized for this particular sample, it cannot be included in statistical calcualtions as a separate dimension.

Stratification

As all data in the present sample have been coded numerically (s. Appendix B), it is possible to perform some statistical computations and to construct a number of scales. The status variables have been combined into two scales, one for traditional and one for modern status. The variables "formal education", "special training",

"reading of newspapers, etc.", "number of previous residences", "Largest previous residence", and "language ability" were combined into a scale for modern status. The traditional status score was constructed with the variables "principal occupation", "age", "size of household", "ownership of cattle", and "number of wives".

In constructing these scales three problems arose: (a) for the construction of scales one must have at least ordinal variables, but some variables were nominal; (b) not all variables have the same number of categories, so that the question of weighting arose; and (c) how should the "no answer" cases be treated.

In particular, the variables "language ability" and "special training" had to be recoded from nominal into ordinal ones. As it was not possible to rank the various types of special training--leadership, vocational, agricultural, and literacy training--relative to each other, all of them were assigned the same value of "1" in order to distinguish them from those who had not attended any special courses or who did not answer this question.

With regard to the variable "language ability" it was assumed that the knowledge of languages influences and limits an individual's range of communication. Therefore the original six categories of language ability (in addition to the "no answer" category) were recoded to indicate a hierarchy of ranges: "1" Knowledge of one or more local languages, where the information exposure is limited to talk among the local population and to conversation with outsiders who know Kisukuma or Kinyamwezi. "2" Knowledge of Kiswahili or English but no local language. Individuals in this category are able to understand outside information as presented in newspapers, radio broad-

casts, official speeches, etc., but they are not able to communicate with individuals in category "1". Thus their range of communication is broader with regard to the outside world and with regard to their potential adoption of innovations, but it is limited with regard to the local population. "3" Knowledge of at least one local language, Kiswahili, and maybe English. Individuals in this category rank highest, because their range of communication is largest. They have the ability to bridge the communication gap between different levels of the national social structure.

- Among the variable set for the traditional status scale "principal occupation" had to be recoded in order to assign the higher value of "2" to "farmer" instead of to "non-farmer".

As already mentioned earlier, not all status variables have the same number of categories. Variables with many categories will achieve a greater weight in computing a multiple scale than variables with few categories. For each variable it had to be determined individually what weight the variable should have in relationship to the other variables in the same scale.

Among the modern status variables "reading of Newspapers, etc." was recoded in order to assign a value of "0" to the answer "I never read anything" (s. Appendix B). Most modern status variables achieve a highest value of either "3" (language ability, reading of newspapers, etc.) or "4" (formal education, largest previous residence). As it was not possible on the basis of the present knowledge of Sukuma society to decide whether any of these variables should be assigned a greater weight than the others, the above values were not altered any further. The variable "number of previous residences"

(highest value: "6") was recoded to have no value higher than "4", because it does not seem to be that much more important than others to warrant the original larger values. In the course of the data analysis it was also found that special training is rather unimportant as an independent status variable but reinforces effects of formal education. Therefore it was felt unnecessary to assign it a higher weight than "1".

With regard to traditional status "age" and "size of household" seem to be the most important indicators of high status. Both are rather obvious and are displayed more openly in the community than, for example, cattle ownership. Therefore it was decided not to reduce their numbers of categories but to retain the original values. Thus the traditional status scale is weighted in favor of these two variables of "age" and "size of household".

Finally, a decision had to be made about the "no answer" category. Several possibilities were considered about how to treat such cases: to omit them from the scale construction, to assign them mean values, or to keep the cases but assign them a value of "0". Eventually the last option was chosen, because it was not possible to separate the "no answer" from the "no" cases. If all the "no/no answer" cases were dropped from the scale construction, the sample would have become too small. On the other hand, if the "no answer" were to be assigned mean values, all the "no" cases would have also received the same value, although they should have been excluded from this procedure. By treating the "no/no answer" cases as "0", it was possible to assign a social status to each individual in the

sample, although at times it might be lower that it should have been, if the respondent had given complete information.

For each individual two status scores were computed: a traditional and a modern one, by adding up an individual's values on each status variable in the two sets of traditional and modern status variables. The scores for modern status range from 0 to 18 on a possible scale of 0 to 19 points, and the traditional scores achieve values between 4 and 22 on a scale that ranged from 0 to 22. These scores can be interpreted as rank hierarchies of individuals: the higher the score the higher an individual's rank.

However, it is unlikely that people are aware of their ranks on objective scales such as the above, and that such ranks have any relevance with regard to their patterns of interaction. More likely, individuals with similar ranks are treated alike as one category. Therefore it is necessary to divide the modern and traditional status scales into categories that are larger than the individual scores, and that might approximate people's perception of social inequalities in their society.

There are no natural breaking points or clusters discernible on the two scales which would permit an easy and obvious subdivision into a number of different categories. There are also no cues in the literature that could be used for defining the boundaries between these categories. Therefore two different attempts of subdividing the scales have been made: a dichotomous and a trichotomous system has been constructed. However, as the first system did not yield significant results in the further course of the study, it will not be discussed here any further. Assuming that a trichotomous system

approximates a stratification model of social inequality, each of the categories into which each scale is divided can be called a "stratum", and all individuals belonging to the same stratum will be treated alike. On the modern scale the ranks 0 to 5 compose the lower, 6 to 12 the middle, and 13 to 18 the upper stratum. In the same way, on the traditional status scale ranks 4 to 9 indicate the lower, 10 to 16 the middle, and 17 to 22 the upper traditional stratum.

An individual's position in a stratum is his social status. As there are two stratification hierarchies, each individual has two statuses, a traditional and a modern one. The two are not necessarily alike but can be combined in a number of possible ways (Table 13).

Status Inconsistency

Lenski compared four status dimensions, each subdivided into ten categories in order to study status inconsistencies. He used the frequency distributions of respondents in all the categories as a basis for computing status inconsistency. At first, he established the midpoints of the percentile ranges in each category. Then he computed the square root of the sum of the squared deviations from the means of the four hierarchy scores of the individual, and finally subtracted the resulting figure from one hundred:

$$\text{status crystallization} = 100 - \sqrt{\text{dev}^2}\,.$$

The higher an individual's status consistency, the closer did his value of status crystallization approximate 100. About one fourth of the respondents with the lowest scores were classified as inconsistent by Lenski, while the others were treated as having consistent statuses (Lenski 1954: 407). However, Lenski's operationalization

seems to be rather arbitrary. It is hard to perceive that it measures something that might still be socially relevant.

As I am comparing only two dimensions with few subdivisions, I can use a simpler way of measuring status discrepancies by merely subtracting modern from traditional status. In each dimension an individual's status can achieve values between 1 (low status) and 3 (high status). By subtracting two statuses from each other I receive values ranging from -2 to +2. A value of 0 means that there is no discrepancy between an individual's two statuses. A value of -2 indicates a large discrepancy between a high modern and a low traditional status; +2 stands for a large discrepancy between a high traditional and a low modern status. This approach not only indicates the existence of a status discrepancy but also its direction.

The Strata

On the basis of the discussion of social stratification in the previous chapter and on the basis of a general knowledge of Sukuma society, a few hypotheses can be formulated about some characteristics of a system of social stratification among the Sukuma:

(a) Relatively new positions such as teaching or the various administrative and party jobs rank higher in the modern status hierarchy than do farming or traditional positions, because some of the variables that define modern social status (e.g., formal schooling) also mark entrance requirements for these jobs.

(b) Earlier I have mentioned the assumption about the formation of classes in African states--a new class is emerging that is primarily composed of bureaucrats and politicians. If this assumption is

is true, then all bureaucrats and politicians (Divisional Secretaries, Ward Executive Officers, TANU chairmen) among the Sukuma should have high modern status. Furthermore, the group of people who hold high modern status should only be composed of these officials.

(c) Occupants of the same position are generally so much alike (in addition to the already mentioned officials), that they all have the same social status. In other words, social position is a good indicator for social status. However, the opposite hypothesis can be presented based on the knowledge of Tanzania's history after independence: As Tanzania lacked sufficient qualified personnel to replace the departing British officials adequately, she had to resort to less qualified people. Therefore, at least the occupants of modern jobs in party and administration are very heterogeneous.

(d) The traditional and the modern, nation-oriented social systems are often seen as incompatible, and as two social systems between which there is no historical continuity. Therefore, occupants of high traditional status should hold low modern status and vice versa. But on the basis of Miller's study (1968) an alternative hypothesis could be formulated, that there is a continuity between those who hold high traditional and those who hold high modern status.

Upper Modern Stratum

There are 138 individuals in the sample who have a high modern status. School headmasters, Divisional Secretaries, and Ward Executive Officers account for 53.6 per cent of the people in the upper modern stratum. Another 28.2 per cent are composed of church related

persons, primary society secretaries, TANU secretaries, and TANU chairmen. 52.6 per cent of the Divisional Secretaries, 54.1 per cent of the school headmasters, and 41.4 per cent of the Ward Executive Officers have a high modern social status (Table 14). It thus seems that the upper modern stratum is dominated by administrators and teachers.

As a group, the Divisional Secretaries are the best educated in the sample. More than half of them have completed a Standard X (lower secondary school) education, compared to 41.9 per cent of the school headmasters and 20.7 per cent of the Ward Executive Officers. There are few who did not have any formal education and/or did not give any information about their school attendance. Most of them completed primary school (Standard VIII). None of the administrators or headmasters has completed secondary school (Table 16). In comparison with other groups in the sample the general educational level of administrators and teachers is high, and is approximated only by church related persons, party and cooperative secretaries. The school headmasters in particular received special training in addition to their formal education, mainly teachers' training but also some other forms of special education (Table 17).

Almost all of the administrators and headmasters are multilingual. Many not only speak the local language (i.e., Kisukuma or Kinyamwezi) but also the national language (kiswahili) and English (Table 18).

Divisional Secretaries and school headmasters are the groups of respondents most interested in news. 77 per cent of the headmasters and 68.4 per cent of the Divisional Secretaries say that they

regularly read newspapers, party publications, etc. Fewer Ward Executive Officers try to keep well informed on a regualr basis than TANU secretaries or church related persons (Table 19). The reasons for such a lack of interest on the side of the WEOs are not known.

School headmasters and Divisional Secretaries are the most mobile in the whole sample, closely followed by Ward Executive Officers and church related persons. 89.2 per cent of the headmasters and 84.2 per cent of the Divisional Secretaries have had one or more residences previous to their present one. 79.3 per cent of the Ward Executive Officers and 75 per cent of the curch related persons have lived at other places (Table 20). The high mobility of administrators is not at all surprising because of the national policy of transferring them frequently.

Divisional Secretaries are the only group where more than half have been exposed to cities, compared to 20.1 per cent among the school headmasters and 15.5 per cent of the Ward Executive Officers (Table 21). The range of possible residences is, however, not related to the frequency of moving.

The hypothesis about an emerging new class of bureaucrats and politicians is neither clearly supported nor clearly disproven with regard to the composition of the upper stratum in a rural area in Tanzania because of the high social position of school headmasters (teachers). Thus the upper stratum in the modern stratification hierarchy among the Sukuma is more characterized by administrators and teachers than by local politicians. It seems that the upper stratum has a broader range of social positions than could be expected on the basis of the above hypothesis. But it is not possible to decide

whether the groups that are already overrepresented in the upper stratum will increase their proportion and thus extend their dominant position , or whether other groups will push up and maintain a broader range of positions represented in the top stratum. Still all who have high modern status and those who aspire one have influential positions, although not always in the government hierarchy. Thus the upper modern stratum is characterized by a certain amount of power.

Middle Modern Stratum

565 individuals have a medium modern status. The modern middle stratum is primarily composed of people who hold an office in the modern state system: Ward Executive Officers, church related persons, the chairmen and secretaries of primary societies, TANU chairmen and secretaries, and progressive farmers account for 46.7 per cent. In each of these categories of respondents more than the average proportion of 53 per cent of the members have a medium status. In addition, 50.9 per cent of the cell leaders belong to the middle stratum, adding 20.2 per cent to the large proportion of modern office holders in this stratum (Table 14).

TANU and primary society secretaries have achieved a similar educational level as the Ward Executive Officers, i.e., most of them have finished primary school (Standard VIII). Church related persons and primary society chairmen have less formal education than party and cooperative secretaries. The majority of TANU chairmen and progressive farmers have at least four years of primary school, but the percentage of those who never attended school is even higher than among the church related persons and the primary society chairmen (Table 16).

Between 40 and 50 per cent of the church related persons, TANU and primary society secretaries have received various forms of special training in addition to their formal education. TANU secretaries predominantly attended leadership training courses, while most of the church related persons and primary society secretaries received vocational training. With respect to the percentage of people with special training they are only exceeded by school headmasters. A number of TANU chairmen and progressive farmers who did not have any formal education have participated in adult literacy training and have learned how to read and write. Some more TANU chairmen attended leadership courses. Together with their secretaries they account for 38 per cent of all the individuals in the sample who have attended such courses. Progressive farmers who participated in agricultural training courses constitute 20.7 per cent of all those who received such training (Table 17).

Most of the individuals with a medium modern status know at least Kiswahili in addition to the local language. One third of the primary society secretaries and 40 per cent of the TANU secretaries say that they also know English in addition to the other languages. The knowledge of non-local languages in all groups representative of the modern middle stratum is higher than the sample average (Table 18).

More than half of the church related persons and the TANU secretaries say that they read newspapers and other publications on a regular basis. Primary society officials are somewhat less eager about keeping informed on a regular basis and are in this respect much like Ward Executive Officers. TANU chairmen are even less concerned about

informing themselves regularly. They are very much like progressive farmers in this respect--less than one third reads regularly, although most of them try to read newspapers at least occasionally.

As mentioned earlier, church related persons are only slightly less mobile than Ward Executive Officers. But there is a large gap between them and the majority of the sample. The next mobile group are the progressive farmers, where 60 per cent have lived in other places besides their present residence. TANU and primary society secretaries are among the most sedentary people in the whole sample--more than half still live in their first residence and have never moved. TANU and primary society chairmen have moved slightly more often than their secretaries (Table 20). On the basis of comments about the frequent transfers of officials, the relative sedentariness of TANU and primary society secretaries is a surprising observation. It could possibly be explained by the fact that many secretaries are still very young people who obtain their first jobs in their home areas and will be transferred later as they advance in their careers.

Progressive farmers are not only more mobile than many others in the medium modern stratum, but many of them have also lived in urban environments. Possibly their higher mobility has made them more aware of alternative approaches to a problem and influenced their receptivity to specific agricultural innovations so that they eventually were rewarded the title of progressive farmer (Table 21).

Considering the composition of the middle stratum of the modern stratification hierarchy, the assumption is supported that at least the modern stratification dimension is related to the distribution of power and influence in society. Most people with a medium modern

status have some primary education, sometimes some additional special training, know the national language in addition to the local one, and many of them do read newspapers and other printed materials fairly frequently. They have access to new information, and many are in official positions where they can control the flow of information and also the distribution of commodities.

The middle stratum differs from the upper one in the degree to which people with medium modern status exhibit certain social characteristics. However, whether these distinctions also mark differences in absolute power is questionable. In relationship to the lower stratum which will be described next, the medium stratum is certainly characterized by a larger amount of formal power expressed in the high proportion of officials of various kinds.

Lower Modern Stratum

The lower modern stratum is composed of 364 individuals. Many of them are farmers and holders of traditional offices: bafumu, baningi, large cattle owners, banamhala, and farmers without cattle, who make up 56.1 per cent of the lower stratum. 46.4 per cent of the cell leaders also belong into this stratum, in spite of the fact that they hold an officially recognized modern office. They account for another 28.6 per cent of the people with low modern social status (Table 14).

The level of formal education among people with low modern status is very low. Less than 40 per cent of the Ten-cell leaders and the farmers without cattle have attended school. Among the large cattle owners, baningi, banamhala, and bafumu even fewer have had

some kind of formal education. Only between 10 per cent (bafumu) and 30 per cent (baningi) ever went to school (Table 16).

17.9 per cent of the Ten-cell leaders have received some special training, particularly adult literacy education. Also 12.3 per cent of the farmers without cattle have attended various kinds of special courses. But among the other categories of respondents those who attended courses amount to less than 10 per cent of the members of each category (Table 17).

The best knowledge of languages in the lower modern stratum is found among the Ten-cell leaders and the farmers without cattle. Two thirds of them claim to know Kiswahili in addition to the local language. A majority of the baningi, banamhala, and large cattle owners also say that they are bilingual with Kisukuma (Kinyamwezi) and Kiswahili. The bafumu are the only group where a majority claims to know the local language only. The rather widespread knowledge of Kiswahili even among people with little education is not very unusual, because Kiswahili has been used as a trade language all throughout East Africa for many years. However, as Hatfield notes (Field Notes 1971: June 6) in many instances the actual command of Kiswahili is not enough to actively participate in discussions or to understand the fine points of public speeches (Table 18).

Only about 10 per cent of the Ten-cell leaders, farmers without cattle, large cattle owners, and banamhala say that they read newspapers and journals regularly. Still about half of the cell leaders and the farmers without cattle say that they try to read sporadically. Among the other groups the general interest in news from outside the local environment es even less (Table 19).

The relative mobility of the members of the lower modern stratum is similar to that of most people in the middle stratum. About half stay where they have always been, and the other half moves around (Table 20). It seems that there is a general pattern in Sukuma culture that favors migration, particularly rural-rural migration. The ratio of 1.4 moves per person within the sample is more than could be expected from an agricultural society. But typically, most people have lived in other villages or small towns, i.e., they stayed within a rural or semi-rural environment (Table 21). This result supports Heijnen's (1968) observation that rural Sukuma who have not acquired any special skills prefer to move to new agricultural land instead of trying their fortune as unskilled workers in the cities.

Ten-cell leaders rank higher in many respects than most other members of the lower stratum; one half of them even have a medium modern social status. It seems that frequently individuals are elected as cell leaders who have more modern qualifications than other members of the unit of ten houses. This, however, does not necessarily mean that they are extremely advanced in modern terms from a supra-local point of view. The observation that farmers without cattle are similar in most respects to the Ten-cell leaders cannot be explained on the basis of our present knowledge about the sample.

After the description of the three strata that compose the modern stratification hierarchy we can turn again to some of the hypotheses that have been presented earlier. In general, new jobs rank higher than farming or traditional positions. The only exception are the Ten-cell leaders who occupy a newly created position but often belong to the lower stratum. The lower status of cell leaders can be

explained by at least two factors: (a) as the only requirement for becoming a cell leader is party membership, there is no need to select candidates that meet similar formal entrance requirements as higher government and party officials; and (b) as cell leaders are the grass-roots level of the party organization, they also should represent the population at that level and not be superimposed officials.

It is not always possible to use position as an indicator of social status. For example, while the upper stratum is mainly composed of three types of officials, many of the Divisional Secretaries, Ward Executive Officers, and school headmasters still have only a medium social status. In the same way, most of the Ten-cell leaders are in the middle stratum, but a more than average proportion is part of the lower stratum. It seems that at the moment social position is useful mainly as a first guess at social status but not as a definite indicator. This situation might improve in the future as more people with the necessary qualification become available to fill certain jobs. For our sample the measure of association between belonging to a certain category of respondents, i.e., having a particular social position, and modern status, Cramer's V, obtains a value of .43.[1]

Upper Traditional Stratum

The upper traditional stratum is composed of 107 individuals. One third of the large cattle owners and one fifth of the progressive farmers have high traditional status. A larger than average number of

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[1] Cramer's V is a measure of association for nominal scales. It ranges from 0 to 1 (s. Blalock 1960: 230).

banamhala, TANU chairmen and primary society chairmen also are part of the upper stratum in the traditional stratification hierarchy. Large cattle owners, progressive farmers, and banamhala alone account for 44.9 per cent of this stratum. 18.7 per cent are Ten-cell leaders; TANU chairmen make up 8.4 per cent and primary society chairmen 5.6 per cent of this stratum (Table 15).

All the groups represented in the upper traditional stratum are primarily farmers. Less than three per cent say that their principal occupation is other than farming (Table 22).

Large cattle owners and banamhala are the oldest groups in the sample. Their average ages are 56 and 57 years. Progressive farmers, primary society chairmen, TANU chairmen, and Ten-cell leaders are somewhat younger, their average ages ranging from 46.7 to 47.8 years (Table 23).

When asked about their cattle more than ten per cent of all the respondents in the sample refused to answer (Table 4). The reluctance to give any kind of information about cattle ownership also becomes obvious when different categories of respondents are compared. In no group do all the respondents say that they themselves or any of their household members own cattle. Even among the large cattle owners, all of whom were thought to own cattle, only 89.1 per cent say that they actually do so. More than 60 per cent of the TANU chairmen, Ten-cell leaders, and progressive farmers claim to have cattle, but less than 60 per cent of the banamhala and fewer than 50 per cent of the primary society chairmen do. As the percentage of "no answer" is particularly high among the banamhala, it is possible that there are more cattle owners among them than appears at first sight (Table 24).

The large cattle owners are the only group in the whole sample where the majority still have tow or more wives. Progressive farmers, TANU chairmen, and primary society chairmen are slightly more polygamous than the sample average, although more than half of them only have one wife (Table 25).

Members of the traditional upper stratum tend to have larger households than other groups in the sample. About half of the large cattle owners, progressive farmers, and primary society chairmen have households with more than ten members; the households of 14.3 per -cent of the large cattle owners and of 12.9 per cent of the progressive farmers are even very large with more than twenty members. Although not as many TANU chairmen have large households, there are still more who do than the sample average (Table 26).

Occupants of many more different positions belong to the upper traditional stratum than to the upper modern one. It is not characterized by a predominance of traditional positions in the same way as the modern upper stratum is dominated by administrative and teaching positions. The large proportion of primary society chairmen and TANU chairmen could be explained in two ways: either people who traditionally were prestigeous and influential were elected for these positions and exercise their traditional influence in a new way, or they used their positions as party and cooperative society chairmen to enrich themselves and display their wealth in a traditional way.[1] Probably cases can be found to support both possible explana-

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[1] During the 1960's there have been cases of misuse of cooperative funds (s. Maguire 1969), and complaints that it is only the officials who get rich in coops but not the farmers have been heard ever since (Hatfield, field notes: June 9, 1971).

tions. With regard to influence and power in community life their positions might be very important. Most of them combine a high traditional with a medium modern status (s. Table 27). They are people who have made it in both worlds, the traditional and the modern one. Therefore, their decisions and their behavior might carry more weight than the word of modern administrators in influencing the majority of the population. Thus they hold crucial positions with regard to acceptance as well as non-acceptance of new ideas and behaivoral patterns.

Progressive farmers are similar to TANU and primary society chairmen in many ways. They also can be accused of using their traditional wealth and prestige in order to gain access to government services and further preferential treatment from the agricultural extension service, thus merely increasing their personal position of wealth and prestige within the community. But another argument can also be made. As more than two thirds of the progressive farmers with high traditional status also have a medium or high modern status, they are obviously more educated and more interested in outside information than other farmers. They might use their superior knowledge to improve their agricultural practices and to make higher profits, which they then display in traditional ways, e g., in cattle, in acquiring more wives, etc. The first argument about possible reasons for the status of progressive farmers has been made more often (Ntirukigwa 1971; Kitching 1972b; Temu 1973) and has been held against them, that they are becoming a "class of rural capitalists".

The upper stratum in the traditional hierarchy cannot be regarded as a power group comparable to the upper modern stratum. Only

TANU and primary society chairmen have power positions which are, however, related to the modern social structure and not to the traditional one. Although the title "banamhala" is a traditional one, and although they have similar functions with regard to the settling of local disputes as they used to have in the old system, these functions have been reassigned to them by the modern national government in order to reduce the case loads in magistrate courts, and are therefore also integrated into the modern national system. On the whole, it rather seems that high traditional status now has the connotation of prestige and possibly personal power but not formal authority per se which can be used to enhance one's control power.

