

THE FULANI IN A DEVELOPMENT CONTEXT

The Relevance of Cultural Traditions

For Coping with Change and Crisis

by Paul Riesman

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## Introduction

The Fulani of West Africa are one of the major cattle-raising peoples of the world. They are unique among African peoples in the degree to which they are scattered over a vast area. Not only are there significant groups of them in every state of West Africa, but also there are Fulani living in Cameroon, Chad, the Central African Empire, and Sudan. Over half the Fulani do not raise cattle today, but there are millions who do and they are concentrated for the most part in the poorest countries, not only of Africa but of the world. This is significant, because in countries with no manufacturing to speak of and with hardly any saleable natural resources the exporting of meat can become a major source of external revenue for the state.

The growth of population in Africa and the rapid expansion of cities make for an unprecedented rise in the demand for meat. The demand is already felt in the Fulani areas in the form of higher prices for cattle. Governments are under pressure to increase meat production because of the dual need to make more meat available and to improve their balance of payments situations. Thus even if the Fulani had no problems of their own to deal with they would still have to face the direct and indirect consequences of the key role they play in tending and regulating the beef supply of the countries they live in. Thus in all the countries where the Fulani are significant minorities the governments are hoping to increase meat production and sale by encouraging economic development projects among the Fulani. The United States Agency for International Development, as a major

donor of economic aid around the world, is naturally called upon to bring American expertise to bear in this sort of endeavor. Economic development projects in underdeveloped countries, particularly among livestock raisers, create several dilemmas, both moral and practical. In addition to the basic question of whether we have the right to interfere at all in other people's lives, there is the more immediate issue of whether the procedures we use to try to bring about development are moral -- in other words, do we end up treating the people with respect for their integrity? On the practical side, do the projects really work? That is, do they gain acceptance among the people who are supposed to benefit from them, and do they have few enough mitigating and deleterious side-effects for there to be a net improvement over the way things were before? Not only in foreign aid, but in our own country as well we are becoming more aware of such long-term effects as build-up of pesticides in body-tissues, excessive erosion and loss of watershed through deforestation, silting up of hydro-electric dams, and so on.

A major snag in many overseas development projects has been the human factor. By this I don't mean simply error, which is always with us, but rather the social structure, way of life, and world view of the particular people for whom a project is designed. Failure by development experts to take these aspects of the problem into account inevitably results in one or more of the following difficulties: 1) radical misinterpretation by the target population of what the experts are trying to do; 2) significant disruption of an ongoing way of life, with the benefits going just to a few rather than to the majority or to all; 3) deterioration rather than improvement of the economic situation due to the manner in which the target population makes use

of the facilities or other changes created by the project. This list could be expanded.

The major aim of this paper is to help reduce these kinds of difficulties in the case of the Fulani and whatever development projects might be tried among them. Once we have made a commitment to acting morally -- e.g. renouncing the use of force -- then our hope of reducing these difficulties rests on achieving a deep understanding of the Fulani way of life as a total system, and on correctly analyzing how changes introduced at various points in the system might affect its over-all functioning. This paper is meant to be a tool that will help specialists of any kind understand the Fulani better and thus use their expertise to serve them more effectively. I lived among the Fulani (in Upper Volta) for nearly four years with the express purpose of coming to understand them and their way of life. My wife was with me on my first field trip, and she and our two children, who were born in the meantime, came on the second one also. I learned to speak the language fluently and feel that I have come as close as any American has to understanding their mentality and grasping the logic of their way of thinking.