Middle Traditional Stratum

725 individuals, i.e., two thirds of the whole sample, belong to the traditional middle stratum. The groups that also compose the majority of the upper stratum account for 56.4 per cent of the middle stratum: large cattle owners, progressive farmers, TANU chairmen, primary society chairmen, banamhala, and Ten-cell leaders. Besides accounting for a more than average share of the traditional upper stratum, TANU chairmen, primary society chairmen, Ten-cell leaders, and banamhala are also overrepresented in the middle stratum. Bafumu and baningi also predominantly belong to this stratum. Large segments of other groups (e.g., primary society secretaries, church related persons, and school headmasters) can be found here, although in less than average numbers (Table 15).

Many of the individuals in the middle traditional stratum are still farmers (Table 22). The proportion of non-farmers is less than ten per cent.

Baningi tend to be relatively young with an average age of 37 years. In terms of age bafumu are quite unlike the baningi in that their average age is 52.5 years, similar to that of the banamhala. Ten-cell leaders are mostly in their 40's like TANU chairmen, primary society chairmen, and progressive farmers (Table 23).

Ownership of cattle is almost as important in the middle stratum as it is in the upper one. More than half of the baningi and bafumu admit having cattle. Similar to the banamhala relatively many do not answer this question, probably in order to conceal their ownership. (Table 24).

Fewer than average baningi are monogamous, while Ten-cell leaders and bafumu show the same trend as the total sample, i.e., about two thirds having only one wife (Table 25).

Relatively many bafumu have small or medium sized households. Also more than half of the baningi and Ten-cell leaders have households with seven or less members (Table 26), a slightly higher number than the banamhala, but very different from other groups that are represented in both the upper and the middle traditional stratum (e.g., large cattle owners, progressive farmers, TANU and primary society chairmen).

In terms of the groups that compose them, the traditional upper and middle stratum are very much alike. The differences between them seem to be differences in degree rather than in kind.

The fact that bafumu and baningi do not rank higher, although one would expect them to have high traditional status, is probably the result of the selection of variables in order to determine traditional status. The special abilities that characterize bafumu and

baningi, i.e., their power with regard to the supernatural and their ability as singers, entertainers, etc., are not included in the set of traditional status variables. Thus bafumu and baningi may have high prestige, but it is not reflected in such terms as size of household or number of wives.

In a comparison of the traditional and the modern status of members of the middle traditional stratum substantial differences between the various categories of respondents appear. Most of the TANU chairmen, primary society chairmen, and progressive farmers in this stratum also have a medium modern status. One fifth of the TANU chairmen and one eighth of the primary society chairmen even belong to the upper modern stratum. Banamhala, bafumu, baningi, large cattle owners, and Ten-cell leaders, on the other hand, frequently combine a medium traditional status with a low modern one (Table 27). These status combinations and their variations can be interpreted in a number of different ways:

(a) The traditional medium stratum--not the upper one--is the seedbed for those seeking advancement in the modern system without giving up their local ties, namely TANU chairmen, primary society chairmen, and progressive farmers.

(b) Traditional status is still important enough among the Sukuma to affect the election of local officials (e.g., Ten-cell leaders, TANU and primary society chairmen) and/or to give an incentive to elected officials that they try to strengthen their position and their potential for influencing the local population by acquiring at least a medium traditional social status.

(c) The social system is in a stage of transition. Traditional status is not enough any more for social advancement. Those who have not yet realized that problem or have refused to achnowledge it are at the bottom of the modern stratification hierarchy, while those who are aware of the inevitability and irreversibility of the change have made attempts to gain medium or high modern status.

Probably, there is no one interpretation that is completely right or wrong in explaining the behavior of all individuals in this stratum. All of them make assumptions about cultural values and personal motivations that cannot be tested here, but that are based on a general knowledge of Sukuma social structure. Very likely, different interpretations will explain the behavior of different individuals, so that all of them are valid within certain limits.

Lower Traditional Stratum

The lower traditional stratum is composed of 235 individuals, that is 22 per cent of the sample population. It is characterized by an abundance of modern officials: Divisional Secretaries, Ward Executive Officers, TANU and primary society secretaries, school headmasters, and church related persons. Also many farmers without cattle have a low traditional status (Table 15).

Most of the people with low traditional status are relatively young. More than half of the TANU secretaries and almost as many primary society secretaries are less than thirty years old. The average age of Divisional Secretaries, Ward Executive Officers, and school headmasters is between 34.1 and 37.9 years. Only church related persons and farmers without cattle tend to be older (Table 23).

The majority of the church related persons and the farmers without cattle are still farmers. Only half of the primary society and party secretaries farm, and less than a third of the Ward Executive Officers and Divisional Secretaries do (Table 22). There is no group, however, where all the respondents would claim a non-farming occupation, although administrative and teaching positions are certainly full-time, salaried, non-farming jobs. Most likely, the emphasis on being a farmer by administrators and school officials does not so much reflect the amount of time actually spent in the fields but reflects a government policy that all officials should also experience the life of a farmer in addition to their office jobs.

Less than half of the TANU and primary society secretaries say that they own cattle. In other categories of respondents represented in the lower traditional stratum the rate of cattle ownership is even much smaller than that, ranging from 34.4 per cent for church related persons to 11.1 per cent for Divisional Secretaries (Table 24). The fact that there are "farmers without cattle" who say that they or members of their household do own some, is not simply a coding mistake but very likely the result of the complicated pattern of cattle ownership and cattle trusteeship among the Sukuma which tends to obscure actual ownership even to well informed outsiders.

More than three quarters of the school headmasters, church related persons, and TANU secretaries have only one wife, while slightly more Ward Executive Officers and primary society secretaries than average have two or more wives (Table 25).

The households of farmers without cattle and TANU secretaries tend to be very small--about half of them have five or less members.

Among the other groups medium sized households are more frequently found, but large households are rare (Table 26).

The lower stratum in the traditional stratification hierarchy is primarily composed of modern officials. The only group that does not fit into this pattern are the farmers without cattle who, however, could be expected to rank low in traditional terms. The internal structure of the lower traditional stratum suggests that there is a certain amount of incompatibility between traditional and modern statuses for some positions such as the Divisional Secretaries, Ward Executive Officers, and school headmasters (Table 27), which are all appointed positions that highly depend on modern qualifications. For these officials it is either not necessary to acquire signs of traditional status in order to gain influence, or they are too much oriented towards the modern system to be interested in the attributes of traditional status. But low traditional status might be a drawback to the influence that they can yield in a relatively traditional society which cannot always be compensated by modern qualifications. In terms of their personal advancement in the modern state hierarchy, however, traditional status is unimportant.

The distribution of traditional status among persons holding the same position shows an even wider spread than the distribution of modern status. The association between position and traditional status is only .32 (Cramer's V). This finding means that there are many other factors involved in achieving a particular social status besides a person's office or his membership in a specific category of respondents, and that not everybody is equally successful in gaining

a relatively high status either in the traditional or in the modern dimension of social stratification.

The traditional stratification hierarchy does not indicate a hierarchy of power distribution, either directly or inversely. Some relatively powerful people have low social status (e.g., Ward Executive Officers or Divisional Secretaries), while others rank very highly (e.g., TANU and primary society chairmen).

However, the traditional ranking hierarchy could be interpreted as a system of differential prestige and wealth which in turn can be employed to gain power in other realms of society (s. Weber 1964). People, who are older, have many cattle, more wives, and larger households, also have more prestige than others and can use it to influence other members of the community and their decision-making processes.

Although there is no specific information about the distribution of income among the respondents in the sample, it seems that the traditional stratification hierarchy is one of relative wealth.[1] In chapter III I have discussed the relationship between income and cattle--that surplus income from crop sales is usually invested in cattle. Therefore people who have many cattle, tend to have more material resources than others, are able to maintain a larger household and a larger labor force than others, and therefore can increase their incomes faster than others. The composition of the upper traditional stratum, and the fact that many farmers without cattle belong to the lower stratum can be cited to support this view.

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[1] Divisional Secretaries, Ward Executive Officers, and school headmasters who receive salaries and most of whom are not farmers

Status Inconsistency

A comparison of the traditional and modern dimensions of social stratification shows that they do not run parallel but have a slight negative relationship (tau = -.17). More than half of the respondents have a traditional status that is different from their modern one, i.e., their statuses are inconsistent. Lenski (1954) treated one fourth of his sample as inconsistent (i.e., with scores far away from 100 which is the highest measure for status crystallization), because he found a natural breaking point between their scores and those of the majority of the sample. In the present sample the percentage of highly inconsistent people is smaller. 4.5 per cent show an inconsistency between a high traditional and a low modern status, and 4.5 per cent exhibit the reverse pattern, but half of the respondents have slightly inconsistent statuses[1] (Tables 13 and 29).

Earlier two alternative hypotheses were presented about the relative continuity between the traditional and the modern dimension of social stratification. If traditional status determines modern social status, then all individuals with high traditional status should also have a high modern one and vice versa, so that the two

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are not necessarily poor people in spite of their low status. They should be excluded from these considerations about wealth.

[1] If the original scales for traditional and modern status each of which contained 19 ranks had been used for the computation of status inconsistency, then very likely a higher percentage of highly inconsistent people could have been found. However, the question of the social relevance of such a procedure which has already been mentioned several times comes up again. If all members of one stratum have the same social status and if this status is socially relevant rather than a person's rank score, then only the discrepancies between social statuses are relevant to social behavior and should therefore be considered in an anthropological analysis of social stratification (s. also Doreian and Stockman 1969: 53, 62).

top strata should be more or less identical. As tables 27 and 28, however, show, there are substantial differences that speak against this hypothesis. Only six individuals (= 5.6 per cent) of the respondents with high traditional status also hold a high modern one, while 44.9 per cent of the upper traditional stratum combine a high traditional with a low modern status.

Most of the respondents with a high modern status rank in the middle of the traditional stratification hierarchy. For example, all the TANU and primary society chairmen with a high modern status have a medium traditional one. Only one third of the upper modern stratum--mainly school headmasters and Ward Executive Officers--combine a high modern with a low traditional status (Tables 28 and 29).

On the basis of this information the alternate hypothesis that there is no continuity at all between the two dimensions of social stratification also cannot be supported. Although there is a slight negative relationship between traditional and modern status, there is not a complete reversal of the social structure.

The distribution of traditional and modern status and the resulting status discrepancies indicate the degree of change in Sukuma society. Traditional status is still relatively important, as can be demonstrated by the many TANU and primary society chairmen who tend to combine a high or medium modern with a medium or high traditional status. But at the same time the acquisition of modern status attributes is spreading among some parts of the population. Especially individuals with a low or medium traditional status try to achieve the necessary qualification for a medium or high modern status, while people with a high traditional status do not make the same attempt

(s. Table 13). It thus seems that the upper traditional stratum loses its position of influence to people with medium or low traditional but with relatively high modern status, because the future social structure of the Sukuma will be more and more determined by aspects related to the modern stratification hierarchy.

The following Figure 2 summarizes the results of this chapter. There are two dimensions of social stratification among the Sukuma which are best perceived as two independent hierarchies. The modern dimension can be interpreted as a hierarchy of control power, while the traditional dimension is a hierarchy of prestige and wealth. Each individual's position is defined in relationship to both hierarchies, i.e., everybody has two social statuses, a traditional and a modern one.

Each hierarchy is subdivided into three strata of different sizes. The middle stratum is largest, accounting for more than half of the sample, and the upper stratum is smallest. The internal composition of each stratum differs slightly from the others, because the various categories of respondents are represented in different proportions. Those that are overrepresented mark a stratum's general image.

For example, assuming a random distribution of respondents in each stratum, we expect to find no more than 13 per cent of any category of respondents in the upper modern stratum. However, much larger proportions of modern officials--particularly Divisional Secretaries, Ward Executive Officers, and school headmasters--belong to this stratum. It is thus characterized by modern officials whose position is defined in relationship to the national state structure. The middle

Stratum	Modern Hierarchy[1] Position	%	Traditional Hierarchy Position	%
Upper Stratum	School headmaster	54.1	Large cattle owner	32.9
	Divisional Secretary	52.6	Progressive farmer	20.0
	Ward Exec. Officer	41.4	Banamhala	15.5
	TANU secretary	20.0	Prim.Soc. chairman	15.4
	Church rel. person	18.1	TANU chairman	14.8
	TANU chairman	16.4	Nfumu	11.3
	Prim.Soc. secretary	14.8		
	Total sample	12.9	Total sample	10.0
Middle Stratum	Prim.Soc. secretary	77.8	Prim.Soc. chairman	82.1
	TANU secretary	72.5	TANU chairman	80.3
	Church rel. person	72.2	Ten-cell leader	79.0
	Prim.Soc. chairman	71.8	Banamhala	78.9
	Progressive farmer	62.9	Nfumu	70.4
	TANU chairman	60.7	Ningi	70.4
	Ward Exec. Officer	55.2	Progressive farmer	68.6
	Total sample	53.0	Total sample	67.9
Lower Stratum	Nfumu	67.6	TANU secretary	55.0
	Ningi	60.8	Divisional Secretary	52.6
	Large cattle owner	58.6	Ward Exec. Officer	51.7
	Banamahala	52.1	School headmaster	41.9
	Farmer without cattle	47.9	Prim.Soc. secretary	40.7
	Ten-cell leader	46.4	Church rel. person	33.3
			Farmer without cattle	30.1
			Ningi	25.4
	Total sample	34.1	Total sample	22.0

[1] In each cell of this figure only those positions are listed which are overrepresented in that stratum. The percentage behind each position indicates how large a part of all occupants of that position in the sample belongs to this stratum. For example: On the basis of their modern status alone 54.1 per cent of all school headmasters in the sample belong to the upper modern stratum, while only 12.9 per cent are expected to be found in this stratum, if social status were distributed randomly.

As this figure only presents an overview over the past discussion, the reader is referred to tables 14 and 15 in Appendix A for detailed information about the exact composition of the various strata.

Figure 2: Traditional and Modern Status Hierarchies

stratum of the modern hierarchy is also composed of many modern officials. But it may be suggested that it is more community-oriented, more parochial than the upper stratum. It therefore has a potentially crucial role in efforts of local development. The lower modern stratum is characterized by Ten-cell leaders and various groups of farmers, all of whom are only marginally involved in the national power structures of the administration and the party.

The traditional stratification hierarchy presents a picture that is different from the modern one. Most modern officials have a low traditional status, while large farmers and holders of traditional offices are found in the upper stratum. Of special interest to the observer is the traditional status of various elected local officials. Many TANU and primary society chairmen belong to the upper and middle traditional strata, i.e., they have the same of even a higher traditional status than a modern one. Their traditional status, however, is not the consequence of their modern office but rather seems to be a prerequisite for their election. The same observation about the relative importance of traditional prestige can be made with regard to the Ten-cell leaders. Many of the have a medium traditional status, while their modern status is rather low. This combination of statuses suggests that prestige in a traditional sense is more important for being elected to office than are modern qualifications. One may also conclude that role expectations for elected officials are more strongly influenced by Sukuma ideas about the proper behavior of traditional leaders than by national conceptions of modern officials.

Any model of a social structure is useful only, if it allows one to predict future behavior. After having described the social structure of the Sukuma in terms of social stratification, the question about the significance of this particular model for explaining and predicting social behavior has not yet been answered. Therefore the relationship between social stratification and one type of social behavior, namely the acceptance of innovations, will be analyzed in the following chapter.

CHAPTER VI

DIFFUSION OF INNOVATIONS

A number of different factors influence an individual's decision as to whether he should or should not accept an innovation. There are economic considerations, e.g., cost/profit calculations, and there are social considerations, e.g., work vs. leisure time to be spent with friends, which have to be balanced against each other. Western economists tend to emphasize the first set of variables as part of a rational decision-making process, assuming that man's economic interest in profit is unlimited. But anthropologists have repeatedly encountered the other situation that man's economic desires are satisfied as soon as he has enough to eat, and that he then rather tries to maximize his non-economic wants (Burling 1962).

Economic considerations that might influence a Sukuma farmer's decision to accept an agricultural innovation proposed by the government extension service, have been discussed in chapter III: the possibility of insufficient rain that might render a new fertilizer ineffective or make a new crop fail where the old low-yield but drought resistant crop might have allowed a small harvest, or the additional demands on labor that cannot be met by the farmer's family alone.

In the present chapter, however, I will focus on the effects of social factors on patterns of diffusion of innovations. I will look at the position of various categories of adopters in the stratification hierarchy and try to relate their rates of adoption to some elements of Sukuma social structure. Only occasionally will it be

necessary to make reference to factors outside the social system that have some impact on the diffusion patterns of specific innovations.

Some Theoretical Remarks

Maquet (1964) says that "the existential situation of a group within a larger society is a factor which conditions the knowledge acquired and used by the group" (47). Although this statment was originally made with regard to the role of anthropologists in Africa, it also applies to the problem of diffusion of innovations, because an individual's social position affects his access to information about innovations and his eventual adoption or rejection.

Rogers who wrote extensively about diffusion of innovations (1962; 1971; Rogers and Shoemaker 1971) does not pay much explicit attention to the factor of a society's social structure in developing his model of innovation diffusion. Diffusion of an innovation is a problem of communication, namely a source sends a message via certain channels to a receiver (Rogers and Shoemaker 1971: 11). Thus the diffusion model has to specify: (a) the stages in the innovation decision process and the relative importance of different communication channels at different stages; (b) the perceived characteristics of innovations which affect their rate of adoption; (c) the behavior and the characteristics of relatively earlier and later adopters; (d) the role of opinion leaders in diffusing innovations; and (e) the factors in the relative success of the change agent (Rogers 1971: 769). Considerations about the social structure of a society are implicit

in stages (a), (c), and (d), but are not mentioned as relevant factors in their own right.

Perceiving diffusion as a process of communication, Rogers develops a multi-step model of communication flow, where a message reaches different receivers at different times, because it is filtered through several stages. Opinion leaders are the first to receive and accept or reject a message. They will eventually transmit it to other individuals in their environment until it finally has spread through the whole system (Rogers and Shoemaker 1971: 201 f). Opinion leaders tend to have more contacts outside the community than other individuals, they have more exposure to the mass media, have a higher social status and often are more innovative than others (218 f.).

With regard to their innovativeness five categories of adopters can be distinguished: innovators, early adopters, early majority, late majority, and laggards (181 f).[1] They can be arranged in a hierarchical fashion so that earlier adopters have a higher social status, are more educated, and wealthier than other groups (186). Other authors prefer to arrange adopter categories horizontally, when they talk about the diffusion of an innovation within one occupational group. The innovators are found at the center of the group, from where all innovations diffuse outward (Becker 1970; Loy 1969).

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[1] Under a normal curve innovators are two standard deviations to the left of the mean, accounting for 2.5 per cent of the area under the curve. The next 13.5 per cent are the early adopters in the area between $\bar{x}$ - s and $\bar{x}$ - 2s. The area between $\bar{x}$ -s and $\bar{x}$ (34 per cent) marks the early majority. The next standard deviation (from $\bar{x}$ to $\bar{x}$ + s) is filled by the late majority (34 per cent), and the rest (16 per cent) are the laggards (Rogers and Shoemaker 1971: 182).

It is merely a statistical procedure to define adopter categories post hoc on the basis of the time of adoption of a given innovation. But theories about the location of innovators and later adopters in a social system vary greatly. Predictions where social innovators are most likely to be found in a social system are, however, important for a change agent in designing his strategy.

Who Are the Innovators?

Barnett defines an innovation as "any thought, behavior, or thing that is new because it is qualitatively different from existing forms" (1953: 7). Thus, accepting an innovation is always an act of non-conforming behavior.

Where a social scientist looks for an innovators, depends on his view of the social system itself. If the system is believed to have strong sanctions to enforce conformity with its norms, innovators are expected to be marginal men. They are social outsiders who have deviated from group norms on so many occasions, that sanctions against them (e.g., loss of face, ostracism) are not effective any more (Barnett 1953; Homans 1969). They rank at the bottom of the local prestige hierarchy and have nothing to lose. Assuming that all men want to retain their social status and/or improve their rank but never want to lose it (Cancian 1972: 136), individuals with higher ranks will avoid non-conforming behavior and not accept a proposed innovation. Therefore the following hypothesis can be found in the literature: The higher a person's social status, the less likely he is to be a social innovator. Specific cases have been quoted that support it (Barnett 1953: 381 ff; Rogers and Shoemaker 1971: 4).

Homans, at the same time, explores the possibility of locating innovators among the high ranking members of a group. Through their past behavior they have already proven their loyalty to the group and their ability and willingness to conform to the group's norms. Although they are still expected to show conforming behavior on core issues, they are given more personal freedom on less important matters. A core issue could be a religious belief or the social value of mutual aid and cooperation among the members of a community. As long as a high ranking individual is willing to fulfill his obligations towards his fellow villagers, people will say little when he accepts an economic innovation. The social risk of innovativeness is thus relatively small to him. At the same time a high ranking member is often more wealthy than other individuals and therefore faces a smaller economic risk in adopting an innovation than others. Therefore another hypothesis that can also be found in the literature is: The higher a person's social status, the more likely he is to innovate.

This hypothesis contradicts the first one, but neither can be rejected on purely theoretical grounds. The second hypothesis is supported by a much larger amount of anthropological research than the first one. Rogers (1971; Rogers and Shoemaker 1971) who reviews much literature about this topic suggests that elites act as gatekeepers of social change in a society. They will accept innovations that seem to support their position but reject others that seem to threaten them. Any change that is introduced through other channels but the ones of existing authority will per se be perceived as threat and will be opposed. Arensberg and Niehoff (1971) refer to the same thing

when they emphasize the need for a change agent to seek the support of the local leaders for any program of planned change and to work through the local power structure. Studies by Williamson (1968) and Stanfield and Whiting (1972), which explicitly use a stratification model, also support the hypothesis that innovativeness is related to social status and wealth.

Homans's seemingly contradictory hypotheses about the innovativeness of high ranking individuals and of social outsiders are tied together by socio-psychological assumptions about middle class conservatism. It is the middle stratum that can still gain something by strictly conforming to the society's norms. Therefore it will be most suspicious of every change that might upset the status quo and threaten its chances for social advancement.

Foster, however, sees in the particular position of the middle stratum--neither at the top nor at the bottom of the social hierarchy--its big chance to be receptive to innovations.[1] On the basis of economic considerations, he argues that their situation is secure enough to experiment within limits, but they are still poor enough to be motivated by the prospects of higher incomes (Foster 1973: 171). He therefore suggests the following hypothesis: The middle stratum is most likely to innovate.

Comparing the three hypotheses that have been presented so far, it can be inferred that innovators are found at any place in the

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[1] Unfortunately, Foster himself is not very consistent in his statements about the social status of innovators. On p. 125 in the same book he says that a prestigeous individual seems to be the most likely innovators: "a wealthy and respected member of a community, a member of the privileged class". This statement clearly assigns the role of innovator to members of the upper stratum.

social system, and that no predictions about their social location can be made. The question, however, is not, whether all innovators have to be concetrated in the same stratum as against none at all in the other strata, but rather in which stratum most likely the highest number of innovators will be found. Cancian (1967; 1972) is also aware of this fact and develops a hypothesis about the distribution of innovators among the different strata. He assumes that high rank has both an inhibiting and a facilitating effect with regard to the early adoption of an innovation. Based on Homans the inhibiting effect of social status is believed to be greatest among the middle stratum because of middle class conservatism. Cancian then presents the following hypothesis: There is a curvilinear relationship between social status and being in innovator in such a way, that members of the middle stratum are less likely to be innovators than members of other strata.

We now have a series of hypotheses about the social status of innovators, all of which are phrased in universal terms. However, not all of them can be true at the same time. Therefore the limiting conditions for the application of one of them to the specific situation of the present sample have to be specified.

Rogers and Shoemaker (1971) compare the diffusion of innovations with the diffusion of information. Thus, access to information is a crucial factor in the diffusion process. As individuals with a high or medium modern status have more access to information than individuals with a low modern status, we expect to find the most innovators in the middle or upper modern stratum.

If access to information were the only limiting condition, then innovators should most likely have a high modern status. However, the composition of the upper modern stratum suggests another limiting factor. Most respondents with a high modern status are officials who have full-time non-farming occupations and who receive regular salaries. Even those who say that they are farmers and/or cattle owners are probably too occupied by their administrative or teaching jobs to pay much attention to new agricultural developments. Therefore the first hypothesis about the social status of innovators among the Sukuma is:

(1) More innovators have a medium modern status than a high or low status.

The social position of a Sukuma is not only defined by his modern status but also by his traditional one. As the traditional status hierarchy indicates differences in prestige and wealth, the facilitating effects of high status--as pointed out by Homans and Cancian--might be very important. Therefore the second hypothesis should be:

(2) Members of the traditional middle stratum are less likely to be innovators than members of the other strata.

The authors who have used a stratification model (Cancian 1967; 1972; Williamson 1968; Stanfield and Whiting 1972) have treated social inequality as a unidimensional concept that primarily refers to economic differences (e.g., size of farms, amount of cash crops grown). However, as social stratification among the Sukuma is treated as a multidimensional phenomenon, it is necessary to formulate an additional hypothesis about the effects of status inconsistencies on people's receptivity to an innovation.

Lenski (1954) assumes that people who experience status inconsisitency are more likely to vote for a liberal party (i.e., favor social change) than individuals who do not have the same experience. Olson and Tully (1972) question, whether all forms of status inconsistencies really have the same effect. They modify Lenski's hypothesis in such a way that (a) "status inconsistency will have political consequences only when it involves sharply disparate achieved and ascribed statuses", and (b) more precisely, only in the case of the "specific combination of a low ascribed with a high achieved status" (562). With regard to the present Sukuma sample none of the dimensions of social stratification indicates purely ascribed status, although the dimension of traditional status includes ascribed elements and is problably less open to individual achievement than the modern dimension. If Olson and Tully's assumptions are slightly altered to fit the situation of our sample, then the following hypothesis about the relationship between status inconsistency and innovativeness can be formulated:

> (3a) Individuals who experience a status discrepancy between a higher modern and a lower traditional status are more likely to be innovators than individuals who experience no discrepancy or one between a higher traditional and a lower modern status.

This hypothesis, however, is not in complete concordance with the two earlier ones. It will not be true, if the data support hypotheses (1) and (2). As a consequence of the earlier hypotheses the following hypothesis (3b) presents an alternative to (3a) in predicting the effects of status inconsistency on innovativeness:

> (3b) Individuals who experience a status discrepancy between a high traditional and a medium modern status are more likely to be innovators than individuals with other types of status discrepancies.

Later Adopters

So far, I have only presented hypotheses that might be able to predict the innovators in a social system, but nothing has been said yet about further stages of the adoption of an innovation in a social system and the social status of later categories of adopters. Rogers's model of the multi-step flow of communication of an innovation has to assume a linear diffusion, because it is measured in terms of distance from the source of the message (Rogers and Shoemaker 1971: 209), which is a linear dimension. Therefore, linear diffusion hypotheses in the literature are: either (a) The higher a person's social status, the later he will adopt an innovation; or (b) the lower a person's social status, the later he will adopt an innovation. The latter diffusion pattern has been related to the "trickle effect" of innovations (Fallers 1954) and is assumed to be the more common and more successful one in a reformist approach to social change, while the first pattern (bottom--up) has been related to revolutionary changes (Rogers 1971).

Isaac (1971) and Cancian (1967; 1972), however, propose a curvilinear model of diffusion. Isaac observed, that a particular innovation in Mando chiefdom, Sierra Leone, was first accepted by rich people, then by low-income individuals, and last by members of the middle stratum. He notes that the reasons for joining the program were different fro each group. The rich people could afford the risk, the poor were either relatives of the participating rich (and persuaded by the success of their rich relatives) or friends of the change agent (i.e., persuaded by the change agent), but the middle

stratum stood alone and accepted the innovation only after its success had been demonstrated.

Cancian distinguishes two steps in the diffusion process: step one, where the innovation is really new and therefore the risk of adoption high; and step two, where the innovation has lost some of its novelty and also its riskiness. Hypotheses about step one refer to the receptivity of innovators and early adopters, while hypotheses about step two refer to the acceptance of an innovation by later categories of adopters. Because of the lower risk involved Cancian predicts that the inhibiting effect of higher social status will be less and therefore the curve describing the pattern of adoption less pronounced than in step one. Cancian's assumptions can be applied to the dimension of traditional status and its relation to later adopters:

> (4) Under the assumption of a curvilinear pattern of diffusion, it is predicted that the middle traditional stratum that was relatively conservative in the beginning (i.e., had few innovators) will be overrepresented among the later adopters of an innovation.

With regard to the modern stratification dimension Cancian's hypothesis has to be modified. It was suggested earlier, that the occupational structure of the upper modern stratum has an inhibiting effect on the innovativeness of high status individuals. However, at later stages of the diffusion process this effect will be counterbalanced by a few facilitating factors: (a) As innovations are usually introduced by the agricultural extension service in the frame-work of national development and African socialism, there is increasing social pressure on individuals with high modern status to conform to national policies, if they want to continue their careers. (b) At

the same time, information about the innovation and its initial success accumulates, thus making high status individuals more aware of the innovation. Because of the inefficient communication system at the lower levels of the national social structure (s. chapter II) these facilitating effects have little influence on the behavior of low status individuals. Now the following hypothesis about the diffusion of innovations in the modern stratification dimension can be formulated:

> (5) Among the later adopters of an innovation individuals with a high modern status will be overrepresented compared to individuals with medium or low modern status.

These hypotheses imply that eventually after the firm integration of an innovation into a society the middle and upper strata will have almost completely accepted it, while the lower stratum in spite of its initial innovators will have a smaller rate of total adoption than other strata because of its lack of resources. Thus an innovation might simply support an existing hierarchy of social inequality in spite of the apparent changes during the early stages of the adoption process.

Earlier (chapter V) it had been observed that individuals with a high traditional status are often found in the lower modern stratum, while individuals who rank low on the traditional stratification dimension have a high or medium moder status. It has been hypothesized that these individuals are more likely to innovate (s. hypothesis 3a), probably to compensate for their low traditional status. If, at the same time, the assumption about the declining importance of traditional status is true (s. chapter V), then we would expect people with a discrepancy between a high traditional and a low modern status

to be least receptive to an innovation even at later stages of the adoption process. People with a small status inconsistency, however, might be eager to adopt at later stages, because they see a chance to close the gap between their statuses without the risk of losing the higher one. Therefore the last hypothesis should be:

> (6) At later stages in the diffusion process people with a slight or with no status inconsistency will be more likely to adopt an innovation than individuals with a large discrepancy between a a high traditional and a low modern status.

We now have six hypotheses about the social position of innovators and later adopters in the stratification system. They will be tested later in this chapter after the description of the specific innovations whose diffusion patterns will be studied.

The Variables

Two sets of innovations have been selected to study the relationship between social stratification and diffusion. A third set of data refers to the diffusion of information about a planned change before it reached the actual adoption stage. It will be assumed that all three sets will show the same diffusion pattern within the social system.

Farming Innovations

In the original study information about five agricultural innovations has been collected which do not make high demands either on the financial resources of the farmers or on their ability to understand the purpose of the innovation and to apply it. Many of these innovations were originally introduced to the farmers through development programs in the late 1950's and early 1960's, but then the

emphasis shifted and the interest declined. Therefore the rate of adoption is relatively high for the time more than five years before the study was conducted but then declines. Questions were asked about the time of adoption of new varieties of sorghum and maize, and of the use of insecticides, fertilizers, and manure. As manure is a side product of cattle breeding, most easily available, and has been promoted for the longest time, its rate of adoption is higher than that of the other innovations; while the introduction of a new variety of sorghum is most recent and not yet very widespread (tables 30 - 34).

Naturally, the diffusion of agricultural innovations can be studied only for individuals who say that they are primarily farmers. Therefore the 230 persons who are either non-farmers or do not give any information about their principal occupation have to be excluded from this analysis.

On the basis of the time of adoption of all farming innovations an index of farm innovativeness has been computed for each individual. The time of adoption for each innovation has been classified as ranging from "0" (no answer/no adoption) to "5" (adoption more than five seasons ago) (Appendix B). When the individual values on each of the five farming variables are added up, a farmer can achieve a score between "0" (no adoption) and "25" (high innovativeness). The highest score actually achieved by any farmer is only 18, and almost half of the farmers score "0"--an indication of the slowness of the Sukuma in responding to the propagation of farming innovations.

Following Rogers and Shoemaker (1971), farmers can be assigned to different categories of adopters on the basis of their innovative-

ness scores. The 2.5 per cent of the farmers with the highest scores are classified as innovators, the next 13.5 per cent as early adopters, and the following 34 per cent as early majority. Because of the high frequency of non-adopters it seemed advisable to combine the two categories of late majority (34 per cent) and laggards (16 per cent) into a single category of laggards that is composed of c. 50 per cent of the farmers in the sample.

Cattle Innovations

The acceptance of cattle innovations can be analyzed for a subsample of 484 cattle owners. The set of cattle innovations includes nine variables (s. tables 35 - 43): three innovations--use of diptanks, cattle inocculation, and use of medicine for sick livestock--, the time of their adoption, and the frequency of their use, the distance to the nearest diptank and veterinary center, and a question about a cattle owner's behavior in the case of livestock sickness in general.

Two indices of cattle innovativeness have been constructed: one which includes all nine variables and ranges from "0" (no adoption) to "44" (high adoption) on a possible range from "0" to "59", while the second index excludes the time of adoption and mainly relies on the frequency of the use of these innovations. Cattle owners achieve points between "0" and "37" on a scale that ranges from "0" to "47". The reason for constructing that second index is, that the time of adoption is often influenced by government campaigns to control cattle epidemics, where participation is mandatory. A respondent might very well say that he accepted cattle inocculation five years

ago (because at that time his cattle were inocculated in the course of a general campaign) but might respond "never" or "rarely" when asked for the frequency of his present use of the innovation. The time of adoption therefore may not give any indication as to the individual cattle owner's innovativeness, while the regularity of use does.

As an individual's acceptance of cattle innovations is strongly dependent on the distance between a cattle owner's homestead and the nearest diptank or veterinary center, it is necessary to account for the effect of distance on a cattle owner's innovativeness. For example, a cattle owner who leves far away from a diptank has to expend more effort in dipping his cattle regularly and therefore has to be more willing to innovate than acattle owner who lives very close to the necessary service facility. Therefore, the individual's value for the use of cattle dips has been multiplied by the value for the distance from the nearest cattle dip. Similarly, "use of medicine for livestock" and "cattle inocculation" have been multiplied by "distance to nearest vet center" in order to give credit to innovative individuals who live far away from diptanks or veterinary centers.

Some variables have to be recoded for scale construction. On the variables "treatment of sick cattle", "use of diptank", "use of medicine" , and "use of cattle inocculation" the answer "never" is assigned a value of "0" (same as "no answer") (Appendix B).

As with agricultural innovations the cattle indices can be used to distinguish various adopter categories: the 2.5 per cent with the

highest index ranks are the innovators, the next 13.5 per cent the early adopters, then follow 34 per cent early majority, 34 per cent late majority, and 16 per cent laggards. Of course, the actual proportion of respondents in each category will differ slightly from this ideal distribution, because individuals with the same index rank have to be assigned to the same adopter category.

Project Information

The last set of variables refers to the diffusion of information about the goal of the change program for which the original study was conducted. Questions were asked whether the respondents had heard about government plans for livestock improvement, about the Range Management Act, ranching associations, and a meeting which was held in February 1970 between the foreign experts (change agents) and local leaders and where information about the project had been presented. The interviewers also collected information concerning the respondents' correct information and their source of information. Finally, people were asked whether or not they would favor the establishment of a local ranching association (Tables 44 - 52).

Again, an index was computed to study the dissemination of information in the stratification system by adding up the individual values of eight of the nine information variables.[1] The index ranged from "0" (no information at all) to "26" (best informed). Assuming that the diffusion of information follows the same lines as the actual adoption of an innovation, categories of adopters were distinguished in the same way as for the other indices.

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[1]The ninth variable is "source of information" which cannot be

As the decision about the establishment of a ranching association had to be made by the whole community independently of cattle ownership or farming occupation, all 1067 respondents were included in the analysis of this particular pattern of diffusion.

Patterns of Diffusion

Now I will test the various hypotheses that have been presented earlier in this chapter using information about the Sukuma's acceptance of farming and cattle innovations and the dissemination of news about a planned change program. It may be assumed that all three sets of innovations would diffuse along the same lines, but a comparison of the three diffusion patterns points out a number of differences. It will also appear that not all the hypotheses are supported by the data.

Farming Innovations

The group of innovators among the farmers is composed of 18 individuals (2.2 per cent). The majority of them are progressive farmers, joined by some TANU chairmen, church related persons, banamhala, primary society officials, a farmer without cattle and a ningi (Table 53). Most innovators have a medium modern status (Table 54). In terms of traditional status innovators are found in all three strata. There are equal numbers with medium and high ranks, but their proportion to the total size of the stratum is larger in ther upper stratum than in the middle or lower one (Table 55).

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transformed into an ordinal scale and therefore has to be excluded from the index construction.

Therefore the first two hypotheses about the traditional and modern status of innovators are supported. In both cases do we find a curve. Individuals with medium traditional status are less innovative than would be assumed on the basis of a linear relationship between higher status and innovativeness, and individuals with a medium modern status are more innovative than members of other strata.

Many innovators experience either no status inconsistency or only a slight one between a higher traditional and a lower modern status (Table 56). As hypothesis (3a) predicted a large degree of discrepancy between a high modern and a low traditional status, it has to be rejected. Hypothesis (3b), however, is supported by the data, but its prediction does not go far enough. The large number of innovators with no status inconsistency may suggest, that status inconsistency is not very important in predicting the social status of an innovator.

The observation that the medium strata in the two stratification hierarchies are not equally innovative, needs some further considerations. Agricultural innovations are nothing new to the Sukuma ever since the Germans introduced cotton as a cash crop. Therefore the social risk of accepting a new crop variety or fertilizer, etc. is probably less than the economic risks involved. An innovator must mainly have the necessary financial means to be able to afford the economic risks--people with high traditional status tend to be wealthy enough to be able to innovate from an economic point of view. At the same time, an innovator must have access to information about new agricultural practices and seed improvements--individuals with high or medium modern status are in such a position. If the

financial factor is slightly more important than the information one, then farmers who combine a high or medium traditional with a medium modern status (i.e., have a slight or no traditional--modern status inconsistency) are best equipped to innovate: progressive farmers, TANU chairmen, etc. This result may suggest that the specific combination of traditional and modern status has a cumulative effect that is more important in determining social behavior than status inconsistency (Table 57).

Interpretation of the data about the diffusion of farming innovations from the innovators to other parts of the social system will, of course, be influenced by these considerations about the relationship between social status and innovativeness which have been presented with regard to the innovators. The diffusion pattern among later adopters of farming innovations is curvilinear (Figure 3). Most of the early adopters are still found in the medium modern stratum. But more than half of the upper modern stratum are among the early majority, while the majority of the people with low modern status lag behind. In terms of traditional status, however, the distribution of later adopters is almost random and not significant (Tables 54 and 55). Thus it appears that--with the exception of the innovators--traditional status is less important for the eventual adoption of an agricultural innovation than modern status, because the economic risk is reduced for later adopters. In accordance with earlier assumptions about the reasons for the lack of innovativeness among individuals with high modern status, it appears from the data that high ranking individuals do not have a basic resistance to all innovations but accept them quickly after others have gone through the

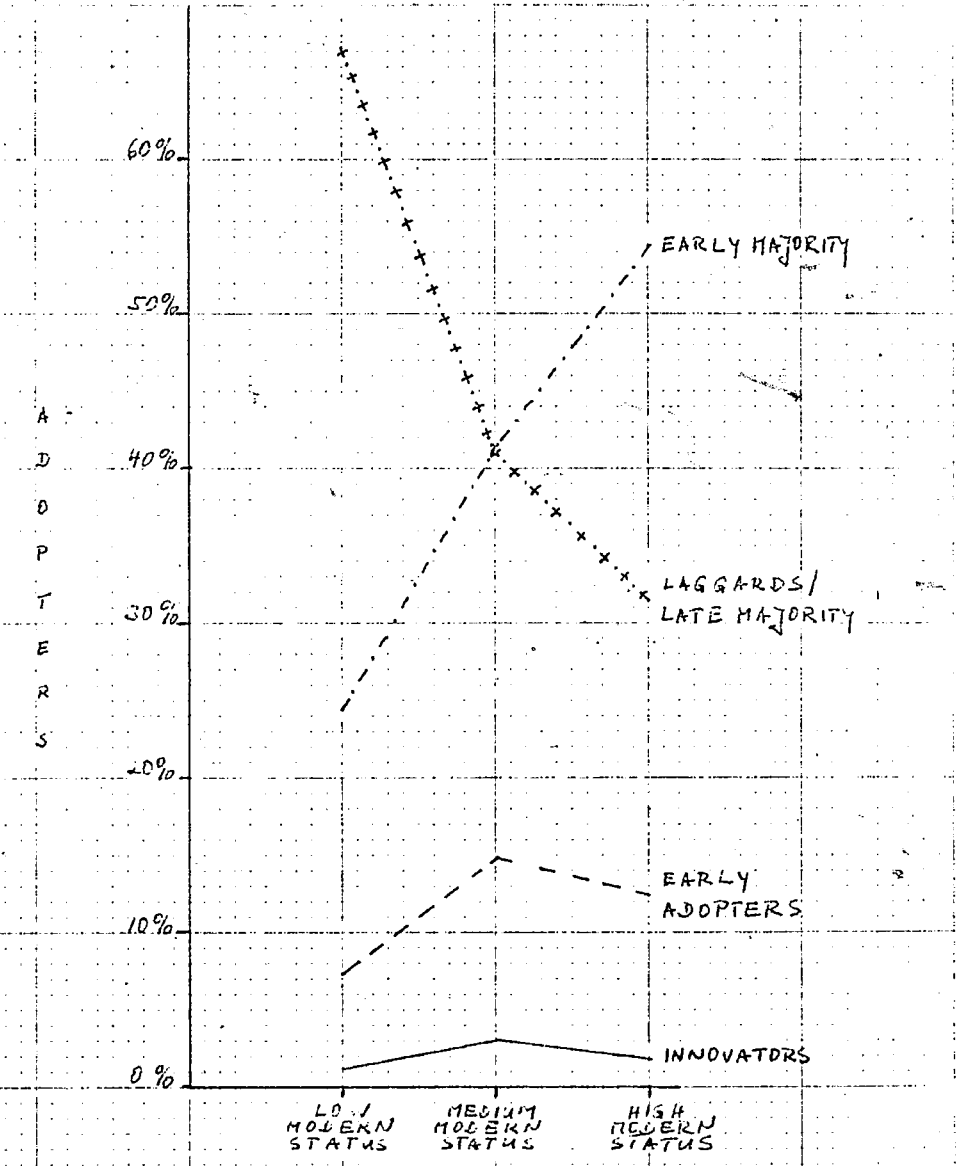

Figure 3: Adoption Curves for Farming Innovations

effort of trying them out. They are therefore among the early majority. The diffusion pattern of farming innovations supports hypothesis (5) but not the fourth hypothesis.

The curvilinear pattern of diffusion has the somewhat surprising effect that in the overall pattern of adoption the innovativeness and early adoption of an innovation by members of the middle and lower modern stratum is counterbalanced by an adoption spurt of farmers with a high modern status. Byt the time the interviews were conducted the upper modern stratum had the highest percentage of adopters and the lower stratum had the lowest percentage (Table 54).

With regard to status inconsistency the curvilinear pattern of diffusion and overall adoption is maintained. Individuals with a slight inconsistency between a higher modern and a lower traditional status have most likely adopted farming innovations, while individuals with large status inconsistencies have a substantially lower rate of adoption (Table 56). Hypothesis (6) is therefore supported.

Cattle Innovations

For the acceptance of innovations related to cattle husbandry the most important factors are the availability of cattle dips and veterinary centers, which are factors not directly related to the social system of the Sukuma. Three quarters of the regular users of cattle dips have to drive their cattle less than five miles to the nearest dip, while a third of those cattle owners who never dip their animals live more than 21 miles away from a dip (Table 58). A similar observation can be made with regard to cattle inocculation and the use of medication for sick livestock. Almost half of the people who have their cattle inocculated regularly live not further than ten

miles away from the nearest veterinary center (Tables 59 and 60). Because of the importance of the necessary facilities, we expect that the influence of stratification variables on the acceptance of cattle innovations is less pronounced than it is for farming innovations.

Originally, two indices for the adoption of cattle innovations have been computed. However, as the first one which accounted for the time of adoption produced more non-significant results thant the second one, only the latter will be used in the following discussion. As already mentioned earlier, the time of adoption of cattle innovations (especially for dipping and inocculation) does not necessarily indicate an individual's innovativeness but often only the time of a a particular government campaign in order to control some cattle diseases.

There are twelve innovators among the cattle owners: three progressive farmers, three Ten-cell leaders, two banamhala, and one each of the large cattle owners, school headmasters, TANU chairmen, and TANU secretaries (Table 61). Progressive farmers are again among the most innovative individuals.

Cattle innovators are primarily found in the middle modern stratum (Table 62), and the middle and upper traditional strata. There are no cattle innovators who have a low traditional status (Table 63). The relationship between social status and cattle innovativeness (Kendall's tau) is small, but significant only for traditional status not for the modern one. Thus, cattle innovativeness seems to be more associated with traditional than with modern status.

With regard to status inconsistencies, effects similar to those among the farming innovators can be observed. Most cattle innovators

show either no or only a slight status inconsistency between a higher traditional and a lower modern status. None of them experience a large degree of discrepancy between their statuses (Table 64). Hypothesis (3a) therefore has to be rejected with regard to cattle innovators, while hypothesis (3b) is supported by the data.

The diffusion pattern of cattle innovations within the social system is less clear than that of farming innovations. Adopters are almost randomly distributed among the fifteen categories of respondents (χ^2 for table 61 not significant). Early adopters are found in all three traditional strata in almost the same proportion. But individuals with high traditional status are overrepresented among the early majority, while low status individuals appear in above average proportion among the laggards (Table 62). Thus we find a curvilinear pattern of diffusion of cattle innovations (s. hypothesis 4). With regard to the majority of the adopters the predictions of hypothesis (4) are true. Among the early majority the middle traditional stratum is underrepresented, but it is overrepresented among the late majority. In terms of overall adoption of cattle innovations we find the same picture as has been described for the farming innovations. By the time of the study there are the most adopters in the upper traditional stratum and the fewest in the lower one so that the old stratification hierarchy is maintained (Table 63; Figure 4).