This paper is not a study of any particular Fulani group, though it draws heavily for its basic ideas on my personal experience with the Fulani of Upper Volta. Nor is it a factual survey of all the various Fulani groups that exist; in other words, the reader should not treat it as an encyclopedia about the Fulani in which the various traits of each group are listed. Instead, it is an attempt to show how the two basic systems of pastoral Fulani life work - the nomadic system and the semi-sedentary system -- wherever they are found. Specific examples are used to illustrate how geographical factors, historical

factors, presence or absence of neighboring populations, etc., affect the operation of these systems. It would be impossible, however, to cover all possible variants in a paper of this size. Therefore it is important for the reader to realize that this study may not specifically cover the particular case he is dealing with. What it does do for him, I hope, is give him a way of thinking about the Fulani that he can apply to any case. In general, I am trying to show that the main features of the Fulani way of life are not whimsical and mysterious products of an exotic mentality, but that they are the logical results of the interplay between known human needs, known animal needs, and constraints in the geographical and social environments.

## CHAPTER I

### Who Are the Fulani?

We have seen that the Fulani are a very far-flung group. They are also one of West Africa's numerically largest groups. With a total estimated population of nine or ten million, they number in the same order of magnitude as the Hausa, Igbo, and Yoruba of Nigeria. They do not form a majority in any West African state, but they are very large minorities in all the sahelian states, as well as in Guinea, and Fulani groups dominate particular regions within those states. Table 1 gives the figures for the Fulani population of most of the states where they live. Please note, however, the different dates from which these figures come. More recent figures surely exist in some cases, but these are the best that were available to me. And even the most recent figures are but approximations. One reason for this, as we shall see shortly, is that different people define who is or is not a Fulani differently.

TABLE 1  
FULANI POPULATIONS

A. Breakdown by country

Country	Year of Census/Source	Number
Benin	1952	54,000
Cameroon	1960-61	400,000
Chad	1964	32,000
Gambia	1954	58,700
Ghana	1950	5,500
Guinea	1970	1,500,000
Guinea-Bissau	1948	36,500
Ivory Coast	1952	52,000
Mali (estimate based on cattle population in 1975)		400,000
Mauritania (Peul)	1962	40,000
Mauritania (Toucouleur)	1962	70,000
Niger	1962	247,143
Nigeria	1972	4,800,000
Senegal (Peul)	1969	560,000
Senegal (Toucouleur)	1969	442,000
Upper Volta	1974	<u>300,000</u>
<b>TOTAL</b>		<b>8,997,843</b>

B. Breakdown by mode of life (see Chapters 2 and 3)

Pastoral	Sedentary	
Nomads	93,300	5,886,400
Semi-sedentary	<u>3,018,143</u>	<u>                    </u>
<b>TOTALS</b>	<b>3,111,443</b>	<b>8,997,843</b>

There is a major division between two life-styles lived by the Fulani, the pastoral and the sedentary (agricultural and urban). It is only the pastoral Fulani that we are concerned with here, and in the next chapter we examine closely the main variants of that way of life, namely the nomadic and the semi-sedentary. While nomadic and semi-sedentary Fulani frequently shift back and forth from one to the other variant of the cattle-herding life, once Fulani have given up cattle-raising for some other occupation they rarely go back to it again.

Those Fulani who are now sedentary probably had ancestors who were pastoralists. The origin of the Fulani is the subject of much speculation. Some writers have suggested that they were one of the lost tribes of Israel, or that they originally came from south India, but modern linguistic and historical research connects the Fulani with the banks of the Senegal river some time during the first millenium of our era. Assuming that the Fulani herded cattle then as they do now, small family groups periodically hived off to look for new pastures or to get away from unpleasant political situations. They moved eastward and lived among whatever populations would accept them in the sahelian zone. As they became numerous in an area they would begin to become dangerous to the people who had originally let them live there. Sometimes they were driven out, and sometimes they would take over the land themselves. One of the first times this happened, if not the first, was in the region they may have come from, namely the Futa (or Fouta) Toro. Very little is known about the history of that region, somewhat on the margin of the better known ancient empires of Ghana and Mali, but it is clear that there have been dynasties of Fulani rulers there from the late fifteenth century down to the present. In the mid-eighteenth century there began to be a sort of Fulani ferment throughout West Africa.

John Grayzel, in his excellent doctoral dissertation, suggests that this might well have been set off by a progressive increase in the value of cattle in foreign markets: when gold and slaves had been Africa's main export, those who controlled those resources held power, and when cattle became important, then those who controlled them rose to power (1977: 209-216). This hypothesis makes a lot of sense to me, and I would only add that a significant increase in population must also have taken place. The first of these take-overs by Fulani happened in the Fouta Djallon of Guinea, and it was organized as a holy war (jihad). During this same period there was a dynastic change in Fouta Toro, but it was not a matter of one ethnic group overthrowing another. My own research in the Jelgoji of Upper Volta suggests that the next Fulani revolution took place there; to my knowledge, it is the only such revolution that took place without a jihad. Then, in the early nineteenth century there was a whole series of uprisings, sparked by Usman dan Fodio in northern Nigeria, and then followed by Fulani in Liptako (region of Dori, Upper Volta), Cameroon (Adamawa region), and Macina in Mali. In all these just named regions the Fulani states that were set up continued to function until the colonial conquests, and in many areas, but not all, they still function today.

One source of evidence supporting the idea that Fulani expansion was both fairly recent and fairly rapid is the Fulani language itself. This language, called Fula by linguists and Fulfulde by the Fulani, is mutually comprehensible by speakers from nearly all areas. I myself was taught by a professor who knew the dialects spoken in Cameroon; he was assisted by a Fulani from Guinea. When I arrived in Upper Volta I found that I could understand and be understood by the speakers there. I later made a short trip to Senegal and could speak with Fulani quite

easily. There are certainly differences in dialect and accent, but they are not greater than the differences between the French of Paris and of Quebec, or even Marseilles. The only exception to this rule is found where there is a small enclave of Fulani surrounded by speakers of another language. In such cases the Fula is so influenced by the other language that it is difficult to understand. Such is the case, for example, in Barani, in northwestern Upper Volta; there, the Fula is heavily influenced by the Marka language. In Dokui, a nearby village settled by Fulani of the same stock, people no longer speak Fula, only Marka.

In contrast to this relative homogeneity of language among the Fulani, there is a plethora both of groups and of names of groups. The reader would follow me into a needless thicket if I tried to sort out all these names, but I will identify the main ones and try to give some rules of thumb that will help him to classify new ones that he might run across. First of all, the name I have been using to speak of these people, Fulani, is a Hausa word that was taken over by the English in Nigeria and has since been used by most English-speaking writers. The Fulani of northern Nigeria are by far the largest single group (see Table 1). Most of them are sedentary and no longer speak Fula but Hausa, the language of the people they revolted against in the nineteenth century. These Fulani are sometimes called "Hausa-Fulani". C.E. Hopen estimated that 18.2% of the Fulani in Sokoto Province were "Cattle Fulani", and if that estimate approximates the proportion in the country as a whole, 873,600 Nigerian Fulani would be nomadic and semi-sedentary (Hopen, 1958:5).

Most of the rest of the Fulani live in countries that were formerly colonies of France. In those countries the most common name for the

Fulani is Peul. This is the word used by the Wolof, the dominant population of Senegal, and it is the usual term used by French-speaking writers. Thus the words Fulani and Peul refer to exactly the same ethnic group. In parts of Guinea, Sierra Leone, Gambia and Senegal, the Manding word Fula is used to refer to the Fulani. In Mauritania and Senegal, in the inland delta region of the Senegal river, lives a large population of sedentary Fulani called Toucouleur. All Fulani except the Toucouleur call themselves Ful'be (the apostrophe indicates a glottalized sound). The Toucouleur speak the same language as the other Fulani, but they call the language Pular rather than Fulfulde, and they call themselves Haalpular'en ("Pular-speakers"). It makes no difference for this study whether the Toucouleur are really Fulani or not; even though they consider themselves distinct, their social structure has been a sort of model for Fulani chiefdoms nearly everywhere, and most Toucouleur terms for different social categories are everywhere in use.