Individuals with a large discrepancy between a high traditional and a low modern status are not innovators but are overrepresented among the early adopters and the early majority. Eventually most of them have adopted cattle innovations, while cattle owners with inconsistencies between higher modern and lower traditional statuses lag

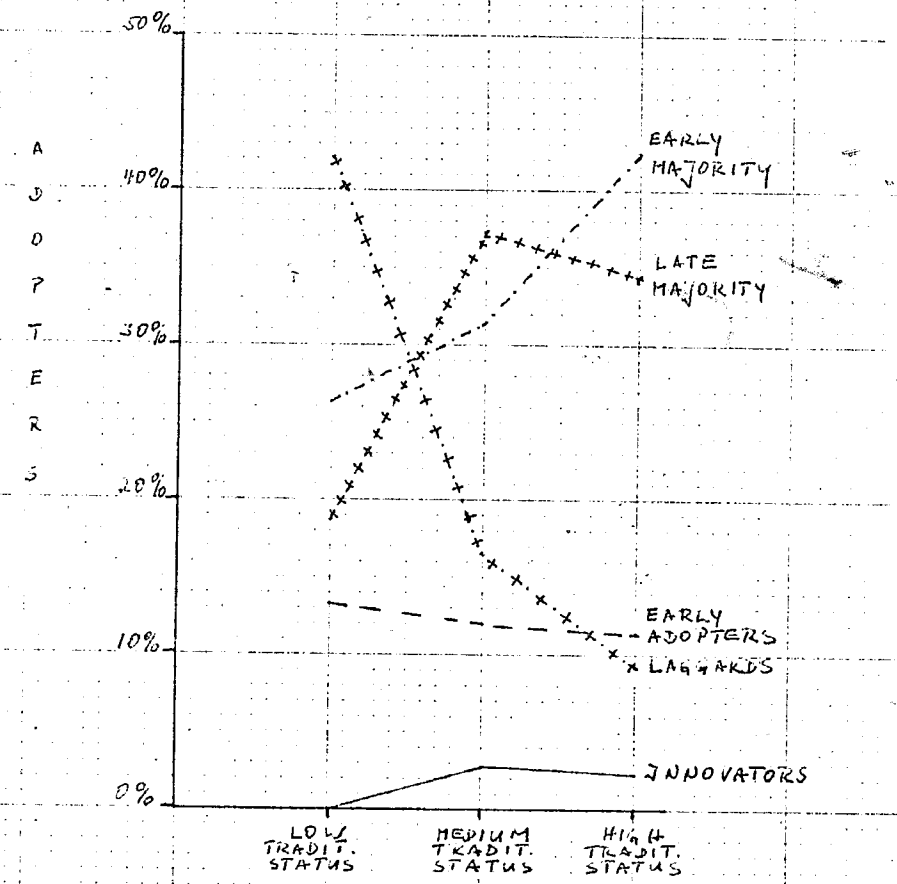

Figure 4: Adoption Curves for Cattle Innovations

behind (Table 64). Hypothesis (6) therefore has to be rejected for the diffusion of cattle innovations. However, it appears again, that special combinations of traditional and modern statuses are more important for the adoption of cattle innovations than are status inconsistencies (Table 65).

At first it seems surprising that the adoption of cattle innovations should be more closely related to traditional than to modern status, because we would expect that individuals with medium or high modern status are more aware of modern methods to preserve the health of their animals than cattle owners with medium or high traditional status. However, there are at least two reasons why the information advantage of higher modern rank does not influence innovativeness in this case:

(a) Although individuals with high or medium modern status may own cattle, they probably do not take care of them themselves because of their other non-farming jobs, but entrust them to family members or friends. Therefore they are not aware of the state of health of their animals, unless the person to whom the animals are loaned tells the owner, and thus are not concerned about measure to prevent or control cattle sickness. The person who has to take care of the animals, on the other hand, will very likely not volunteer the extra expense and labor necessary for cattle dipping or inocculation unless the owner requests it. Therefore we may conclude that the lack of innovativeness among people with a high modern status is not so much an effect of their social status but of other aspects of the social system of the Sukuma (e.g., the pattern of cattle trusteeships) that are not part of the stratification system.

Individuals with medium or high traditional status, however, are mostly farmers and probably keep at least some of their cattle near their own kayas. Although the Sukuma do not want to spend much money on their cattle because they are not part of the subsistence or the cash economy, the farmers are interested in healthy cattle and the prestige that is associated with having a large herd of healthy animals. As the cattle innovations studied here (use of dips, inoculation, and medicine) can be perceived as a means towards achieving that goal and a way of securing a cattle owner's social position and prestige, it is not exceptional that individuals with medium or high traditional status should accept them more readily.

(b) Most Sukuma probably become acquainted with some cattle innovations through government campaigns where participation is obligatory. In such situations the information advantage that might be associated with higher modern status is less important than it is with regard to the diffusion of farming innovations. Of greater importance to the further voluntary use of cattle innovations is the success in terms of fewer cattle deaths, the availability of technical facilities, and a certain amount of wealth to pay for the necessary serum and for the extra labor in connection with these innovations. Individuals with high traditional status can meet these conditions more easily than others and are therefore better adopters of cattle innovations.

Project Information

The diffusion of information about the FAO-project to establish ranching associations and to introduce other measures for soil conservation and improved cattle husbandry should most closely resemble

Rogers's predictions about the diffusion of innovations, as this information es exclusively a matter of communication that is not influenced by such factors as wealth or technical facilities.

As could be expected from the approach to change of the FAO-team, mostly modern officials have heard about the project. Among the 26 individuals who had heard most (the innovators), we find many Divisional Secretaries, Ward Executive Officers, TANU chairmen, primary society secretaries, and Ten-cell leaders (Table 66). In absolute terms, most of them have a medium modern status, but there are some with low and high modern status as well. The ratio of innovators to the rest of their respective strata is lowest among the lower stratum and highest for the upper modern stratum (Table 67). The distribution of innovators and later adopters in terms of traditional status is not significant (Table 68). In contrast to the other innovations we find an almost limear relationship between social status and innovativeness (Figure 5).

The status inconsistencies experienced by project information innovators are at least partially of the kind predicted in hypothesis (3a). Six per cent of those with a status inconsistency between a high modern and a low traditional status (as compared to 2.4 per cent sample average) are innovators. However, most innovators do not experience any status discrepancy at all (Table 69) but rather combine a medium traditional with a medium modern status (Table 70).

The diffusion pattern of project information among the rest of the sample shows the same trend as the distribution of innovators. Modern officials are more likely to have heard more about the project

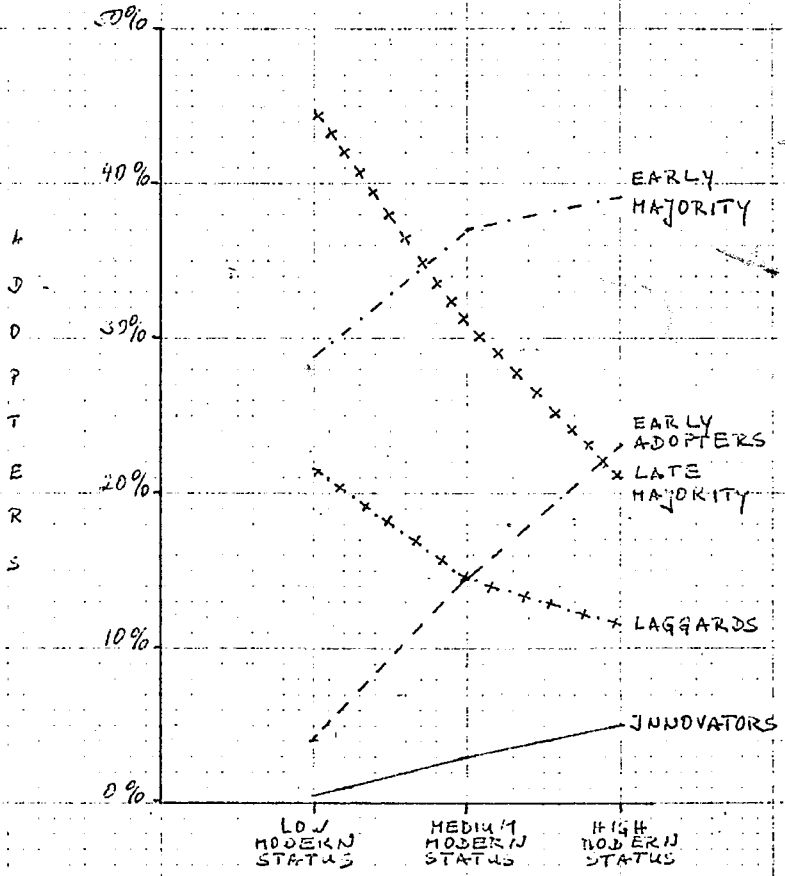

Figure 5: Adoption Curves for Project Information

than other people. Expecially large cattle owners, farmers without cattle, banamhala, bafumu, and baningi have heard little or nothing about it (Table 66).

Within the modern stratification hierarchy the diffusion pattern is slightly curvilinear (Figure 5). Above average proportions of individuals with medium and high modern status are found among the early adopters and the early majority, while most low status individuals are among the late majority and the laggards. Comparing the total amount of information present in each stratum, we find that in the upper stratum there is the highest percentage of people with some project information, and in the lower stratum is the lowest percentage of information (Table 67).

The distribution of adopter categories with regard to status inconsistency supports hypothesis (6). Many individuals with some or high inconsistencies between a higher modern and a lower traditional status are found among the early adopters and the early majority. Individuals with a higher traditional than modern status abound in the categories of late majority and laggards. The diffusion pattern among persons who experience no status discrepancy does not deviate much from the sample average (Table 69).

The diffusion of project information to a limited degree confirms some observations that have already been made with regard to farming and cattle innovations: (a) the middle stratum is generally more innovative than predicted by most of the anthropological literature, (b) the diffusion pattern is curvilinear not linear, and (c) in terms of total adoption we always find a hierarchical pattern

where the upper stratum has the highest overall adoption rate and the lower stratum the lowest.

A comparison of the patterns of adoption of the three different sets of innovations and their relationship to social stratification leads to a few further conclusions. The diffusion of innovations in the same social system is influenced by a variety of social factors (in addition to technical factors as was the case with cattle innovations). As not all of these factors are equally important at all times, differences in the diffusion patterns occur. The social factors that appeared in the discussion of diffusion patterns among the Sukuma are: wealth, as manifested in the traditional status hierarchy; access to information, as apparent in the modern stratification hierarchy; and overriding demands by the larger society such as the mandatory participation in campaigns to control cattle diseases. None of these factors alone could have explained the observed diffusion patterns sufficiently, particularly not the relatively high degree of innovativeness of the middle stratum.

It has been found that access to information (i.e., modern status) is not relevant in cases of mandatory initial adoption of an innovation. But wealth is still an important factor for continuing the use of the innovation on a voluntary basis. Access to information in combination with a certain amount of wealth, however, is important when the decision about the time of adoption has to be made by the adopting individual himself. Information alone diffuses along the lines of the modern stratification hierarchy overlapping little with the adoption patterns for other innovations. The diffusion pattern of information alone could be interpreted as the basic

pattern that is greatly altered by a number of intervening variables in the process of adopting new patterns of behavior.

The differences between the diffusion patterns of information and other innovations hint at a potential problem with regard to the success or failure of a change program. The people who have the most information about the project have not shown to be innovators on any of the other innovations. One might conclude, that by the time of the data collection for this study the information about the planned program of change had not yet reached the right people, the potential innovators, but was still with the wrong group. Such discrepancies between patterns of information diffusion and adoption patterns for social behaviors in a society may become a source for the eventual failure of a change program.

Hypotheses about the effects of status inconsistencies are only partially supported by the data. Large status discrepancies do not lead to a higher degree of innovativeness, only to positive attitudes about future changes. It seems that specific status combinations have a greater effect on innovativeness than even slight status inconsistencies. Especially the combination of high traditional with a medium modern status seems to provide good conditions for innovators; the necessary material means are combined with relatively good access to information.

These results seem to indicate that inconsistencies between traditional and modern statuses are not experienced the same way as status discrepancies are in Western societies. The two dimensions are quite different from each other, and an individual might not expect to occupy the same rank on both. On the contrary, a large status

inconsistency might indicate the rejection of the system that is associated with the low status (i.e., rejection of all traditional values by high ranking modern individuals with low traditional status and vice versa). Only in the case where the proposed change involves a new organizational setup (ranching associations) that could be interpreted as a means of overcoming the traditional system, do people with a discrepancy between a high modern and a low traditional status favor the change.

It rather seems that the specific combination of traditional and modern statuses has a cumulative effect that is more important than the discrepancy between them. Individuals with medium or high statuses in both dimensions have the chance of using the resources of both to their advantage: the wealth and prestige associated with traditional status and the control power and preferential access to information of modern status.

The traditional and the modern stratification hierarchy indicate the differential distribution of factors that are important for the diffusion of innovations in Sukuma society. Innovations are readily accepted only by individuals with favorable combinations of statuses with regard to all relevant factors. Such persons are not randomly distributed in society, but can be located on the basis of the two dimensions of traditional and modern status.

CHAPTER VII

CONCLUSION

Summary

In this dissertation I have undertaken to do two things: (a) to explore the uses of Western theories of social inequality and to apply one of them to the analysis of a contemporary African society, and (b) to study an example of how social stratification influences social behavior, namely the case of the diffusion of innovations.

The Sukuma have been described in the anthropological literature as a rather egalitarian society. However, changes in the political, economic, and social structure have happened which indicate that the Sukuma are moving away from this ideal, although egalitarianism--together with the obligation towards cooperation and mutual aid--still exists as a social value. The national philosophy of African socialism tends to support this value orientation through its emphasis on "ujamaa"--the basic equality of all men, the obligation of all to work, and to help each other. Nyerere, one of the fathers of African socialism, hopes that the social practice of the ideals of "ujamaa" will prevent the rise of forms of mutual exploitation and of potentially revolutionary conditions that would endanger past development efforts and the nation's independence.

Not all forms of social inequality necessarily imply the rise of two opposing classes and the existence of antagonistic class interests. Inequality based on the division of labor between the mem-

bers of a group, on the contrary, leads to cooperation and organic solidarity among the group members. But there always is an inherent disruptive potential that may eventually lead to the development of social classes.

Different theories about social inequality have been developed by social scientists. Among the most important are Marx's theory of social classes and class conflict in capitalist societies, various structural-functional approaches to social stratification which emphasize the contribution of social inequality towards the maintenance of the social system, and some non-functionalist theories as presented by Lenksi or Dahrendorf which propose to look at social stratification in terms of distribution of power, especially control power to control other individuals and the flow of goods and services in the society.

In discussing the applicability of the various theories of social inequality to the study of a non-Western society it has been noted that most of them make a series of assumptions that cannot be tested here--e.g., assumptions about the predominance of economic conditions in determining other aspects of social life, or assumptions about the functional contribution of social stratification towards fulfilling a societal need. Eventually, a multidimensional model of social stratification has been suggested for the study of social inequality among the Sukuma. According to this model, individuals are ranked in two hierarchies, a "traditional" and a "modern" one, each of which is subdivided into three strata. The modern hierarchy indicates differences in control power, while the traditional one marks differences in wealth and prestige. It has been found that

administrative officials and school headmasters rank highest in the modern stratification hierarchy, followed by elected and appointed party and cooperative society officials and church related persons. On the other hand, the traditional upper stratum is characterized by large cattle owners and progressive farmers. Elected party and cooperative chairmen tend to have a medium or high traditional status, while administrators and school headmasters are mostly found in the lower traditional stratum.

More than half of the individuals in the sample occupy different ranks in the traditional and the modern hierarchy of social stratification, i.e., inconsistencies exist between their statuses. The concept of status inconsistency as it has been introduced here refers to differences between the two ranks of an individual. Due to the lack of necessary information, it has not been possible to assess whether particular status combinations deviate from general patterns of expectations and whether the observed inconsistencies are actually experienced as such. In spite of the obvious handicaps with regard to the operationalization of the concept of status inconsistency, it has been introduced here because it was originally developed as a predictor for attitudes that are favorable to social change.

Finally, the influence of social stratification on the diffusion of innovations among the Sukuma has been studied. Hypotheses have been derived from the sociological and anthropological literature to predict the social position of innovators and later adopters and specific diffusion patterns. The hypotheses propose that many innovators have a medium modern and a high traditional status, that

innovations diffuse in a curvilinear pattern, and that individuals with low modern and/or low traditional status and with a high degree of status inconsistency between a high traditional and a low modern status will be last to adopt an innovation.

Three types of innovations have been compared: farming innovations, where the decision about their adoption is solely made by the individual farmer; cattle innovations, where participation in occasional government campaigns is mandatory; and information about a planned project of range management. It has been found that:

(a) The diffusion patterns for the three innovations are different from each other. Farming innovations and project information seem to diffuse along the lines of the modern stratification dimension, but with the difference that there are more members of the upper stratum among the innovators and early adopters of project information than of farming innovations. Cattle innovations, on the other hand, follow the lines of the traditional stratification hierarchy. The differences between the diffusion patterns have been related to the circumstances of the initial adoption, and to the relative importance of different stratification variables with regard to the acceptance of different innovations. In the case of diffusion of information, access to information (modern status) is most important. Where the initial adoption of an innovation may be mandatory (cattle innovations), the factor of relative wealth (traditional status) is most important for predicting the voluntary use of the innovation. In the case of farming innovations the specific combination of high wealth (traditional status) and good access to information (modern

status) is most important for innovators, while access to information alone (modern status) is more predictive for later adopters.

(b) Innovations diffuse in a curvilinear pattern. The middle stratum tends to be more innovative than has been expected on the basis of the relevant literature alone. However, somewhere in the intermediate stages of the diffusion process members of the upper stratum show an increased rate of adoption, so that eventually the distribution of laggards and non-adopters shows a inverse hierarchical relationship to the stratification hierarchy, exactly as would be expected on the basis of the assumption of a linear diffusion pattern--the fewest laggards (and therefore the most adopters) are found in the upper stratum, and the most laggards belong to the lower stratum.

(c) Status inconsistency is generally not as good a predictor of innovativeness as traditional or modern status alone or as the combination of both. The failure of the concept of status inconsistency to predict social behavior might be due to several factors: either the statistical procedure of operationalizing that concept has not been adequate, or it is socially irrelevant, i.e., there is no expectation among the Sukuma about a consistency of traditional and modern status. It rather seems that traditional and modern statuses are treated as elements of two distinct hierarchies, whose cumulative effects are more important for social behavior than are their discrepancies.

Discussion

The problem of social inequality is not new to anthropology. But it has usually been approached from a different perspective than that of stratification theory. Differences between "kinds of persons" (Redfield 1960: 33 ff.), i.e., performers of social roles and occupants of social statuses, have been studied in terms of person-oriented patterns, where differences in relative status are recognized as attributes of kinds of persons but not as a feature characteristic of groups of social statuses that influence social behavior. Examples of that approach, treating stratification differences in terms of role differences, are Foster's patron--client relationship (1967) or Hollnsteiner's description of the compadrazgo system as a means of bridging class differences (1967).

In the study of African societies concepts of class and social stratification have been used in analyzing some forms of social inequality. But mostly they focus on national elites and the modern administration, contrasting them with the rural population in general. The interest in these groups has been great during the 1960's after many African states had gained their independence and the Western world wanted to know, who the new leaders were, where they planned to lead their nations, and how the new states were functioning (Table ronde 1970; Lloyd 1966; Hopkins 1971). But the study of rural populations has been dominated by assumptions about peasant communities that are explicitly or implicitly derived from Redfield's concepts of the "little community" or the "folk society" (Redfield 1947; 1960).

Redfield's "little community" is distinct in terms of territory and group membership, small in size, homogeneous and slow-changing, and self-sufficient (1960: 4). It is a whole that can be studied as a unit and then compared with other similar units. Internal differentiation is described in terms of social roles that interact with each other. Relationships with the outside world are limited and decrease with increasing "structural distance" from the local community (116). The outside world is adjunct to the local structure, and therefore can often be ignored when studying a rural community.

The Sukuma match this concept of the little community to a limited degree. Many villages are relatively isolated; they are the units for cooperation in agricultural work and for forming voluntary associations, and they are relatively small. However, changes have occurred, although at a slow pace. It is not the village, but the ward which is now recognized as an administrative unit and which is composed of a number of different villages. The national party structure tries to permeate the local community through its system of cells of ten houses, thus breaking up the relative structural isolation of the villages. New social roles have appeared in the wards that are distinct from that of the local farmers. Thus changes have happened that prepare the integration of the Sukuma into the larger society and that eventually lead to the development of a social structure wich cannot be fully described in terms of the little community. Therefore analytical concepts are needed that go beyond that of the little community and allow the analysis of more complex relationships.

In this dissertation I have tried to present an alternative concept to that of the little community: social stratification. This concept offers several advantages for the analysis of contemporary societies over that of Redfield's little community. It allows one to analyze forms of social inequality in a society at a higher and more general level of abstraction than that of social roles and role-centered networks. Social differences within a community are not merely seen as attributes of social positions. The concept of social stratification makes it possible to compare positions with regard to their differences, to assign them to different categories, to arrange them hierarchically, and to study the effects of the differences between various strata on social behavior.

At the same time, the number of categories used in an analysis is considerably reduced. It is not necessary any more to account for each social position individually in the description of the social structure of a society after it has been assigned to a certain social stratum. This analytical advantage, of course, does not appear in the study of relatively primitive societies with little role differentiation. But with regard to the sample used in this dissertation, the 1067 individuals and fifteen categories of respondents could be reduced to three strata in each of the two stratification hierarchies, and the reduction would have been even more considerable, if individuals with more different social positions had been interviewed.

The use of a concept such as social stratification instead of a term with strong cultural connotations (e.g., patron--client relationship) makes it easier to compare the social structures of different communities and different societies. It is a step towards trans-

gressing the boundaries of ad-hoc propositions that apply to one specific historical and cultural situation only and that are so common in anthropology (Manners and Kaplan 1968: 1). This dissertation started out with the observation of a specific case of social inequality, described it in terms of an existing body of social theory, then proceeded to develop some hypotheses and to explain new forms of social behavior in terms of tha theory.

The relationship between social stratification and the diffusion of innovations needs further study. The findings of this dissertation and those presented in the anthropological literature are too diverse to arrive at any clear and unambiguous conclusions and to develop a general theory of social structure and social change at the present time. It now seems that a system of social stratification channels the diffusion process but does not prohibit or intercept it. The latter case might be expected in a cast-like social system or in the instance of a classical Marxian class structure. Non-revolutionary innovations (and only those were discussed in the previous chapter) tend to diffuse in such a way that the general system of social stratification is not altered. However, we do know that social systems change because of the adoption of innovations. One way, how this can happen, is that the relationships between the members of the society change, while the formal structure of the society is retained. For example, the composition of social strata changes, individuals move up or down the social ladder, but the system of social stratification itself remains unaltered. It may be suggested that the time and the intensity of the adoption of an innovation has the effect of altering the relationships between the members of a society: e.g.,

that relatively early adopters gain social status, if the system is favorable toward the adoption of innovations without any effects on the overall pattern of social stratification. In the case of the Sukuma and of Tanzania where the diffusion of innovations is part of the organized efforts of national development, this may mean that innovators and early adopters gain modern status and are rewarded a certain amount of power (e.g., in the form of some party or administrative office), while the late adopters do not change or maybe even lose some of their social status. These considerations, however, go beyond the scope of the present dissertation, because they would require a longitudinal study of the same population in order to be tested.

There are many questions that have been raised but not answered by this dissertation, and that are open to further investigation. I did not intend to provide final solutions and to present a fully developed theory of social structure and social change, but to make a contribution to the more recent discussion about the uses of the stratification concept in the study of non-Western contemporary societies. The development of an appropiate theory requires more research and remains a task for the future.

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APPENDIX A

TABLE 1

CATEGORIES OF RESPONDENTS

Position	Total		Nzega		Shinyanga		Maswa		Kahama	
	n	%	n	%	n	%	n	%	n	%
Divisional Secretary	19	1.8	3	1.3	4	1.0	7	2.7	5	2.7
Ward Executive Officer	58	5.4	14	5.9	22	5.6	17	6.6	5	2.7
TANU chairman	61	5.7	15	6.3	23	5.9	11	4.3	12	6.6
TANU secretary	40	3.7	7	3.0	15	3.8	12	4.7	6	3.3
Prim. Soc. chairman	39	3.7	6	2.5	14	3.6	11	4.3	8	4.4
Prim. Soc. secretary	54	5.1	9	3.8	23	5.9	11	4.3	11	6.0
Ten-cell leader	224	21.0	50	21.1	81	20.8	54	20.9	39	21.4
Progressive farmer	70	6.6	17	7.2	23	5.9	17	6.6	13	7.1
Large cattle owner	70	6.6	16	6.8	25	6.4	16	6.2	13	7.1
Farmer without cattle	73	6.8	17	7.2	26	6.7	18	7.0	12	6.6
Banamhala	71	6.7	17	7.2	27	6.9	16	6.2	11	6.0
Nfumu	71	6.7	16	6.8	25	6.4	18	7.0	12	6.6
Ningi	71	6.7	16	6.8	28	7.2	16	6.2	11	6.0
Church rel. person	72	6.7	16	6.8	27	6.9	17	6.6	12	6.6
School headmaster	74	6.9	18	7.6	27	6.9	17	6.6	12	6.6
N = 100 %	1067		237		390		258		182	

TABLE 2

PRINCIPAL OCCUPATION

Principal Occupation	Total		Nzega		Shinyanga		Maswa		Kahama	
	n	%	n	%	n	%	n	%	n	%
Farmer	837	78.4	189	79.7	319	81.8	184	71.3	145	79.7
Non-farmer	174	16.3	36	15.2	51	13.1	56	21.7	31	17.0
No answer	56	5.2	12	5.1	20	5.1	18	7.0	6	3.3
N = 100%	1067		237		390		258		182	

TABLE 3

AGE DISTRIBUTION

Age	Total		Nzega		Shinyanga		Maswa		Kahama	
	n	%	n	%	n	%	n	%	n	%
under 20	2	.2			2	.5				
20 - 30	132	12.4	31	13.1	42	10.8	32	12.4	27	14.8
30 - 40	327	30.6	56	23.6	140	35.9	83	32.2	48	26.4
40 - 50	242	22.7	58	24.5	89	22.8	62	24.0	33	18.1
50 - 60	199	18.7	47	19.8	63	16.2	52	20.2	37	20.3
60 - 70	109	10.2	28	11.8	38	9.7	20	7.8	23	12.6
over 70	55	5.2	17	7.2	15	3.8	9	3.5	14	7.7
No answer	1	.1			1	.3				
N = 100 %	1067		237		390		258		182	

TABLE 4

OWNERSHIP OF CATTLE

Cattle	Total		Nzega		Shinyanga		Maswa		Kahama	
	n	%	n	%	n	%	n	%	n	%
Yes	484	45.4	100	42.2	210	53.8	118	45.7	56	30.8
No	457	42.8	111	46.8	142	36.4	96	37.2	108	59.3
No answer	126	11.8	26	11.0	38	9.7	44	17.1	18	9.9
N = 100 %	1067		237		390		258		182	

TABLE 5

WIVES

number of wives	Total		Nzega		Shinyanga		Maswa		Kahama	
	n	%	n	%	n	%	n	%	n	%
None	52	4.9	17	7.2	21	5.4	4	1.6	10	5.5
One	691	64.8	144	60.8	254	65.1	163	63.2	130	71.4
Two	236	22.1	52	21.9	87	22.3	64	24.8	33	18.1
Three or more	88	8.2	24	10.1	28	7.2	27	10.5	9	4.9
N = 100 %	1067		237		390		258		182	

TABLE 6

SIZE OF HOUSEHOLDS

Members in household	Total		Nzega		Shinyanga		Maswa		Kahama	
	n	%	n	%	n	%	n	%	n	%
1 - 3	165	15.5	49	20.7	55	14.1	28	10.9	33	18.1
4 - 5	162	15.2	38	16.0	60	15.4	35	13.6	29	15.9
6 - 7	214	20.1	47	19.8	80	20.5	54	20.9	33	18.1
8 - 9	174	16.3	40	16.9	70	17.9	39	15.1	25	13.7
10 - 11	119	11.2	24	10.1	51	13.1	30	11.6	14	7.7
12 - 15	140	13.1	21	8.9	48	12.3	46	17.8	25	13.7
16 - 19	44	4.1	6	2.5	12	3.1	14	5.5	12	6.6
20 and more	47	4.4	10	4.2	14	3.6	12	4.6	11	6.0
No answer	2	.2	2	.9						
N = 100 %	1067		237		390		258		182	

Note: Actually households can be as large as eighty members. However, as there are relatively few individuals with very large households, it was advisable to construct the categories in such a way that those for larger households cover a larger range than those for smaller households.

TABLE 7

FORMAL EDUCATION

Schooling completed	Total		Nzega		Shinyanga		Maswa		Kahama	
	n	%	n	%	n	%	n	%	n	%
None/ no answer	504	47.2	115	48.5	172	44.1	122	47.3	95	52.2
Lower primary school	266	24.9	54	22.8	106	27.2	61	23.6	45	24.7
Upper primary school	222	20.8	52	21.9	86	22.1	53	20.5	31	17.0
Lower secondary school	73	6.8	15	6.3	25	6.4	22	8.5	11	6.0
Upper secondary school	2	.2	1	.4	1	.3				
N = 100 %	1067		237		390		258		182	

TABLE 8

SPECIAL TRAINING

Type of training	Total		Nzega		Shinyanga		Maswa		Kahama	
	n	%	n	%	n	%	n	%	n	%
None/ no answer	828	77.6	166	70.0	312	80.0	215	83.3	135	74.2
Agricultural training	29	2.7	16	6.8	9	2.3	3	1.2	1	.5
Leadership training	42	3.9	10	4.2	16	4.1	7	2.7	9	4.9
Vocational training	110	10.3	28	11.8	36	9.2	28	10.9	18	9.9
Literacy training	58	5.4	17	7.2	17	4.4	5	1.9	19	10.4
N = 100 %	1067		237		390		258		182	

TABLE 9

KNOWLEDGE OF LANGUAGES

Languages	Total		Nzega		Shinyanga		Maswa		Kahama	
	n	%	n	%	n	%	n	%	n	%
One local language	207	19.4	29	12.2	78	20.0	62	24.0	38	20.9
Kiswahili only	41	3.8	10	4.2	27	6.9	1	.4	3	1.6
English only	12	1.1	5	2.1	6	1.5	-	-	1	.5
Two local languages	14	1.3	3	1.3	5	1.3	1	.4	5	2.7
Local l. and Kiswahili	610	57.2	146	61.6	208	53.3	152	58.9	104	57.1
Local l., Kiswahili, Engl.	164	15.4	41	17.3	54	13.8	41	15.9	28	15.4
No answer	19	1.8	3	1.3	12	3.1	1	.4	3	1.6
N = 100 %	1067		237		390		258		182	

TABLE 10

READING OF NEWSPAPERS AND JOURNALS

Reading frequency	Total		Nzega		Shinyanga		Maswa		Kahama	
	n	%	n	%	n	%	n	%	n	%
Never	300	28.1	82	34.6	102	26.2	63	24.4	53	29.1
Rarely	268	25.1	67	28.3	108	27.7	55	21.3	38	20.9
Sometimes	154	14.4	18	7.6	51	13.1	53	20.5	32	17.6
Regularly	290	27.2	64	27.0	99	25.4	73	28.3	54	29.7
No answer	55	5.2	6	2.5	30	7.7	14	5.4	5	2.7
N = 100 %	1067		237		390		258		182	

TABLE 11

NUMBER OF PREVIOUS RESIDENCES

Number of residences	Total n	%	Nzega n	%	Shinyanga n	%	Maswa n	%	Kahama n	%
None/ no answer	452	42.4	60	25.3	209	53.6	111	43.0	72	39.6
One	228	21.4	62	26.2	78	20.0	50	19.4	38	20.9
Two	171	16.0	50	21.1	47	12.1	48	18.6	26	14.3
Three	84	7.9	20	8.4	26	6.7	27	10.5	11	6.0
Four	48	4.5	16	6.8	12	3.1	7	2.7	13	7.1
Five	32	3.0	9	3.8	5	1.3	8	3.1	10	5.5
Six or more	52	4.9	20	8.4	13	3.3	7	2.7	12	6.6
N = 100 %	1067		237		390		258		182	

TABLE 12

LARGEST PREVIOUS RESIDENCE

Type of residence	Total n	%	Nzega n	%	Shinyanga n	%	Maswa n	%	Kahama n	%
No prev. res. no answer	468	43.9	62	26.2	219	56.2	113	43.8	74	40.7
Village	247	23.1	55	23.2	85	21.8	78	30.2	29	15.9
Small town	136	12.7	46	19.4	48	12.3	24	9.3	18	9.9
Large town	79	7.4	34	14.3	16	4.1	11	4.3	18	9.9
City	137	12.8	40	16.9	22	5.6	32	12.4	43	23.6
N = 100 %	1067		237		390		258		182	

TABLE 13

TRADITIONAL AND MODERN STATUS

Traditional Status	Modern Status Low	Medium	High	Row Total
Low	50[1] 21.3 13.7	135 57.4 23.9	50 21.3 36.2	235 22.0
Medium	266 36.7 73.1	377 52.0 66.7	82 11.3 59.4	725 67.9
High	48 44.9 13.2	53 49.5 9.4	6 5.6 4.3	107 10.0
Column Total	364 34.1	565 53.0	138 12.9	1067 100.0

note: $\chi^2 = 36.21$; 4 d.f.; $p < .001$; s.
Kendall's tau = -.17; s.

[1] In this and all further cross tabulations each cell contains the following values: number of cases in that cell, per cent of total number of cases in that row, per cent of total number of cases in that column. In tables, where only two values are listed in each cell, they refer to the former two with the column percentage being omitted.

TABLE 14

POSITION AND MODERN STATUS

Position	Modern Status			Row Total
	Low	Medium	High	
Divisional Secretary	1 5.3 .3	8 42.1 1.4	10 52.6 7.2	19 1.8
Ward Executive Officer	2 3.4 .5	32 55.2 5.7	24 41.4 17.4	58 5.4
TANU Chairman	14 23.0 3.8	37 60.7 6.5	10 16.4 7.2	61 5.7
TANU Secretary	3 7.5 .8	29 72.5 5.1	8 20.0 5.8	40 3.7
Primary Society Chairman	7 17.9 1.9	28 71.8 5.0	4 10.3 2.9	39 3.7
Primary Society Secretary	4 7.4 1.1	42 77.8 7.4	8 14.8 5.8	54 5.1
Ten-cell Leader	104 46.4 28.6	114 50.9 20.2	6 2.7 4.3	224 21.0
Progressive Farmer	17 24.3 4.7	44 62.9 7.8	9 12.9 6.5	70 6.6
Large Cattle Owner	41 58.6 11.3	29 41.4 5.1	- - -	70 6.6
Farmer Without Cattle	35 47.9 9.6	36 49.3 6.4	2 2.7 1.4	73 6.8

TABLE 14 (CONTINUED)

POSITION AND MODERN STATUS

Position	Modern Status Low	Medium	High	Row Total
Banamhala	37 52.1 10.2	32 45.1 5.7	2 2.8 1.4	71 6.7
Nfumu	48 67.6 13.2	22 31.0 3.9	1 1.4 .7	71 6.7
Ningi	43 60.6 11.8	27 38.0 4.8	1 1.4 .7	71 6.7
Church Related Person	7 9.7 1.9	52 72.2 9.2	13 18.1 9.4	72 6.7
School Head-master	1 1.4 .3	33 44.6 5.8	40 54.1 29.0	74 6.9
Column Total	364 34.1	565 53.0	138 12.9	1067 100.0

note: χ^2 = 400.36; 28 d.f.; $p < .001$; s.
Cramer's V = .43

TABLE 15

POSITION AND TRADITIONAL STATUS

Position	Traditional Status			Row Total
	Low	Medium	High	
Divisional Secretary	10 52.6 4.3	9 47.4 1.2	- - -	19 1.8
Ward Executive Officer	30 51.7 12.8	24 41.4 3.3	4 6.9 3.7	58 5.4
TANU Chairman	3 4.9 1.3	49 80.3 6.8	9 14.8 8.4	61 5.7
TANU Secretary	22 55.0 9.4	17 42.5 2.3	1 2.5 .9	40 3.7
Primary Society Chairman	1 2.6 .4	32 82.1 4.4	6 15.4 5.6	39 3.7
Primary Society Secretary	22 40.7 9.4	30 55.6 4.1	2 3.7 1.9	54 5.1
Ten-cell Leader	27 12.1 11.5	177 79.0 24.4	20 8.9 18.7	224 21.0
Progressive Farmer	8 11.4 3.4	48 68.6 6.6	14 20.0 13.1	70 6.6
Large Cattle Owner	- - -	47 67.1 6.5	23 32.9 21.5	70 6.6
Farmer Without Cattle	22 30.1 9.4	48 65.8 6.6	3 4.1 2.8	73 6.8

TABLE 15 (CONTINUED)

POSITION AND TRADITIONAL STATUS

Position	Traditional Status Low	Medium	High	Row Total
Banamhala	4 5.6 1.7	56 78.9 7.7	11 15.5 10.3	71 6.7
Nfumu	13 18.3 5.5	50 70.4 6.9	8 11.3 7.5	71 6.7
Ningi	18 25.4 7.7	50 70.4 6.9	3 4.2 2.8	71 6.7
Church Related Person	24 33.3 10.2	45 62.5 6.2	3 4.2 2.8	72 6.7
School Head-master	31 41.9 13.2	43 58.1 5.9	- - -	74 6.9
Column Total	235 22.0	725 67.9	107 10.0	1067 100.0

note: $\chi^2 = 224.25$; 28 d.f.; $p < .001$; s. Cramer's V = .32

TABLE 16

POSITION AND FORMAL EDUCATION

Position	Formal Education: None/ no answ.	lower prim.	upper prim.	lower sec.	upper sec.	Row Total
Divisional Secretary	1 5.3	3 15.8	5 26.3	10 52.6	- -	19 1.8
Ward Exec. Officer	2 3.4	9 15.5	35 60.3	12 20.7	- -	58 5.4
TANU Chairman	26 42.6	22 36.1	12 19.7	1 1.6	- -	61 5.7
TANU Secretary	- -	8 20.0	26 65.0	6 15.0	- -	40 3.7
Prim.Soc. Chairman	10 25.6	22 56.4	6 15.4	1 2.6	- -	39 3.7
Prim.Soc. Secretary	1 1.9	9 16.7	40 74.1	4 7.4	- -	54 5.1
Ten-cell Leader	147 65.6	66 29.9	10 4.5	- -	1 .4	224 21.0
Progressive Farmer	30 42.9	26 37.1	13 18.6	1 1.4	- -	70 6.6
Large Cattle Owner	58 82.9	11 15.7	1 1.4	- -	- -	70 6.6
Farmer Without Cattle	45 61.6	19 26.0	8 11.0	1 1.4	- -	73 6.8
Banamhala	52 73.2	16 22.5	3 4.2	- -	- -	71 6.7
Nfumu	64 90.1	5 7.0	2 2.8	- -	- -	71 6.7
Ningi	51 71.8	18 25.4	2 2.8	- -	- -	71 6.7
Church Rel. Person	15 20.8	29 40.3	21 29.2	6 8.3	1 1.4	72 6.7
School Headmaster	2 2.7	3 4.1	38 51.4	31 41.9	- -	74 6.9
Column Total	504 47.2	266 24.9	222 20.8	73 6.8	2 .2	1067 100.0

note: χ^2 = 796.04; 56 d.f.; $p < .001$; s.; Cramer's V = .43

TABLE 17

POSITION AND SPECIAL TRAINING

Position	Special Training: none/ no ans.	agric. train.	leader- ship tr.	vocat. train.	literacy	Row Total
Divisional Secretary	15 78.9	- -	- -	4 21.0	- -	19 1.8
Ward Exec. Officer	46 79.3	2 3.4	5 8.6	5 8.6	- -	58 5.4
TANU Chairman	39 63.9	5 8.2	8 13.1	1 1.6	8 13.1	61 5.7
TANU Secretary	23 57.5	3 7.5	8 20.0	6 15.0	- -	40 3.7
Prim.Soc. Chairman	30 76.9	1 2.6	3 7.7	3 7.7	2 5.1	39 3.7
Prim. Soc. Secretary	29 53.7	3 5.6	2 3.7	20 37.0	- -	54 5.1
Ten-cell Leader	184 82.1	3 1.3	1 .4	11 4.9	25 11.2	224 21.0
Progressive Farmer	57 81.4	6 8.6	- -	1 1.4	6 8.6	70 6.6
Large Cattle Owner	67 95.7	- -	- -	- -	3 4.3	70 6.6
Farmer Without Cattle	64 87.7	1 1.4	2 2.7	4 5.5	2 2.7	73 6.8
Banamhala	64 90.1	1 1.4	1 1.4	4 5.6	1 1.4	71 6.7
Nfumu	65 91.5	- -	1 1.4	2 2.8	3 4.2	71 6.7
Ningi	66 93.0	1 1.4	- -	2 2.8	2 2.8	71 6.7
Church Rel. Person	42 58.3	2 2.8	6 8.3	16 22.6	6 8.3	72 6.9
School Headmaster	37 50.0	1 1.4	5 6.8	31 41.9	- -	74 6.9
Column Total	828 77.6	29 2.7	42 3.9	110 10.3	58 5.4	1067 100.0

note: $\chi^2 = 320.98$; 56 d.f.; $p < .001$; s.
Cramer's V = .27

TABLE 18

POSITION AND LANGUAGE ABILITY

Position	Languages						Row Total
	local lang. only	Swa-hili only	English only	2 local lang.	biling. with Swahili	biling.w Swahili, English	
Divisional Secretary	1 5.3	1 5.3	- -	- -	6 31.6	11 57.9	19 1.8
Ward Exec. Officer	3 5.2	1 1.7	- -	2 3.4	25 43.1	27 46.6	58 5.5
TANU Chairman	- -	4 6.7	- -	1 1.7	51 85.0	4 6.7	60 5.7
TANU Secretary	2 5.0	1 2.5	1 2.5	- -	20 50.0	16 40.0	40 3.8
Prim. Soc. Chairman	4 10.3	3 7.7	- -	- -	27 69.2	5 12.8	39 3.7
Prim. Soc. Secretary	1 1.9	1 1.9	2 3.7	1 1.9	31 57.4	18 33,3	54 5.2
Ten-cell Leader	54 25.0	8 3.7	2 .9	4 1.9	139 64.4	9 4.2	216 20.6
Progressive Farmer	12 17.1	3 4.3	- -	- -	51 72.9	4 5.7	70 6.7
Large Cattle Owner	27 39.7	1 1.5	- -	- -	39 57.4	1 1.5	68 6.5
Farmer With-out Cattle	13 18.3	2 2.8	- -	2 2.8	48 67.6	6 8.5	71 6.8
Banamhala	27 38.6	3 4.3	- -	1 1.4	37 52.9	2 2.9	70 6.7
Nfumu	36 52.2	3 4.3	1 1.4	2 2.9	27 39.1	- -	69 6.6
Ningi	21 30.4	2 2.9	1 1.4	1 1.4	42 60.9	2 2.9	69 6.6
Church Rel. Person	6 8.5	4 5.6	1 1.4	- -	49 69.0	11 15.5	71 6.8
School Headmaster	- -	4 5.4	4 5.4	- -	18 24.3	48 64.9	74 7.1
Column Total	207 19.8	41 3.9	12 1.1	14 1.3	610 58.2	164 15.6	1048 100.0

note: χ^2 = 461.14; 70 d.f.; p $<$.001; s; Cramer's V = .3

TABLE 19

POSITION AND READING OF NEWSPAPERS, ETC.

Position	Reading: no answer	never	rarely	some-times	regu-larly	Row Total
Divisional Secretary	- -	- -	2 10.5	4 21.1	13 68.4	19 1.8
Ward Exec. Officer	- -	2 3.4	20 34.5	8 13.8	28 48.3	58 5.4
TANU Chairman	- -	10 16.4	20 32.8	12 19.7	19 31.1	61 5.7
TANU Secretary	1 2.5	- -	10 25.0	6 15.0	23 57.5	40 3.7
Prim.Soc. Chairman	1 2.6	4 10.3	10 25.6	5 12.8	19 48.7	39 3.7
Prim. Soc. Secretary	2 3.7	4 7.4	15 27.8	11 20.4	22 40.7	54 5.1
Ten-cell Leader	20 8.9	84 37.5	58 25.9	37 16.5	25 11.2	224 21.0
Progressive Farmer	2 2.9	8 11.4	27 38.6	14 20.0	19 27.1	70 6.6
Large Cattle Owner	1 1.4	41 58.6	14 20.0	7 10.0	7 10.0	70 6.6
Farmer Without Cattle	3 4.1	32 43.8	21 28.8	8 11.0	9 12.3	73 6.8
Banamhala	6 8.5	34 47.9	16 22.5	8 11.3	7 9.9	71 6.7
Nfumu	9 12.7	39 54.9	11 15.5	10 14.1	2 2.8	71 6.7
Ningi	10 14.1	33 46.5	14 19.7	11 15.5	3 4.2	71 6.7
Church Rel. Person	- -	6 8.3	18 25.0	11 15.3	37 51.4	72 6.7
School Headmaster	- -	3 4.1	12 16.2	2 2.7	57 77.0	74 6.9
Column Total	55 5.2	300 28.1	268 25.1	154 14.4	290 27.2	1067 100.0

note: χ^2 = 427.65; 56 d.f.; $p < .001$; s.
Cramer's V = .32

TABLE 20

POSITION AND NUMBER OF PREVIOUS RESIDENCES

Position	Number of Previous Residences							Row Total
	none	one	two	three	four	five	six +	
Divisional Secretary	3 15.8	2 10.5	4 21.1	3 15.8	2 10.5	1 5.3	4 21.1	19 1.8
Ward Exec. Officer	12 20.7	11 19.0	10 17.2	7 12.1	6 10.3	3 5.2	9 15.5	58 5.4
TANU Chairman	29 47.5	10 16.4	7 11.5	6 9.8	7 11.5	2 3.3	- -	61 5.7
TANU Secretary	21 52.5	8 20.0	6 15.0	4 10.0	1 2.5	- -	- -	40 3.7
Prim. Soc. Chairman	20 51.3	5 12.8	6 15.4	2 5.1	2 5.1	1 2.6	3 7.7	39 3.7
Prim. Soc. Secretary	28 51.9	10 18.5	9 16.7	5 9.3	- -	1 1.9	1 1.9	54 5.1
Ten-cell Leader	104 46.4	59 26.3	33 14.7	15 6.7	2 .9	7 3.1	4 1.8	224 21.0
Progressive Farmer	28 40.0	17 24.3	11 15.7	7 10.0	1 1.4	4 5.7	2 2.9	70 6.6
Large Cattle Owner	36 51.4	18 25.7	9 12.9	- -	6 8.6	- -	1 1.4	70 6.6
Farmer Without Cattle	35 47.9	15 20.5	11 15.1	5 6.8	5 6.8	1 1.4	1 1.4	73 6.8
Banamhala	38 53.5	13 18.3	8 11.3	6 8.5	1 1.4	1 1.4	4 5.6	71 6.7
Nfumu	35 49.3	14 19.7	8 11.3	5 7.0	4 5.6	4 5.6	1 1.4	71 6.7
Ningi	37 52.1	17 23.9	10 14.1	3 4.2	2 2.8	- -	2 2.8	71 6.7
Church Rel. Person	18 25.0	18 25.0	17 23.6	7 9.7	2 2.8	3 4.2	7 9.7	72 6.7
School Headmaster	8 10.8	11 14.9	22 29.7	9 12.2	7 9.5	4 5.4	13 17.6	74 6.9
Column Total	452 42.4	228 21.4	171 16.0	84 7.9	48 4.5	32 3.0	52 4.9	1067 100.0