Let us look at a few of these terms, for they are important to know when dealing with Fulani. Toucouleur society, as well as other sedentary Fulani societies and most semi-sedentary ones, consisted in pre-colonial times of distinct groups or "castes" of people hierarchically ordered. At the top were the Ful'be (sing. Pullo) everywhere except in Toucouleur society itself, where the noble class were called Tooro'bbe (sing. Tooroddo). Then came a number of hereditary artisan castes such as blacksmiths, weavers, woodworkers, singers; there was also a caste of courtiers or councillors. All members of these groups were considered free (rim'be, sing. dimo), in contrast to people of servile condition called riimaay'be (sing. diimaa'lo) and maccu'be (sing. maccu'do -- the letter /c/ in Fula is always pronounced like the /ch/ in "cheese"). We won't be concerned with the Toucouleur any more in this essay, but the

distinction between noble and slave, Pullo and maccu'do, has been basic to the shaping of Fulani society as it exists today. We shall see later on how important the slaves were in the precolonial Fulani economy, and what effect the abolition of slavery had on that economy. For the moment I simply want to point out that the descendants of these slaves, together with members of other "castes", are normally all counted as Fulani in the census figures we have. This fact can make a considerable difference when we are trying to estimate the number of pastoralists in a given area. Jean Gallais, for instance, in his study of the Mali Fifth Region, found that the "Peul group" amounted to 38 percent of the region's population, while the "true Peul" were only 20 percent of the population (Republique du Mali, 1972:19). In addition, when asked in French whether they were "Peul" or not, members of other castes might well say yes, while they would be unlikely to say that they were Ful'be unless far from home where no one could contradict them.

Finally, it should be pointed out that the non-Ful'be strata of Fulani society, especially the maccu'be and the riimaay'be, may have the most to gain from political and economic development. The Fulani have good reasons to want to conserve their position in society, but the maccu'be have good reasons to want to change theirs. Thus it is perfectly logical that the "conservative" Fulani generally have rejected modern education, while the "progressive" maccu'be have sought it. Ironically, this education has now made it possible for some maccu'be to return home as government officials and rule their former masters. We may permit ourselves to smirk momentarily at this "logical" response of the Fulani, but this is precisely the kind of behavior that needs to be looked at more closely. We mustn't jump to the conclusion that we understand it simply because it makes a neat contrast to the way the

marcu'be have acted. If we do jump to such a conclusion, we in effect close the door to further understanding because we stop trying, and we thereby curtail our effectiveness as agents of beneficial change. I will return to the topic of education later in the paper; I hope by then we will have covered enough ground to enable us to understand this Fulani behavior in a new light.

## CHAPTER II

### How the Fulani Live

#### A. The Nomads

Very few Fulani today are true nomads -- that is, people who move from place to place with no fixed home and who live entirely off the produce of their herds. The life-way of the nomads has an importance out of proportion to the number of people practicing it for several reasons. The chief of these is that some degree of mobility is crucial to the life of most of the Fulani we are concerned with in this report, and the values and practices of the nomads are a kind of model of that aspect of life. Second, a study of how the nomads live, when compared with semi-nomadic Fulani, increases our understanding of the range of possibilities for life in, and exploitation of, the sahel environment. Third, it is important to remember that the word nomad, in Africa, has often been misused as a synonym for pastoralist, and that being a pastoralist by no means necessarily entails being a nomad. Finally, the reason for this misuse is itself instructive, for it probably stems from the extreme dispersion of the Fulani in West Africa when compared with all other ethnic groups. When compared even with other "nomadic" peoples, such as the Maures and the Tuaregs, the Fulani have not limited their movements to particular areas, but have moved, often quite rapidly, among populations long established in the sahel and have begun to exploit the environment in their own, distinctive manner.

Because the Fulani, both nomadic and semi-nomadic, move so easily

from one area to another, counting them is extremely difficult. Even today, Fulani who have lived for years in one area may be on the tax rolls in a place a hundred miles away -- and actually pay their taxes there -- because that is where the head of their family lives. Thus all figures in this report, or any report must be regarded as approximations at best.

The region where the largest concentration of nomads is found is the area known as Bornu near lake Chad on both sides of the Niger-Nigeria frontier. In Niger, this is the Maine-Soroa district, and in Nigeria the province of Bornu. By far the majority of these nomadic Fulani belong to the group that calls itself Wo'daa'be, and is often known to members of other tribes as Bororo. Not all nomadic Fulani are Wo'daa'be, but nearly all Wo'daa'be are nomadic. The largest numbers live in Niger (50,000 - Dupire, 1970:16), Nigeria, Bornu province (6,000 - Stenning, 1959:210), and on the Ngaoundere plateau in Cameroon (7,300 - Dupire, 1970:16). Smaller pockets of Wo'daa'be can be found in other parts of northern Nigeria, in Mali, and in Senegal. There are probably about 20,000 or more nomadic Fulani of other groups in Niger (Dupire estimated 17,519 in 1962), and my own guess is that there are not more than 10,000 others practicing this way of life in the whole of West Africa. This gives us a total of 93,300.

In contrast to some East African pastoralists, such as the Masai (Jacobs, 1975), no Fulani group, to my knowledge, lives day in, day out, on the products of its herd alone. The Fulani do not make use of the blood of their animals to drink or any other way, and though at certain times of the year they may live on milk alone, millet is the staple of their diet almost everywhere in West Africa. It is a basic given of nomadic Fulani economy, then, that there is trade with agricultural

peoples. In regions where agriculture is possible the Fulani either constitute a small minority of the total population -- in which case they can be nomadic and trade with the agriculturalists -- or they make up a larger segment of the population and in that case must cultivate their own fields. This arrangement, practiced by the vast majority of pastoral Fulani, is what we will be calling semi-sedentary.

There are two major points to remember concerning the economic base of nomadic life when looking at it in a development context: 1) the first is that a group's herds are made up such that, in normal times, the people can satisfy all their subsistence needs on the revenues from milk products alone. No nomadic Fulani are, or have ever been, oriented towards the production of beef. Should the revenues from milk products drop too low to buy millet, the nomads are more likely to settle down for a while and cultivate a field then to treat their herds as a source of income from animal sales. Cattle are of course sold from time to time, but from the point of view of the herd manager these sales are generally in response to large financial needs above and beyond subsistence, such as medical expenses, taxes, ceremonial expenses, clothing, and lastly cooking utensils and manufactured items.

2) The second major point is that the nomads and the sedentary peoples among whom they move are, in a certain sense, a luxury for one another. The nomad economy does depend absolutely on the products of the agricultural economy, but the nomads are such a small minority of the population that the amount of millet they obtain from the farmers is negligible when compared to their total harvest. In exchange, the milk products that the farmers buy or trade from the nomads are luxuries in their own diet. Only the richest of villagers, such as shop-owners, traders or civil servants would be likely to buy milk or butter every

day. The interdependence of these peoples is thus not at all like what we are familiar with in a modern, market economy.

Let us now look at the nomadic modes of life and production in a little more detail. Though an outsider, seeing vast herds of cattle being driven across the plain, might think that the Fulani must be rich, this is not really the case, as a look at the productive system will indicate. The average nomad household head manages a herd of ten to 50 cattle (Dupire, 1962:128). The average number of people in a nomadic household is, according to one census, 5.1 (Stenning, 1959:160). Let us take for a test case a hypothetical family of six, with a herd of sixty cows. By nomadic standards, such a family is well off. How do they actually fare if they try to live off the produce of their herds? We have some solid basis for an answer in a very interesting recent study on herd economy by two Swedes (Dahl and Hjort, 1976). Summarizing other studies from many sources, they estimate the human milk requirements if people are to live on milk alone. Finally, they calculate the optimum percentages of different categories of animals (e.g. milk cows, heifers, bulls, etc.) for a healthily balanced herd. From these figures they can calculate the number of milk cows it would take to feed a family of six and thus the total optimum herd size. The results are surprising and thereby instructive.