note: $\chi^2 = 197.08$; 84 d.f.; $p < .001$; s.
Cramer's V = .18

TABLE 21

POSITION AND LARGEST PREVIOUS-RESIDENCE

Position	Largest Previous Residence: none/ no ans.	village	small town	large town	city	Row Total
Divisional Secretary	4 21.1	1 5.3	2 10.5	2 10.5	10 52.6	19 1.8
Ward Exec. Officer	12 20.7	14 24.1	10 17.2	13 22.4	9 15.5	58 5.4
TANU Chairman	29 47.5	14 23.0	2 3.3	6 9.8	10 16.4	61 5.7
TANU Secretary	22 55.0	5 12.5	3 7.5	4 10.0	6 15.0	40 3.7
Primary Soc. Chairman	21 53.8	6 15.4	3 7.7	2 5.1	7 17.9	39 3.7
Prim. Soc. Secretary	28 51.9	12 22.2	6 11.1	4 7.4	4 7.4	54 5.1
Ten-cell Leader	106 47.3	56 25.0	30 13.4	10 4.5	22 9.8	224 21.0
Progressive Farmer	30 42.9	13 18.6	10 14.3	2 2.9	15 21.4	70 6.6
Large Cattle Owner	36 51.4	22 31.4	7 10.0	1 1.4	4 5.7	70 6.6
Farmer Without Cattle	36 49.3	18 24.7	6 8.2	3 4.1	10 13.7	73 6.8
Banamhala	38 53.5	14 19.7	7 9.9	3 4.2	9 12.7	71 6.7
Nfumu	36 50.7	13 18.3	13 18.3	6 8.5	3 4.2	71 6.7
Ningi	39 54.9	17 23.9	9 12.7	2 2.8	4 5.6	71 6.7
Church Rel. Person	20 27.8	22 30.6	13 18.1	8 11.1	9 12.5	72 6.7
School Headmaster	11 14.9	20 27.0	15 20.3	13 17.6	15 20.3	74 6.9
Column Total	468 43.9	247 23.1	136 12.7	79 7.4	137 12.8	1067 100.0

note: $\chi^2 = 152.92$; 56 d.f.; $p < .001$; s.
Cramer's V = .19

TABLE 22

POSITION AND PRINCIPAL OCCUPATION

Position	Principal Occupation Farmer	Non-Farmer	Row Total
Divisional Secretary	4 22.2	14 77.8	18 1.8
Ward Exec. Officer	18 32.7	37 67.3	55 5.4
TANU Chairman	59 98.3	1 1.7	60 5.9
TANU Secretary	19 51.4	18 48.6	37 3.7
Prim. Soc. Chairman	35 97.2	1 2.8	36 3.6
Prim. Soc. Secretary	32 62.7	19 37.3	51 5.0
Ten-cell Leader	211 98.1	4 1.9	215 21.3
Progressive Farmer	70 100.0	- -	70 6.9
Large Cattle Owner	66 100.0	- -	66 6.5
Farmer Without Cattle	67 98.5	1 1.5	68 6.7
Banamhala	67 97.1	2 2.9	69 6.8
Nfumu	62 93.9	4 6.1	66 6.5
Ningi	65 100.0	- -	65 6.4
Church Rel. Person	57 83.3	11 16.2	68 6.7
School Headmaster	5 7.5	62 92.5	67 6.6
Column Total	837 82.8	174 17.2	1011 100.0

note: $\chi^2 = 570.27$; 14 d.f.; $p < .001$; s. Cramer's V = .75

TABLE 23

POSITION AND AGE

Position	Age under 20	20-30	30-40	40-50	50-60	60-70	70 and over	Average Age in Years
Divisional Secretary	- -	1 5.3	14 73.7	3 15.8	1 5.3	- -	- -	36.9
Ward Exec. Officer	- -	18 31.0	28 48.3	11 19.0	1 1.7	- -	- -	34.1
TANU Chairman	- -	- -	17 27.9	24 39.3	12 19.7	7 11.5	1 1.6	46.8
TANU Secretary	1 2.5	20 50.0	15 37.5	1 2.5	2 5.0	1 2.5	- -	31.5
Prim. Soc. Chairman	- -	1 2.6	10 25.6	10 25.6	13 33.3	5 12.8	- -	47.8
Prim. Soc. Secretary	- -	23 42.6	22 40.7	9 16.7	- -	- -	- -	32.4
Ten-cell Leader	- -	18 8.0	59 26.3	63 28.1	47 21.0	29 12.9	8 3.6	46.5
Progressive Farmer	- -	6 8.6	18 25.7	14 20.0	25 35.7	4 5.7	3 4.3	46.7
Large Cattle Owner	- -	- -	8 11.4	12 17.1	26 37.1	13 18.6	11 15.7	56.0
Farmer Without Cattle	- -	12 16.7	21 29.2	14 19.4	14 19.4	6 8.3	5 6.9	44.4
Banamhala	1 1.4	- -	4 5.6	13 18.3	19 26.8	19 26.8	15 21.1	57.0
Nfumu	- -	1 1.4	12 16.9	17 23.9	22 31.0	12 16.9	7 9.9	52.5
Ningi	- -	15 21.1	34 47.9	17 23.9	3 4.2	2 2.8	- -	37.0
Church Rel. Person	- -	7 9.7	28 38.9	11 15.3	10 13.9	11 15.3	5 6.9	47.1
School Headmaster	- -	10 13.5	37 50.0	23 31.1	4 5.4	- -	- -	37.9
Column Total	2 .2	132 12.4	327 30.7	242 22.7	199 18.7	108 10.2	55 5.2	1066 100.0

note: $\chi^2 = 471.33$; 84 d.f.; $p < .001$; s.
Cramer's V = .27

TABLE 24

POSITION AND CATTLE OWNERSHIP

Position	Cattle Ownership No	Yes	Row Total
Dvisional Secretary	16 88.9	2 11.1	18 1.9
Ward Exec. Officer	39 72.2	15 27.8	54 5.7
TANU Chairman	22 39.3	34 60.7	56 6.0
TANU Secretary	17 53.1	15 46.9	32 3.4
Prim. Soc. Chairman	19 51.4	18 48.6	37 3.9
Prim. Soc. Secretary	26 51.0	25 49.0	51 5.4
Ten-cell Leader	69 34.7	130 65.3	199 21.1
Progressive Farmer	22 36.1	39 63.9	61 6.5
Large Cattle Owner	7 10.9	57 89.1	64 6.8
Farmer Without Cattle	47 78.3	13 21.7	60 6.4
Banamhala	24 40.7	35 59.3	59 6.3
Nfumu	26 44.8	32 55.2	58 6.2
Ningi	24 38.1	39 61.9	63 6.7
Church Rel. Person	42 65.6	22 34.4	64 6.8
School Headmaster	57 87.7	8 12.3	65 6.9
Column Total	457 48.6	484 51.4	941 100.0

note: χ^2 = 154.85; 14 d.f.; $p < .001$; s. Cramer's V = .41

TABLE 25

POSITION AND NUMBER OF WIVES

Position	Wives				Row Total
	none	one	two	three or more	
Divisional Secretary	1 5.3	13 68.4	4 21.1	1 5.3	19 1.8
Ward Exec. Officer	- -	38 65.5	14 24.1	6 10.3	58 5.4
TANU Chairman	2 3.3	35 57.4	18 29.5	6 9.8	61 5.7
TANU Secretary	5 12.5	31 77.5	3 7.5	1 2.5	40 3.7
Prim. Soc. Chairman	- -	22 56.4	14 35.9	3 7.7	39 3.7
Prim. Soc. Secretary	3 5.6	33 61.1	18 33.3	- -	54 5.1
Ten-cell Leader	9 4.0	144 64.3	53 23.7	18 8.0	224 21.0
Progressive Farmer	1 1.4	41 58.6	16 22.9	12 17.1	70 6.6
Large Cattle Owner	2 2.9	26 37.1	27 38.6	15 21.4	70 6.6
Farmer Without Cattle	7 9.6	45 61.6	15 20.5	6 8.2	73 6.8
Banamhala	4 5.6	48 67.6	12 16.9	7 9.9	71 6.7
Nfumu	5 7.0	47 66.2	14 19.7	5 7.0	71 6.7
Ningi	4 5.6	41 57.7	19 26.8	7 9.9	71 6.7
Church Rel. Person	5 6.9	64 88.9	3 4.2	- -	72 6.7
School Headmaster	4 5.4	63 85.1	6 8.1	1 1.4	74 6.9
Column Total	52 4.9	691 64.8	236 22.1	88 8.2	1067 100.0

note: $\chi^2 = 118.74$; 42 d.f.; $p < .001$; s. Cramer's V = .19.

TABLE 26

POSITION AND SIZE OF HOUSEHOLD

Position	Members in Household 1-3	4-5	6-7	8-9	10-11	12-15	16-19	20+	Row Total
Divisional Secretary	2 10.5	5 26.3	4 21.1	1 5.3	3 15.8	4 21.1	- -	- -	19 1.8
Ward Exec. Officer	11 19.0	11 19.0	17 29.3	6 10.3	3 5.2	5 8.6	3 5.2	2 3.4	58 5.4
TANU Chairman	1 1.6	10 16.4	12 19.7	17 27.9	6 9.8	4 6.6	5 8.2	6 9.8	61 5.7
TANU Secretary	10 25.0	9 22.5	6 15.0	4 10.0	4 10.0	6 15.0	1 2.5	- -	40 3.8
Prim. Soc. Chairman	1 2.6	5 12.8	4 10.3	4 10.3	5 12.8	16 41.0	1 2.6	3 7.7	39 3.7
Prim. Soc. Secretary	8 14.8	15 27.8	6 11.1	7 13.0	5 9.3	10 18.5	2 3.7	1 1.9	54 5.1
Ten-cell Leader	38 17.0	27 12.1	51 22.8	44 19.6	21 9.4	28 12.5	7 3.1	8 3.6	224 21.0
Progressive Farmer	9 12.9	2 2.9	12 17.1	13 18.6	11 15.7	10 14.3	4 5.7	9 12.9	70 6.6
Large Cattle Owner	1 1.4	6 8.6	10 14.3	11 15.7	12 17.1	10 14.3	10 14.3	10 14.3	70 6.6
Farmer Without Cattle	25 34.2	15 20.5	10 13.7	6 8.2	7 9.6	8 11.0	1 1.4	1 1.4	73 6.9
Banamhala	10 14.1	10 14.1	17 23.9	8 11.3	11 15.5	11 15.5	3 4.2	1 1.4	71 6.7
Nfumu	13 18.6	15 21.4	13 18.6	10 14.3	3 4.3	10 14.3	2 2.9	4 5.7	70 6.6
Ningi	12 17.1	14 20.0	14 20.0	15 21.4	6 8.6	5 7.1	3 4.3	1 1.4	70 6.6
Church Rel. Person	15 20.8	7 9.7	24 33.3	10 13.9	11 15.3	4 5.6	1 1.4	- -	72 6.8
School Headmaster	9 12.2	11 14.9	14 18.9	18 24.3	11 14.9	9 12.2	1 1.4	1 1.4	74 6.9
Column Total	165 15.5	162 15.2	214 20.1	174 16.3	119 11.2	140 13.1	44 4.1	47 4.4	1065 100.0

note: $\chi^2 = 226.31$; 98 d.f.; $p < .001$; s.
Cramer's V = .17

TABLE 27

MODERN STATUS OF MEMBERS OF TRADITIONAL STRATA

Position	Lower Traditional Stratum				Medium Traditional Stratum				Upper Traditional Stratum				Total
	low mod.s.	med. mod.s.	high mod.s.	sub-total	low mod.s.	med. mod.s.	high mod.s.	sub-total	low mod.s.	med. mod.s.	high mod.s.	sub-total	
Divisional	1	3	6	10	-	5	4	9	-	-	-	-	19
Secretary	10.0	30.0	60.0	4.3	-	55.6	44.4	1.2	-	-	-	-	
	2.0	2.2	12.0		-	1.3	4.9		-	-	-		
Ward	-	18	12	30	2	12	10	24	-	2	2	4	58
Executive	-	60.0	40.0	12.8	8.3	50.0	41.7	3.3	-	50.0	50.0	3.7	
Officer	-	13.3	24.0		.8	3.2	12.2		-	3.8	33.3		
TANU	-	3	-	3	12	27	10	49	2	7	-	9	61
Chairman	-	100.0	-	1.3	24.5	55.1	20.4	6.8	22.2	77.8	-	8.4	
	-	2.2	-		4.5	7.2	12.2		4.2	13.2	-		
TANU	1	16	5	22	2	12	3	17	-	1	-	1	40
Secretary	4.5	72.7	22.7	9.4	11.8	70.6	17.6	2.3	-	100.0	-	.9	
	2.0	11.9	10.0		.8	3.2	3.7		-	1.9	-		
Primary	-	1	-	1	4	24	4	32	3	3	-	6	39
Society	-	100.0	-	.4	12.5	75.0	12.5	4.4	50.0	50.0	-	5.6	
Chairman	-	.7	-		1.5	6.4	4.9		6.3	5.7	-		
Primary	2	19	1	22	1	22	7	30	1	1	-	2	54
Society	9.1	86.4	4.5	9.4	3.3	73.3	23.3	4.1	50.0	50.0	-	1.9	
Secretary	4.0	14.1	2.0		.4	5.8	8.5		2.1	1.9	-		
Ten-cell	8	17	2	27	86	87	4	177	10	10	-	20	224
Leader	29.8	63.0	7.4	11.5	48.6	49.2	2.3	24.4	50.0	50.0	-	18.7	
	16.0	12.6	4.0		32.3	23.1	4.9		20.8	18.9	-		

TABLE 27 (CONTINUED)

MODERN STATUS OF MEMBERS OF TRADITIONAL STRATA

Position	Lower Traditional Stratum low mod.s.	med. mod.s.	high mod.s.	sub-total	Medium Traditional Stratum low mod.s.	med. mod.s.	high mod.s.	sub-total	Upper Traditional Stratum low mod.s.	med. mod.s.	high mod.s.	sub-total	Total
Progressive Farmer	3 37.5 6.0	3 37.5 2.2	2 25.0 4.0	8 3.4	10 20.8 3.8	34 70.8 9.0	4 8.3 4.9	48 6.6	4 28.6 8.3	7 50.0 13.2	3 21.4 50.0	14 13.1	70
Large Cattle Owner	- - -	- - -	- - -	- -	26 55.3 9.8	21 44.7 5.6	- - -	47 6.5	15 65.2 31.3	8 34.8 15.1	- - -	23 21.5	70
Farmer Without Cattle	12 54.5 24.0	10 45.5 7.4	- - -	22 9.4	22 45.8 8.3	25 52.1 6.6	1 2.1 1.2	48 6.6	1 33.3 2.1	1 33.3 1.9	1 33.3 16.7	3 2.8	73
Banamhala	1 25.0 2.0	2 50.0 1.5	1 25.0 2.0	4 1.7	32 57.1 12.0	23 41.1 6.1	1 1.8 1.2	56 7.7	4 36.4 8.3	7 63.6 13.2	- - -	11 10.3	71
Nfumu	10 76.9 20.0	2 15.4 1.5	1 7.7 2.0	13 5.5	32 64.0 12.0	18 36.0 4.8	- - -	50 6.9	6 75.0 12.5	2 25.0 3.8	- - -	8 7.5	71
Ningi	11 61.1 22.0	7 38.9 5.2	- - -	18 7.7	30 60.0 11.3	19 38.0 5.0	1 2.0 1.2	50 6.9	2 66.7 4.2	1 33.3 1.9	- - -	3 2.8	71
Church Related Person	1 4.2 2.0	17 70.8 12.6	6 25.0 12.0	24 10.2	6 13.3 2.3	32 71.1 8.5	7 15.6 8.5	45 6.2	- - -	3 100.0 5.7	- - -	3 2.8	72

TABLE 27 (CONTINUED)

MODERN STATUS OF MEMBERS OF TRADITIONAL STRATA

Position	Lower Traditional Stratum				Medium Traditional Stratum				Upper Traditional Stratum				Total
	low mod.s.	med. mod.s.	high mod.s.	sub-total	low mod.s.	med. mod.s.	high mod.s.	sub-total	low mod.s.	med. mod.s.	high mod.s.	sub-total	
School Headmaster	-	17	14	31	1	16	26	43	-	-	-	-	74
	-	54.8	45.2	13.2	2.3	37.2	60.5	5.9	-	-	-	-	
	-	12.6	28.0		.4	4.2	31.7		-	-	-		
Column Total	50	135	50	235	266	377	82	725	48	53	6	107	1067
	21.3	57.4	21.3		36.7	52.0	11.3		44.9	49.5	5.6		

note: $\chi^2 = 118.09$; 26 d.f.; $p < .001$; s. Cramer's V = .50

$\chi^2 = 274.58$; 28 d.f.; $p < .001$; s. Cramer's V = .44

$\chi^2 = 45.43$; 24 d.f.; $p < .01$; s. Cramer's V = .46

TABLE 28

TRADITIONAL STATUS OF MEMBERS OF MODERN STRATA

Position	Lower Modern Stratum				Medium Modern Stratum				Upper Modern Stratum				Total
	low tr.s.	med. tr.s.	high tr.s.	sub-total	low tr.s.	med. tr.s.	high tr.s.	sub-total	low tr.s.	med. tr.s.	high tr.s.	sub-total	
Divisional	1	-	-	1	3	5	-	8	6	4	-	10	19
Secretary	100.0	-	-	.3	37.5	62.5	-	1.4	60.0	40.0	-	7.2	
	2.0	-	-		2.2	1.3	-		12.0	4.9	-		
Ward	-	2	-	2	18	12	2	32	12	10	2	24	58
Executive	-	100.0	-	.5	56.3	37.5	6.3	5.7	50.0	41.7	8.3	17.4	
Officer	-	.8	-		13.3	3.2	3.8		24.0	12.2	33.3		
TANU	-	12	2	14	3	27	7	37	-	10	-	10	61
Chairman	-	85.7	14.3	3.8	8.1	73.0	18.9	6.5	-	100.0	-	7.2	
	-	4.5	4.2		2.2	7.2	13.2		-	12.2	-		
TANU	1	2	-	3	16	12	1	29	5	3	-	8	40
Secretary	33.3	66.7	-	.8	55.2	41.4	3.4	5.1	62.5	37.5	-	5.8	
	2.0	.8	-		11.9	3.2	1.9		10.0	3.7	-		
Primary	-	4	3	7	1	24	3	28	-	4	-	4	39
Society	-	67.1	42.9	1.9	3.6	85.7	10.7	5.0	-	100.0	-	2.9	
Chairman	-	1.5	6.3		.7	6.4	5.7		-	4.9	-		
Primary	2	1	1	4	19	22	1	42	1	7	-	8	54
Society	50.0	25.0	25.0	1.1	45.2	52.4	2.4	7.4	12.5	87.5	-	5.8	
Secretary	4.0	.4	2.1		14.1	5.8	1.9		2.0	8.5	-		
Ten-Cell	8	86	10	104	17	87	10	114	2	4	-	6	224
Leader	7.7	82.7	9.6	28.6	14.9	76.3	8.8	20.4	33.3	66.7	-	4.3	
	16.0	32.3	20.8		12.6	23.1	18.9		4.0	4.9	-		

TABLE 28 (CONTINUED)

TRADITIONAL STATUS OF MEMBERS OF MODERN STRATA

Position	Lower Modern Stratum				Medium Modern Stratum				Upper Modern Stratum				Total
	low tr.s.	med. tr.s.	high tr.s.	sub-total	low tr.s.	med. tr.s.	high tr.s.	sub-total	low tr.s.	med. tr.s.	high tr.s.	sub-total	
Progressive Farmer	3 17.6 6.0	10 58.8 3.8	4 23.5 8.3	17 4.7	3 6.8 2.2	34 77.3 9.0	7 15.9 13.2	44 7.8	2 22.2 4.0	4 44.4 4.9	3 33.3 50.0	9 6.5	70
Large Cattle Owner	- - -	26 63.4 9.8	15 36.6 31.3	41 11.3	- - -	21 72.4 5.6	8 27.6 15.1	29 5.1	- - -	- - -	- - -	- -	70
Farmer Without Cattle	12 34.3 24.0	22 62.9 8.3	1 2.9 2.1	35 9.6	10 27.8 7.4	25 69.4 6.6	1 2.8 1.9	36 6.4	- - -	1 50.0 1.2	1 50.0 16.7	2 1.4	73
Banamhala	1 2.7 2.0	32 86.5 12.0	4 10.8 8.3	37 10.2	2 6.3 1.5	23 71.9 6.1	7 21.9 13.2	32 5.7	1 50.0 2.0	1 50.0 1.2	- -	2 1.4	71
Nfumu	10 20.8 20.0	32 66.7 12.0	6 12.5 12.5	48 13.2	2 9.1 1.5	18 81.8 4.8	2 9.1 3.8	22 3.9	1 100.0 2.0	- - -	- -	1 .7	71
Ningi	11 25.6 22.0	30 69.8 11.3	2 4.7 4.2	43 11.8	7 25.9 5.2	19 70.4 5.0	1 3.7 1.9	27 4.8	- - -	1 100.0 1.2	- -	1 .7	71
Church Related Person	1 14.3 2.0	6 85.7 2.3	- -	7 1.9	17 32.7 12.6	32 61.5 8.5	3 5.8 5.7	52 9.2	6 46.2 12.0	7 53.8 8.5	- -	13 9.4	72

TABLE 28 (CONTINUED)

TRADITIONAL STATUS OF MEMBERS OF MODERN STRATA

Position	Lower Modern Stratum low tr.s.	med. tr.s.	high tr.s.	sub total	Medium Modern Stratum low tr.s.	med. tr.s.	high tr.s.	sub-total	Upper Modern Stratum low tr.s.	med. tr.s.	high tr.s.	sub-total	Total
School	-	1	-	1	17	16	-	33	14	26	-	40	74
Headmaster	-	100.0	-	.3	51.5	48.5	-	5.8	35.0	65.0	-	29.0	
	-	.4	-		12.6	4.2	-		28.0	31.7	-		
Column Total	50	266	48	364	135	377	53	565	50	82	6	138	1067
	13.7	73.1	13.2		23.9	66.7	9.4		36.2	59.4	4.3		

note: $\chi^2 = 80.98$; 28 d.f.; $p < .001$; s. Cramer's V = .33

$\chi^2 = 125.30$; 28 d.f.; $p < .001$; s. Cramer's V = .33

$\chi^2 = 55.27$; 26 d.f. $p < .001$; s. Cramer's V = .45

TABLE 29

POSITION AND STATUS INCONSISTENCY

Position	Status Inconsistency					Row Total
	Trad.St. much higher	Trad.St. little higher	no inconsistency	Mod.St. little higher	Mod. St. much higher	
Divisional Secretary	- -	- -	6 31.6	7 36.8	6 31.6	19 1.8
Ward Exec. Officer	- -	4 6.9	14 24.1	28 48.3	12 20.7	58 5.4
TANU Chairman	2 3.3	19 31.1	27 44.3	13 21.3	- -	61 5.7
TANU Secretary	- -	3 7.5	13 32.5	19 47.5	5 12.5	40 3.7
Prim. Soc. Chairman	3 7.7	7 17.9	24 61.5	5 12.8	- -	39 3.7
Prim. Soc. Secretary	1 1.9	2 3.7	24 44.4	26 48.1	1 1.9	54 5.1
Ten-cell Leader	10 4.5	96 42.9	95 42.4	21 9.4	2 .9	224 21.0
Progressive Farmer	4 5.7	17 24.3	40 57.1	7 10.0	2 2.9	70 6.6
Large Cattle Owner	15 21.4	34 48.6	21 30.0	- -	- -	70 6.6
Farmer Without Cattle	1 1.4	23 31.5	38 52.1	11 15.1	- -	73 6.8
Banamhala	4 5.6	39 54.9	24 33.8	3 4.2	1 1.4	71 6.7
Nfumu	6 8.5	34 47.9	28 39.4	2 2.8	1 1.4	71 6.7
Ningi	2 2.8	31 43.7	30 42.3	8 11.3	- -	71 6.7
Church Rel. Person	- -	9 12.5	33 45.8	24 33.3	6 8.3	72 6.7
School Headmaster	- -	1 1.4	16 21.6	43 58.1	14 18.9	74 6.9
Column Total	48 4.5	319 29.9	433 40.6	217 20.3	50 4.7	1067 100.0

note: $\chi^2 = 503.15$; 56 d.f.; $p < .001$; s. Cramer's V = .34

TABLE 30

ACCEPTANCE OF NEW VARIETY OF SORGHUM (FARMERS ONLY)

Time of Adoption	Total		Nzega		Shinyanga		Maswa		Kahama	
	n	%	n	%	n	%	n	%	n	%
Last season	31	3.7	3	1.6	23	7.2	3	1.6	2	1.4
2 seasons ago	13	1.6	1	.5	7	2.2	4	2.2	1	.7
3 seasons ago	11	1.3	-	-	8	2.5	2	1.1	1	.7
4 seasons ago	-	-	-	-	-	-	-	-	-	-
5 or more s.	5	.6	1	.5	1	.3	3	1.6	-	-
no/no answer	777	92.8	184	97.4	280	87.8	172	93.5	141	97.2
N = 100 %	837		189		319		184		145	

TABLE 31

ACCEPTANCE OF NEW VARIETY OF MAIZE (FARMERS ONLY)

Time of Adoption	Total		Nzega		Shinyanga		Maswa		Kahama	
	n	%	n	%	n	%	n	%	n	%
Last season	98	11.7	25	13.2	42	13.2	26	14.1	5	3.4
2 seasons ago	40	4.8	20	10.6	11	3.4	6	3.3	3	2.1
3 seasons ago	14	1.7	2	1.1	4	1.3	4	2.2	4	2.8
4 seasons ago	4	.5	-	-	2	.6	-	-	2	1.4
5 or more s.	19	2.3	7	3.7	5	1.6	6	3.3	1	.7
no/no answer	662	79.1	135	71.4	255	79.9	142	77.2	130	89.7
N = 100 %	837		189		319		184		145	

TABLE 32

ACCEPTANCE OF FERTILIZER (FARMERS ONLY)

Time of Adoption	Total		Nzega		Shinyanga		Maswa		Kahama	
	n	%	n	%	n	%	n	%	n	%
Last season	86	10.3	25	13.2	26	8.2	11	6.0	24	16.6
2 seasons ago	41	4.9	13	6.9	13	4.1	4	2.2	11	7.6
3 seasons ago	19	2.3	7	3.7	5	1.6	1	.5	6	4.1
4 seasons ago	7	.8	1	.5	2	.6	1	.5	3	2.1
5 or more s.	10	1.2	2	1.1	3	.9	4	2.2	1	.7
no/no answer	674	80.5	141	74.6	270	84.6	163	88.6	100	69.0
N = 100 %	837		189		319		184		145	

TABLE 33

ACCEPTANCE OF INSECTICIDE (FARMERS ONLY)

Time of Adoption	Total		Nzega		Shinyanga		Maswa		Kahama	
	n	%	n	%	n	%	n	%	n	%
Last season	101	12.1	29	15.3	37	11.6	23	12.5	12	8.3
2 seasons ago	48	5.7	8	4.2	22	6.9	8	4.3	10	6.9
3 seasons ago	16	1.9	5	2.6	1	.3	4	2.2	6	4.1
4 seasons ago	17	2.0	5	2.6	3	.9	-	-	9	6.2
5 or more s.	24	2.9	6	3.2	2	.6	7	3.8	9	6.2
no/no answer	631	75.4	136	72.0	254	79.6	142	77.2	99	68.3
N = 100 %	837		189		319		184		145	

TABLE 34

ACCEPTANCE OF MANURE (FARMERS ONLY)

Time of Adoption	Total		Nzega		Shinyanga		Maswa		Kahama	
	n	%	n	%	n	%	n	%	n	%
Last season	51	6.1	18	9.5	18	5.6	7	3.8	8	5.5
2 seasons ago	30	3.6	10	5.3	17	5.3	2	1.1	1	.7
3 seasons ago	21	2.5	7	3.7	6	1.9	3	1.6	5	3.4
4 seasons ago	14	1.7	7	3.7	4	1.3	-	-	3	2.1
5 or more s.	189	22.6	65	34.4	45	14.1	21	11.4	58	40.0
no/no answer	532	63.6	82	43.4	229	71.8	151	82.1	70	48.3
N = 100 %	837		189		319		184		145	

TABLE 35

TREATMENT OF SICK CATTLE (CATTLE OWNERS ONLY)

Treatment	Total		Nzega		Shinyanga		Maswa		Kahama	
	n	%	n	%	n	%	n	%	n	%
Nothing	17	3.5	3	3.0	5	2.4	7	5.9	2	3.6
Neighbor or Nfumu	40	8.3	3	3.0	5	2.4	29	24.6	3	5.4
Veterinary Center	329	68.0	67	67.0	153	72.9	62	52.2	47	83.9
No answer	98	20.2	27	27.0	47	22.4	20	16.9	4	7.1
N = 100 %	484		100		210		118		56	

TABLE 36

USE OF DIPTANK (CATTLE OWNERS ONLY)

Frequency of Use	Total n	%	Nzega n	%	Shinyanga n	%	Maswa n	%	Kahama n	%
Never	187	38.6	43	43.0	74	35.2	63	53.4	7	12.5
Rarely	44	9.1	7	7.0	27	12.9	8	6.8	2	3.6
Sometimes	25	5.2	2	2.0	19	9.0	4	3.4	-	-
Regularly	81	16.7	15	15.0	19	9.0	5	4.2	42	75.0
No answer	147	30.4	33	33.0	71	33.8	38	32.2	5	8.9
N = 100 %	484		100		210		118		56	

TABLE 37

BEGINNING OF USE OF DIPTANK (CATTLE OWNERS ONLY)

First Use	Total n	%	Nzega n	%	Shinyanga n	%	Maswa n	%	Kahama n	%
Recently	41	8.5	13	13.0	8	3.8	4	3.4	16	28.6
1-2 years ago	8	1.7	4	4.0	3	1.4	1	.8	-	-
3-5 years ago	5	1.0	1	1.0	2	1.0	1	.8	1	1.8
More than 5 y.	37	7.6	1	1.0	13	6.2	3	2.5	20	35.7
No answer	393	81.2	81	81.0	184	87.6	109	92.4	19	35.9
N = 100 %	484		100		210		118		56	

TABLE 38

DISTANCE TO NEAREST DIPTANK (CATTLE OWNERS ONLY)

Distance in Miles	Total		Nzega		Shinyanga		Maswa		Kahama	
	n	%	n	%	n	%	n	%	n	%
0 - 5	114	23.6	19	19.0	48	22.9	8	6.8	39	69.6
6 - 10	85	17.6	12	12.0	43	20.5	20	16.9	10	17.9
11 - 20	54	11.2	5	5.0	25	11.9	22	18.6	2	3.6
21 - 40	60	12.4	4	4.0	21	10.0	34	28.8	1	1.8
More than 40	32	6.6	13	13.0	6	2.9	13	11.0	-	-
No answer	139	28.7	47	47.0	67	31.9	21	17.8	4	7.1
N = 100 %	484		100		210		118		56	

TABLE 39

USE OF CATTLE INOCCULATION (CATTLE OWNERS ONLY)

Frequency of Use	Total		Nzega		Shinyanga		Maswa		Kahama	
	n	%	n	%	n	%	n	%	n	%
Never	67	13.8	27	27.0	20	9.5	5	4.2	15	26.8
Rarely	176	36.4	33	33.0	89	42.4	36	30.5	18	32.1
Sometimes	53	11.0	9	9.0	25	11.9	13	11.0	6	10.7
Regularly	87	18.0	12	12.0	27	12.9	37	31.4	11	19.6
No answer	101	20.9	19	19.0	49	23.3	27	22.9	6	10.7
N = 100 %	484		100		210		118		56	

TABLE 40

BEGINNING OF CATTLE INOCCULATION (CATTLE OWNERS ONLY)

First Use	Total		Nzega		Shinyanga		Maswa		Kahama	
	n	%	n	%	n	%	n	%	n	%
Recently	6	1.2	3	3.0	-	-	1	.8	2	3.6
1-2 years ago	16	3.3	4	4.0	8	3.8	2	1.7	2	3.6
3-5 years ago	13	2.7	4	4.0	5	2.4	2	1.7	2	3.6
More than 5 y.	99	20.5	19	19.0	38	18.1	33	28.0	9	16.1
No answer	350	72.3	70	70.0	159	75.7	80	67.8	41	73.2
N = 100 %	484		100		210		118		56	

TABLE 41

USE OF MEDICINE FOR LIVESTOCK (CATTLE OWNERS ONLY)

Frequency of Use	Total		Nzega		Shinyanga		Maswa		Kahama	
	n	%	n	%	n	%	n	%	n	%
Never	150	31.0	47	47.0	50	23.8	37	31.4	16	28.6
Rarely	139	28.7	23	23.0	65	31.0	33	28.0	18	32.1
Sometimes	34	7.0	4	4.0	19	9.0	8	6.8	3	5.4
Regularly	32	6.6	3	3.0	8	3.8	10	8.5	11	19.6
No answer	129	26.7	23	23.0	68	32.4	30	25.4	8	14.3
N = 100 %	484		100		210		118		56	

TABLE 42

BEGINNING OF USE OF MEDICINE (CATTLE OWNERS ONLY)

First Use	Total		Nzega		Shinyanga		Maswa		Kahama	
	n	%	n	%	n	%	n	%	n	%
Recently	9	1.9	3	3.0	-	-	-	-	6	10.7
1-2 years ago	10	2.1	1	1.0	6	2.9	2	1.7	1	1.8
3-5 years ago	16	3.3	4	4.0	7	3.3	3	2.5	2	3.6
More than 5 y.	53	11.0	6	6.0	28	13.3	13	11.0	6	10.7
No answer	396	81.8	86	86.0	169	80.5	100	84.7	41	73.2
N = 100 %	484		100		210		118		56	

TABLE 43

DISTANCE TO NEAREST VETERINARY CENTER (CATTLE OWNERS ONLY)

Distance in Miles	Total		Nzega		Shinyanga		Maswa		Kahama	
	n	%	n	%	n	%	n	%	n	%
0 - 5	86	17.8	16	16.0	41	19.5	9	7.6	20	35.7
6 - 10	92	19.0	19	19.0	38	18.1	25	21.2	10	17.9
11 - 20	80	16.5	16	16.0	29	13.8	32	27.1	3	5.4
21 - 40	68	14.0	16	16.0	19	9.0	26	22.0	7	12.5
More than 40	18	3.7	-	-	5	2.4	6	5.1	7	12.5
No answer	140	28.9	33	33.0	78	37.1	20	16.9	9	16.1
N = 100 %	484		100		210		118		56	

TABLE 44

PEOPLE HAVE HEARD ABOUT PLANS FOR LIVESTOCK IMPROVEMENT

Respondents Have Heard	Total		Nzega		Shinyanga		Maswa		Kahama	
	n	%	n	%	n	%	n	%	n	%
Yes	378	35.4	104	43.9	121	31.0	100	38.8	53	29.1
No	664	62.2	131	55.3	259	66.4	154	59.7	120	65.9
No answer	25	2.3	2	.8	10	2.6	4	1.6	9	4.9
N = 100 %	1067		237		390		258		182	

TABLE 45

WHERE HEARD ABOUT PLANS FOR LIVESTOCK IMPROVEMENT

Source	Total		Nzega		Shinyanga		Maswa		Kahama	
	n	%	n	%	n	%	n	%	n	%
Official Source	219	20.5	72	30.4	64	16.4	55	21.3	28	15.4
Casual Source	55	5.2	12	5.1	19	4.9	13	5.0	11	6.0
Mass Media	87	8.2	20	8.4	29	7.4	30	11.6	8	4.4
No answer/ Never heard	706	66.2	133	56.1	278	71.3	160	62.0	135	74.2
N = 100 %	1067		237		390		258		182	

TABLE 46

KNOWLEDGE OF RANGE MANAGEMENT ACT

Knowledge	Total		Nzega		Shinyanga		Maswa		Kahama	
	n	%	n	%	n	%	n	%	n	%
Yes	156	14.6	51	21.5	52	13.3	35	13.6	18	9.9
No	659	61.8	114	48.1	229	58.7	177	68.6	139	76.4
No answer	252	23.6	72	30.4	109	27.9	46	17.8	25	13.7
N = 100 %	1067		237		390		258		182	

TABLE 47

ABILITY TO NAME THE RANGE COMMISSIONERS CORRECTLY

Correctly Named	Total		Nzega		Shinyanga		Maswa		Kahama	
	n	%	n	%	n	%	n	%	n	%
None correct	29	2.7	11	4.6	9	2.3	4	1.6	5	2.7
1-2 correct	20	1.9	6	2.5	2	.5	8	3.1	4	2.2
3-4 correct	15	1.4	-	-	8	2.1	5	1.9	2	1.1
5-6 correct	8	.7	3	1.3	1	.3	3	1.2	1	.5
7 or more	14	1.3	5	2.1	3	.8	5	1.9	1	.5
No answer	981	91.9	212	89.5	367	94.1	233	90.3	169	92.9
N = 100 %	1067		237		390		258		182	

TABLE 48

INFORMANTS WHO HAVE HEARD ABOUT MEETING IN FEB. 1970

Heard about the Meeting	Total		Nzega		Shinyanga		Maswa		Kahama	
	n	%	n	%	n	%	n	%	n	%
Yes	105	9.8	31	13.1	25	6.4	22	8.5	27	14.8
No	650	60.9	142	59.9	228	58.5	158	61.2	122	67.0
No answer	312	29.2	64	27.0	137	35.1	78	30.2	33	18.1
N = 100 %	1067		237		390		258		182	

TABLE 49

CORRECT INFORMATION ABOUT MEETING IN FEB. 1970

Things Heard Correctly	Total		Nzega		Shinyanga		Maswa		Kahama	
	n	%	n	%	n	%	n	%	n	%
None	996	93.3	214	90.3	378	96.9	241	93.4	163	89.6
One	28	2.6	11	4.6	1	.3	8	3.1	8	4.4
Two	19	1.8	5	2.1	2	.5	5	1.9	7	3.8
Three	16	1.5	4	1.7	6	1.5	4	1.6	2	1.1
Four or more	8	.7	3	1.3	3	.8	-	-	2	1.1
N = 100 %	1067		237		390		258		182	

TABLE 50

INFORMANTS WHO HAVE HEARD ABOUT RANCHING ASSOCIATIONS

Heard about R.A.s	Total		Nzega		Shinyanga		Maswa		Kahama	
	n	%	n	%	n	%	n	%	n	%
Yes	280	26.2	86	36.3	83	21.3	75	29.1	36	19.8
No	619	58.0	121	51.1	206	52.8	165	64.0	127	69.8
No answer	168	15.7	30	12.7	101	25.9	18	7.0	19	10.4
N = 100 %	1067		237		390		258		182	

TABLE 51

CORRECT INFORMATION ABOUT RANCHING ASSOCIATIONS

Things Heard Correctly	Total		Nzega		Shinyanga		Maswa		Kahama	
	n	%	n	%	n	%	n	%	n	%
None	812	76.1	158	66.7	316	81.0	187	72.5	151	83.0
One	112	10.5	38	16.0	27	6.9	28	10.9	19	10.4
Two	64	6.0	22	9.3	18	4.6	16	6.2	8	4.4
Three	58	5.4	15	6.3	22	5.6	20	7.8	1	.5
Four or More	21	2.0	4	1.7	7	1.8	7	2.7	3	1.6
N = 100 %	1067		237		390		258		182	

TABLE 52

RESPONDENTS WHO FAVOR RANCHING ASSOCIATIONS

Favorable Attitude	Total		Nzega		Shinyanga		Maswa		Kahama	
	n	%	n	%	n	%	n	%	n	%
Definitely Unfavorable	23	2.2	2	.8	10	2.6	8	3.1	3	1.6
Slightly Unfavorable	45	4.2	5	2.1	21	5.4	4	1.6	15	8.2
Undecided	80	7.5	16	6.8	32	8.2	11	4.3	21	11.5
Slightly Favorable	225	21.1	49	20.7	76	19.5	51	19.8	49	26.9
Strongly Favorable	573	53.7	108	45.6	225	57.7	163	63.2	77	42.3
No answer	121	11.3	57	24.1	26	6.7	21	8.1	17	9.3
N = 100 %	1067		237		390		258		182	

TABLE 53

POSITION OF ADOPTERS OF FARMING INNOVATIONS (FARMERS ONLY)

Position	Adopters				Row Total
	Laggards/ late maj.	Early majority	Early adopters	Innovators	
Divisional Secretary	2 50.0	2 50.0	- -	- -	4 .5
Ward Exec. Officer	9 50.0	9 50.0	- -	- -	18 2.2
TANU Chairman	20 33.9	24 40.7	13 22.0	2 3.4	59 7.0
TANU Secretary	5 26.3	7 36.8	7 36.8	- -	19 2.3
Prim. Soc. Chairman	13 37.1	17 48.6	4 11.4	1 2.9	35 4.2
Prim. Soc. Secretary	16 50.0	12 37.5	3 9.4	1 3.1	32 3.8
Ten-cell Leader	125 59.2	69 32.7	17 8.1	- -	211 25.2
Progressive Farmer	20 28.6	22 31.4	20 28.6	8 11.4	70 8.4
Large Cattle Owner	41 62.1	22 33.3	3 4.5	- -	66 7.9
Farmer Without Cattle	37 55.2	20 29.9	9 13.4	1 1.5	67 8.0
Banamhala	42 62.7	21 31.3	2 3.0	2 3.0	67 8.0
Nfumu	41 66.1	17 27.4	4 6.5	- -	62 7.4
Ningi	35 53.8	24 36.9	5 7.7	1 1.5	65 7.8
Church Rel. Person	19 33.3	26 45.6	10 17.5	2 3.5	57 6.8
School Headmaster	2 40.0	3 60.0	- -	- -	5 .6
Column Total	427 51.0	295 35.2	97 11.6	18 2.2	837 100.0

Note: $\chi^2 = 123.98$; 42 d.f.; $p < .001$; s. Cramer's V = .22

TABLE 54

MODERN STATUS OF ADOPTERS OF FARMING INNOVATIONS

Modern Status	Adopters: Laggards/ late maj.	Early majority	Early adopters	Innovators	Row Total
Low modern status	229 67.2 53.6	83 24.3 28.1	25 7.3 25.8	4 1.2 22.2	341 40.7
Medium modern status	180 41.0 42.2	181 41.2 61.4	65 14.8 67.0	13 3.0 72.2	439 52.4
High modern status	18 31.6 4.2	31 54.4 10.5	7 12.3 7.2	1 1.8 5.6	57 6.8
Column Total	427 51.0	295 35.2	97 11.6	18 2.2	837 100.0

note: χ^2 = 64.33; 6 d.f.; $p < .001$; s.
Kendall's tau = .21; s.

TABLE 55

TRADITIONAL STATUS OF ADOPTERS OF FARMING INNOVATIONS

Traditional Status	Adopters: Laggards/ late maj.	Early majority	Early adopters	Innovators	Row Total
Low Traditional Status	65 52.4 15.2	42 33.9 14.2	15 12.1 15.5	2 1.6 11.1	124 14.8
Medium Traditional Status	314 51.6 73.5	218 35.8 73.9	69 11.3 71.1	8 1.3 44.4	609 72.8
High Traditional Status	48 46.2 11.2	35 33.7 11.9	13 12.5 13.4	8 7.7 44.4	104 12.4
Column Total	427 51.0	295 35.2	97 11.6	18 2.2	837 100.0

note: χ^2 = 17.9; 6 d.f.; $p < .01$; s.
Kendall's tau = .03; n.s.

TABLE 56

STATUS INCONSISTENCIES OF ADOPTERS OF FARMING INNOVATIONS

Status Inconsistency	Adopters				Row Total
	Laggards/ late maj.	Early majority	Early adopters	Innovators	
Trad. Status much higher	27 57.4 6.3	15 31.9 5.1	3 6.4 3.1	2 4.3 11.1	47 5.6
Trad. Status little higher	188 62.9 44.0	77 25.8 26.1	27 9.0 27.8	7 2.3 38.9	299 35.7
No Inconsistency	171 45.7 40.0	146 39.0 49.5	50 13.4 51.5	7 1.9 38.9	374 44.7
Modern Status little higher	34 32.4 8.0	52 49.5 17.6	17 16.2 17.5	2 1.9 11.1	105 12.5
Modern Status much higher	7 58.3 1.6	5 41.7 1.7	- - -	- - -	12 1.4
Column Total	427 51.0	295 35.2	97 11.6	18 2.2	837 100.0

note: χ^2 = 42.05; 12 d.f.; $p < .001$; s.
Kendall's tau = .13; s.

TABLE 57

STATUS COMBINATIONS OF ADOPTERS OF FARMING INNOVATIONS

Status Combination	Adopters: Laggards/ late maj.	Early majority	Early adopters	Innovators	Row Total
Low trad/ low modern status	34 73.9 8.0	8 17.4 2.7	4 8.7 4.1	- - -	46 5.5
Low trad./ med. modern status	24 36.4 5.6	29 43.9 9.8	11 16.7 11.3	2 3.0 11.1	66 7.9
Low trad./ high modern status	7 58.3 1.6	5 41.7 1.7	- - -	- - -	12 1.4
Med. trad./ low modern status	168 67.7 39.3	60 24.2 20.3	18 7.3 18.6	2 .8 11.1	248 29.6
Med. trad./ med. modern status	136 42.2 31.9	135 41.9 45.8	45 14.0 46.4	6 1.9 33.3	322 38.5
Med. trad./ high modern status	10 25.6 2.3	23 59.0 7.8	6 15.4 6.2	- - -	39 4.7
High trad./ low modern status	27 57.4 6.3	15 31.9 5.1	3 6.4 3.1	2 4.3 11.1	47 5.6
High trad./ med. modern status	20 39.2 4.7	17 33.3 5.8	9 17.6 9.3	5 9.8 27.8	51 6.1
High trad./ high modern status	1 16.7 .2	3 50.0 1.0	1 16.7 1.0	1 16.7 5.6	6 .7
Column Total	427 51.0	295 35.2	97 11.6	18 2.2	837 100.0

note: $\chi^2 = 96.76$; 24 d.f.; $p < .001$; s. Cramer's V = .2

TABLE 58

USE OF DIPTANK AND DISTANCE TO NEAREST DIPTANK

Use of Diptank	Distance to Nearest Diptank in Miles 0 - 5	6 - 10	11 - 20	21 - 40	40 +	No answ.	Row Total
Never	5	38	38	42	24	40	187
	2.7	20.3	20.3	22.5	12.8	21.4	38.6
Rarely	20	17	4	-	2	1	44
	45.5	38.6	9.1	-	4.5	2.3	9.1
Sometimes	13	7	4	1	-	-	25
	52.0	28.0	16.0	4.0	-	-	5.2
Regularly	60	14	3	1	-	3	81
	74.1	17.3	3.7	1.2	-	3.7	16.7
No Answer	16	9	5	16	6	95	147
	10.9	6.1	3.4	10.9	4.1	64.6	30.4
Column Total	114	85	54	60	32	139	484
	23.6	17.6	11.2	12.4	6.6	28.7	100.0

note: χ^2 = 356.39; 20 d.f.; $p < .001$; s.; Kendall's tau = .11; s.

TABLE 59

CATTLE INOCCULATION AND DISTANCE TO NEAREST VET CENTER

Frequency of Inocculation	Distance to Nearest Vet Center in Miles 0 - 5	6 - 10	11 - 20	21 - 40	40 +	No answ.	Row Total
Never	9	18	18	5	4	13	67
	13.4	26.9	26.9	7.5	6.0	19.4	13.8
Rarely	35	31	31	27	6	46	176
	19.9	17.6	17.6	15.3	3.4	26.1	36.4
Sometimes	13	16	10	8	2	4	53
	24.5	30.2	18.9	15.1	3.8	7.5	11.0
Regularly	21	15	18	18	4	11	87
	24.1	17.2	20.7	20.7	4.6	12.6	18.0
No answer	8	12	3	10	2	66	101
	7.9	11.9	3.0	9.9	2.0	65.3	20.9
Column Total	86	92	80	68	18	140	484
	17.8	19.0	16.5	14.0	3.7	28.9	100.0

note: χ^2 = 108.96; 20 d.f.; $p < .001$; s.; Kendall's tau = .2; s.

TABLE 60

USE OF MEDICINE FOR LIVESTOCK AND DISTANCE TO NEAREST VET CENTER

Frequency of Use of Med.	Distance to Nearest Vet Center in Miles 0 - 5	6 - 10	11 - 20	21 - 40	40 +	no answ.	Row Total
Never	24 16.0	38 25.3	36 24.0	22 14.7	6 4.0	24 16.0	150 31.0
Rarely	27 19.4	30 21.6	26 18.7	25 18.0	4 2.9	27 19.4	139 28.7
Sometimes	7 20.6	6 17.6	9 26.5	5 14.7	1 2.9	6 17.6	34 7.0
Regularly	11 34.4	5 15.6	5 15.6	5 15.6	3 9.4	3 9.4	32 6.6
No answer	17 13.2	13 10.1	4 3.1	11 8.5	4 3.1	80 62.0	129 26.7
Column Total	86 17.8	92 19.0	80 16.5	68 14.0	18 3.7	140 28.9	484 100.0

note: χ^2 = 113.23; 20 d.f.; $p < .001$; s.
Kendall's tau = .22; s.

TABLE 61

POSITION OF ADOPTERS OF CATTLE INNOVATIONS

Position	Adopters					Row Total
	Laggards	Late m.	Early m.	Early a.	Innov.	
Divisional Secretary	1 50.0	1 50.0	- -	- -	- -	2 .4
Ward Exec. Officer	2 13.3	7 46.7	3 20.0	3 20.0	- -	15 3.1
TANU Chairman	5 14.7	13 38.2	7 20.6	8 23.5	1 2.9	34 7.0
TANU Secretary	6 40.0	3 20.0	4 26.7	1 6.7	1 6.7	15 3.1
Prim. Soc. Chairman	4 22.2	8 44.4	6 33.3	- -	- -	18 3.7
Prim. Soc. Secretary	2 8.0	9 36.0	8 32.0	6 24.0	- -	25 5.2
Ten-cell Leader	26 20.0	39 30.0	51 39.2	11 8.5	3 2.3	130 26.9
Progressive Farmer	4 10.3	18 46.2	11 28.2	3 7.7	3 7.7	39 8.1
Large Cattle Owner	5 8.8	22 38.6	20 35.1	9 15.8	1 1.8	57 11.8
Farmer Without Cattle	7 53.8	2 15.4	3 23.1	1 7.7	- -	13 2.7
Banamhala	5 14.3	12 34.3	14 40.0	2 5.7	2 5.7	35 7.2
Nfumu	4 12.5	13 40.6	10 31.3	5 15.6	- -	32 6.6
Ningi	4 10.3	17 43.6	13 33.3	5 12.8	- -	39 8.1
Church Rel. Person	5 22.7	6 27.3	7 31.8	4 18.2	- -	22 4.5
School Headmaster	3 37.5	1 12.5	3 37.5	- -	1 12.5	8 1.7
Column Total	83 17.1	171 35.3	160 33.1	58 12.0	12 2.5	484 100.0

Note: $\chi^2 = 71.31$; 56 d.f.; p = .08; n.s.
Cramer's V = .19

TABLE 62

TRADITIONAL STATUS OF ADOPTERS OF CATTLE INNOVATIONS

Traditional Status	Adopters Laggards	Late m.	Early m.	Early a.	Innov.	Row Total
Low	16	7	10	5	-	38
traditional	42.1	18.7	26.3	13.2	-	7.9
status	19.3	4.1	6.3	8.6	-	
Medium	59	134	113	43	10	359
traditional	16.4	37.3	31.5	12.0	2.8	74.2
status	71.1	78.4	70.6	74.1	83.3	
High	8	30	37	10	2	87
traditional	9.2	34.5	42.5	11.5	2.3	18.0
status	9.6	17.5	23.1	17.2	16.7	
Column	83	171	160	58	12	484
Total	17.1	35.3	33.1	12.0	2.5	100.0

note: $\chi^2 = 24.92$; 8 d.f.; $p < .002$; s.
Kendall's tau = .09; s.

TABLE 63

MODERN STATUS OF ADOPTERS OF CATTLE INNOVATIONS

Modern Status	Adopters Laggards	Late m.	Early m.	Early a.	Innov.	Row Total
Low	26	73	67	25	4	194
modern	13.4	37.6	34.5	12.9	1.5	40.1
status	31.3	42.7	41.9	43.1	25.0	
Medium	52	85	88	29	6	260
modern	20.0	32.7	33.8	11.2	2.3	53.7
status	62.7	49.7	55.0	50.0	50.0	
High	5	13	5	4	3	30
modern	16.7	43.3	16.7	13.3	10.0	6.2
status	6.0	7.6	3.1	6.9	25.0	
Column	83	171	160	58	12	484
Total	17.1	35.3	33.1	12.0	2.5	100.0

note: $\chi^2 = 14.67$; 8 d.f.; $p = .06$; n.s.
Kendall's tau = -.03; n.s.

TABLE 64

STATUS INCONSISTENCIES OF ADOPTERS OF CATTLE INNOVATIONS

Status Inconsistency	Adopters Laggards	Late m.	Early m.	Early a.	Innov.	Row Total
Trad. Status much higher	4 9.3 4.8	16 37.2 9.4	16 37.2 10.0	7 16.3 12.1	- - -	43 8.9
Trad. Status little higher	23 12.7 27.7	65 35.9 38.0	69 38.1 43.1	20 11.0 34.5	4 2.2 33.3	181 37.4
No inconsistency	40 19.1 48.2	76 36.4 44.4	63 30.1 39.4	24 11.5 41.4	6 2.9 50.0	209 43.2
Mod. Status little higher	14 29.2 16.9	14 29.2 8.2	12 25.0 7.5	6 12.5 10.3	2 4.2 16.7	48 9.9
Mod. Status much higher	2 66.7 2.4	- - -	- - -	1 33.1 1.7	- - -	3 .6
Column Total	83 17.1	171 35.3	160 33.1	58 12.0	12 2.5	484 100.0

note: χ^2 = 22.10; 16 d.f.; p = .13; n.s.
Kendall's tau = -.08; s.

TABLE 65

STATUS COMBINATIONS OF ADOPTERS OF CATTLE INNOVATIONS

Status Combination	Adopters Laggards	Late m.	Early m.	Early a.	Innov.	Row Total
Low trad./	2	4	3	-	-	9
low modern	22.2	44.4	33.3	-	-	1.9
status	2.4	2.3	1.9	-	-	
Low trad./	12	3	7	4	-	26
med. modern	46.2	11.5	26.9	15.4	-	5.4
status	14.5	1.8	4.4	6.9	-	
Low trad./	2	-	-	1	-	3
high modern	66.7	-	-	33.3	-	.6
status	2.4	-	-	1.7	-	
Med. trad./	20	53	48	18	3	142
low modern	14.1	37.3	33.8	12.7	2.1	29.3
status	24.1	31.0	30.0	31.0	25.0	
Med. trad./	37	70	60	23	5	195
med. modern	19.0	35.9	30.8	11.8	2.6	40.3
status	44.6	40.9	37.5	39.7	41.7	
Med. trad./	2	11	5	2	2	22
high modern	9.1	50.0	22.7	9.1	9.1	4.5
status	2.4	6.4	3.1	3.4	16.7	
High trad./	4	16	16	7	-	43
low modern	9.3	37.2	37.2	16.3	-	8.9
status	4.8	9.4	10.0	12.1	-	
High trad./	3	12	21	2	1	39
med. modern	7.7	30.8	53.8	5.1	2.6	8.1
status	3.6	7.0	13.1	3.4	8.3	
High trad./	1	2	-	1	1	5
high modern	20.0	40.0	-	20.0	20.0	1.0
status	1.2	1.2	-	1.7	8.3	
Column	83	171	160	58	12	484
Total	17.1	35.3	33.1	12.0	2.5	100.0

note: $\chi^2 = 56.64$; 32 d.f.; $p < .01$; s. Cramer's V = .17

TABLE 66

POSITION OF ADOPTERS OF PROJECT INFORMATION

Position	Adopters					Row Total
	Laggards	Late m.	Early m.	Early a.	Innov.	
Divisional Secretary	1 5.3	3 15.8	6 31.6	6 31.6	3 15.8	19 1.8
Ward Exec. Officer	6 10.3	13 22.4	20 34.5	16 27.6	3 5.2	58 5.4
TANU Chairman	2 3.3	15 24.6	24 39.3	16 26.2	4 6.6	61 5.7
TANU Secretary	1 2.5	9 22.5	20 50.0	9 22.5	1 2.5	40 3.7
Prim. Soc. Chairman	6 15.4	11 28.2	15 38.5	7 17.9	- -	39 3.7
Prim. Soc. Secretary	8 14.8	10 18.5	20 37.0	13 24.1	3 5.6	54 5.1
Ten-cell Leader	42 18.7	85 37.9	72 32.1	17 7.6	8 3.6	224 21.0
Progressive Farmer	3 4.3	30 42.9	29 41.4	7 10.0	1 1.4	70 6.6
Large Cattle Owner	17 24.3	35 50.0	14 20.0	3 4.3	1 1.4	70 6.6
Farmer Without Cattle	15 20.5	29 39.7	23 31.5	5 6.8	1 1.4	73 6.8
Banamahala	19 26.8	28 39.4	18 25.4	6 8.5	- -	71 6.7
Nfumu	15 21.1	31 43.7	21 29.6	4 5.6	- -	71 6.7
Ningi	17 23.9	31 43.7	19 26.8	4 5.6	- -	71 6.7
Church Rel. Person	12 16.7	19 26.4	34 47.2	7 9.7	- -	72 6.7
School Headmaster	13 17.6	18 24.3	33 44.6	9 12.2	1 1.4	74 6.9
Column Total	177 16.6	367 34.4	368 34.5	129 12.1	26 2.4	1067 100.0

note: χ^2 = 164.32; 56 d.f.; $p < .001$; s.
Cramer's V = .2

TABLE 67

MODERN STATUS OF ADOPTERS OF PROJECT INFORMATION

Modern Status	Adopters Laggards	Late m.	Early m.	Early a.	Innov.	Row Total
Low modern status	79 21.7 44.6	163 44.8 44.4	105 28.8 28.5	15 4.1 11.6	2 .5 7.7	364 34.1
Medium modern status	82 14.5 46.3	175 31.0 47.7	209 37.0 56.8	82 14.5 63.6	17 3.0 65.4	565 53.0
High modern status	16 11.6 9.0	29 21.0 7.9	54 39.1 14.7	32 23.2 24.8	7 5.1 26.9	138 12.9
Column Total	177 16.6	367 34.4	368 34.5	129 12.1	26 2.4	1067 100.0

note: χ^2 = 80.99; 8 d.f.; $p < .001$; s.
Kendall's tau = .22; s.

TABLE 68

TRADITIONAL STATUS OF ADOPTERS OF PROJECT INFORMATION

Traditional Status	Adopters Laggards	Late m.	Early m.	Early a.	Innov.	Row Total
Low traditional status	34 14.5 19.2	74 31.5 20.2	88 37.4 23.9	34 14.5 26.4	5 2.1 19.2	235 22.0
Medium traditional status	120 16.6 67.8	257 35.4 70.0	242 33.4 65.8	87 12.0 67.4	19 2.6 73.1	725 67.9
High traditional status	23 21.5 13.0	36 33.6 9.8	38 35.5 10.3	8 7.5 6.2	2 1.9 7.7	107 10.0
Column Total	177 16.6	367 34.4	368 34.5	129 12.1	26 2.4	1067 100.0

note: χ^2 = 7.23; 8 d.f.; p = .5; n.s.
Kendall's tau = -.05. s.

TABLE 69

STATUS INCONSISTENCIES OF ADOPTERS OF PROJECT INFORMATION

Status Inconsistency	Adopters					Row Total
	Laggards	Late m.	Early m.	Early a.	Innov.	
Trad. status much higher	15 31.3 8.5	19 39.6 5.2	13 27.1 3.5	1 2.1 .8	- - -	48 4.5
Trad. status little higher	61 19.1 34.5	135 42.3 36.8	102 32.0 27.7	18 5.6 14.0	3 .9 11.5	319 29.9
No inconsistency	66 15.2 37.3	147 33.9 40.1	146 33.7 39.7	59 13.6 45.7	15 3.5 57.7	433 40.6
Mod. status little higher	31 14.3 17.5	55 25.3 15.0	87 40.1 23.6	39 18.0 30.2	5 2.3 19.2	217 20.3
Mod. status much higher	4 8.0 2.3	11 22.0 3.0	20 40.0 5.4	12 24.0 9.3	3 6.0 11.5	50 4.7
Column Total	177 16.6	367 34.4	368 34.5	129 12.1	26 2.4	1067 100.0

note: $\chi^2 = 64.77$; 16 d.f.; $p < .001$; s.
Kendall's tau = .18; s.

TABLE 70

STATUS COMBINATIONS OF ADOPTERS OF PROJECT INFORMATION

Status Combination	Adopters Laggards	Late m.	Early m.	Early a.	Innov.	Row Total
Low trad./ low modern status	10 20.0 5.6	25 50.0 6.8	12 24.0 3.3	2 4.0 1.6	1 2.0 3.8	50 4.7
Low trad./ med. modern status	20 14.8 11.3	38 28.1 10.4	56 41.5 15.2	20 14.8 15.5	1 .7 3.8	135 12.7
Low trad./ high modern status	4 8.0 2.3	11 22.0 3.0	20 40.0 5.4	12 24.0 9.3	3 6.0 11.5	50 4.7
Med. trad./ low modern status	54 20.3 30.5	119 44.7 32.4	80 30.1 21.7	12 4.5 9.3	1 .4 3.8	266 24.9
Med. trad./ medium modern status	55 14.6 31.1	121 32.1 33.0	131 34.7 35.6	56 14.9 43.4	14 3.7 53.8	377 35.3
Med. trad./ high modern status	11 13.4 6.2	17 20.7 4.6	31 37.8 8.4	19 23.2 14.7	4 4.9 15.4	82 7.7
High trad./ low modern status	15 31.3 8.5	19 39.6 5.2	13 27.1 3.5	1 2.1 .8	- - -	48 4.5
High trad./ med. modern status	7 13.2 4.0	16 30.2 4.4	22 41.5 6.0	6 11.3 4.7	2 3.8 7.7	53 5.0
High trad./ high modern status	1 16.7 .6	1 16.7 .3	3 50.0 .8	1 16.7 .8	- - -	6 .6
Column Total	177 16.6	367 34.4	368 34.5	129 12.1	26 2.4	1067 100.0

note: χ^2 = 94.46; 32 d.f.; $p < .001$; s.
Cramer's V = .15

APPENDIX B

LIST OF VARIABLES

Variables

Question	Code
Respondent's Position:	
Divisional Secretary	01
Ward Executive Officer	02
TANU Chairman	03
TANU Secretary	04
Primary Society Chairman	05
Primary Society Secretary	06
Ten-cell Leader	07
Progressive Farmer	08
Large Cattle Owner	09
Farmer without Cattle	10
Banamhala	11
Nfumu	12
Ningi	13
Church Related Person	14
School Headmaster	15
Age:	
Less than 20 years	1
20 - 30 years	2
30 - 40 years	3
40 - 50 years	4
50 - 60 years	5
60 - 70 years	6
70 and older	7
no answer	0
Principal Occupation:	
Farmer	1
Non-farmer	2
no answer	3
Number of Previous Residences:	
One	1
Two	2
Three	3
Four	4
Five	5
Six or more	6
None/no answer	0

Question	Code
Largest Previous Residence:	
Village	1
Small Town	2
Large Town	3
City	4
no answer	0
Reading of Newspapers, Journals, etc.	
Never	1
Rarely	2
Sometimes	3
Regularly	4
no answer	0
Language Ability:	
Local Language Only	1
Kiswahili Only	2
English Only	3
Two Local Languages	4
One or More Local Languages and Kiswahili	5
One or More Local Languages, Kiswahili, and English	6
no answer	0
Formal Education (Years Completed):	
Lower Primary	1
Upper Primary	2
Lower Secondary	3
Upper Secondary	4
No formal Education/no answer	0
Other Special Training:	
Agricultural Training	1
Leadership Training	2
Vocational Training	3
Literacy Education	4
No Special Training/ no answer	0
Number of Wives:	
One	1
Two	2
Three or More	3
None/ no answer	0
Size of Household:	
1 - 3 Members	1
4 - 5 Members	2
6 - 7 Members	3
8 - 9 Members	4
10 - 11 Members	5
12 - 15 Members	6

Questions	Code
16 - 19 Members	7
20 and more Members	8
no answer	0
Ownership of Cattle:	
No	1
Yes	2
no answer	0
Since when do you plant that new variety of sorghum?	
Last season	1
2 seasons ago	2
3 seasons ago	3
4 seasons ago	4
5 or more seasons ago	5
Don't plant it/no answer	0
Since when do you plant that new variety of maize?	
Last season	1
2 seasons ago	2
3 seasons ago	3
4 seasons ago	4
5 or more seasons ago	5
Don't plant it/no answer	0
Since when do you use fertilizer?	
Last season	1
2 seasons ago	2
3 seasons ago	3
4 seasons ago	4
5 or more seasons ago	5
Don't use it/no answer	0
Since when do you use insecticide?	
Last season	1
2 seasons ago	2
3 seasons ago	3
4 seasons ago	4
5 or more seasons ago	5
Don t use it/no answer	0
Since when do you use manure?	
Last season	1
2 seasons ago	2
3 seasons ago	3
4 seasons ago	4
5 or more seasons ago	5
no answer	0

Question	Code
What do you do when your cattle is sick?	
Nothing	1
Ask a mfumu or a neighbor for help	2
go to the veterninary center or the bwana shamba	3
no answer/ no cattle owner	0
Do you dip your cattle?	
Never	1
Rarely	2
Sometimes	3
Regularly	4
no answer	0
When did you start dipping your cattle?	
Recently	1
1 - 2 years ago	2
3 - 5 years ago	3
longer	4
no answer	0
How far is the nearest diptank?	
0 - 5 miles	1
6 - 10 miles	2
11 - 20 miles	3
21 - 40 miles	4
More than 40 miles	5
no answer	0
Do you have your cattle inocculated?	
Never	1
Rarely	2
Sometimes	3
Regularly	4
no answer	0
When did you start cattle inocculation?	
Recently	1
1 - 2 years ago	2
3 - 5 years ago	3
Longer	4
no answer	0
Do you use medicine for sick livestock?	
Never	1
Rarely	2
Sometimes	3
Regularly	4
no answer	0

Question	Code
When did you start to use medicine for livestock?	
Recently	1
1 - 2 years ago	2
3 - 5 years ago	3
Longer	4
no answer	0
How far is it to the nearest veterinary center?	
0 - 5 miles	1
6 - 10 miles	2
11 - 20 miles	3
21 - 40 miles	4
More than 40 miles	5
no answer	0
Have you heard about plans for livestock improvement?	
No	1
Yes	2
no answer	0
Where did you hear about these plans?	
Official Source	1
Casual Source	2
Mass Media	3
no answer	0
Have you heard of the Range Management Act?	
No	1
Yes	2
no answer	0
Ability to name the Range Commissioners correctly:	
None correct	1
1 - 2 correct	2
3 - 4 correct	3
5 - 6 correct	4
7 or more correct	5
no answer	0
Have you heard about the meeting between the FAO-team and local leaders in February, 1970?	
No	1
Yes	2
no answer	0
Things heard correctly about that meeting:	
One	1
Two	2
Three	3
Four or more	4
no answer	0

Question	Code
Have you heard about Ranching Associations?	
No	1
Yes	2
no answer	0
How many thighs heard about Ranching Associations?	
One	1
Two	2
Three	3
Four or more	4
no answer	0
Do you favor the establishment of a local Ranching Association?	
Definitely not	1
Slightly not	2
Undecided	3
Slightly favor	4
Strongly favor	5
no answer	0

Indices

Traditional Status = Age + Principal Occupation + Cattle Ownership + Wives + Size of Household

Recode:
Principal Occupation:

Non-farmer (2)	1
Farmer (1)	2

Range: 4 - 22

Traditional Lower Stratum (4 - 9)	1
Traditional Middle Stratum (10 - 16)	2
Traditional Upper Stratum (17 - 22)	3

Modern Status = Formal Education + Special Training + Language Ability + Number of Previous Residences + Largest Previous Residence + Reading of Newspapers, etc.

Recode:
Special training:

All types of special training (1,2,3,4)	1
no answer	0

Language Ability:

Knowledge of one or more local languages (1,4)	1
Knowledge of English or Kiswahili (2,3)	2
Knowledge of one or more local languages, Kiswahili, and/or English (5,6)	3

Question	Code
Number of Previous Residences:	
One (1)	1
Two (2)	2
Three or Four (3,4)	3
Five or more (5,6)	4
Reading of Newspapers, etc.	
Never/no answer (1,0)	0
Rarely (2)	1
Sometimes (3)	2
Regularly (4)	3
Range: 0 - 18	
Modern Lower Stratum (0 - 5)	1
Modern Middle Stratum (6 - 12)	2
Modern Upper Stratum (13 - 18)	3

Status Inconsistency = Traditional Status - Modern Status

Traditional status much higher than modern status	1
Traditional status little higher than modern status	2
No inconsistency	3
Modern status little higher than traditional status	4
Modern status much higher than traditional status	5

Index of Farm Innovativeness = Adoption of Sorghum + Adoption of Maize + Adoption of Fertilizer + Adoption of Insecticide + Adoption of Manure

Range: 0 - 25 (actual: 0 - 18)	
Laggards/late majority (0 - 1)	1
Early majority (2 - 6)	2
Early Adopters (7 - 12)	3
Innovators (13 - 18)	4

Index of Cattle Innovativeness A = Treatment of Sick Cattle + Use of Diptank * Distance to Nearest Diptank + Beginning of Use of Diptank + Cattle Inocculation * Distance to Nearest Vet Center + Beginning of Cattle Inocculation + Use of Medicine for Livestock * Distance to Nearest Vet Center + Beginning of Use of Medicine for Livestock

Index of Cattle Innovativeness B = Treatment of Sick Cattle + Use of Diptank * Distance to Nearest Diptank + Cattle Inocculation * Distance to Nearest Vet Center + Use of Medicine for Livestock * Distance to Nearest Vet Center

Question	Code

Only Index of Cattle Innovativeness B has been used.

Recode:
Treatment of Sick Cattle:

Nothing/no answer (1,0)	0
Nfumu or Neighbor (2)	1
Vet Center or Bwana Shamba (3)	2

Dipping of Cattle/Cattle Inocculation/Use of Medicine for Sick Livestock:

Never/no answer (1,0)	0
Rarely (2)	1
Sometimes (3)	2
Regularly (4)	3

Range: 0 - 47 (actual: 0 - 37)

Laggards (0)	0
Late majority (1 - 5)	1
Early majority (6 - 11)	2
Early adopters (12 - 22)	3
Innovators (23 - 37)	4

Project Information = Heard of plans for livestock improvement + heard of Range Management Act + Range Commissioners named correctly + heard of meeting in Feb. 1970 + correct information about meeting + heard about ranching associations + correct information about ranching associations + favorable attitude about establishment of a local ranching association.

Range: 0 - 26

Laggards (0 - 5)	0
Late majority (6 - 8)	1
Early majority (9 - 12)	2
Early adopters (13 - 18)	3
Innovators (19 - 26)	4