In the best season, the height of the rains, Dahl and Hjort say that a milking cow can give two liters of milk per day for human consumption. Under these favorable circumstances, "nine milk-giving cows are well sufficient to provide for the requirements of the reference family of six persons ... The total herd necessary to contain sufficient lactating cows would be in all sixty cattle (158)", given the previous assumptions about distribution of animals in the herd. So far

so good -- the Wo'daa'be are right on target. It also turns out that these nomads have the optimum percentage of milk cows as recommended by Dahl and Hjort, though the structure of their herds differs in other categories. Dupire cites a study done near Nguigmi which revealed that 29.82 percent of the Wo'daa'be cows were milk cows, and Dahl and Hjort recommend 29.5 percent (Dupire, 1962:109; Dahl and Hjort, 1976:157). But what if the cows don't give two liters of milk per day? In my own experience, hardly any cows gave that much, and though Dupire does not say how much milk the Wo'daa'be cattle give, we can calculate an approximate amount on the basis of how much butter the women make. Speaking of the dry season, she says that a woman can get about 250 grams of butter per day from the combined milk of four cows. Assuming a butter-fat content of about five percent, this means that those four cows are giving a combined total of about five liters, or 1.25 l. per cow (Dupire, 1962:127).

Dahl and Hjort calculate (p. 158) that if the average yield per lactating cow is 1.5 l., then to feed a family of six a total herd size of 73 animals is needed. They continue:

In the dry season, small amounts of milk are produced by a small number of animals. At the height of the period only four percent of the total herd are lactating; i.e. in February, when fourteen percent of the fertile cows are lactating, and when individual yields are low, maybe not more than 0.7 kg per cow. A herd of the required size for a family of five adult equivalents would need to consist of 593 animals! (ibid.)

We can see from these calculations that it is clearly outside the range of possibility for the vast majority of nomadic households to subsist entirely on their milk production. While a well-off household can live on milk alone during the height of the rainy season, this is possible for but a few months of the year and the rest of the time food must

be obtained in some other way. That way, as we have seen, is the exchange of milk products for money or directly for millet. Dahl and Hjort point out, in this context, a fact that we shall return to later on, namely that a family of six could not possibly manage a herd of around 600 animals. There are upper as well as lower limits on the size of herds in relation to family size and the ecology of the region.

It should now be clear why the Fulani nomad economy can only function when there is trade for a goodly portion of the year with agricultural peoples. But why, it is often asked, don't the nomads settle down? Sedentarization of nomads is often seen as the necessary first step in improving their lot and in developing their economy, but the obstacles to sedentarization are wrongly and unfortunately perceived as residing in the nomads' love of wandering, in their backwardness and unwillingness to break with ancient traditions, and in their ornery, uncooperative character. The issue here is not whether these phrases describe the nomads, but whether they explain their behavior. It is actually my impression that nomads do not especially love wandering per se, but they do appreciate what wandering does for them: basically, it enables them to feed their cattle. Why couldn't they feed their cattle by staying in one place? Because cattle need a very extensive area to graze in, while at the same time in those areas where permanent settlement is possible there is still competition for land from agriculturalists. This is, in a sense, as it should be, because in a fertile area agriculture is far more efficient than raising animals is as a way of converting the sun's energy into energy our bodies can use.

The crucial importance of cattle (and other livestock) is that they can extract energy from environments where farming cannot be effectively practiced, and this is precisely the fact about many regions of the

sahel. The word sahel originally means border, and the sahel is truly a borderline area between the desert and the savannah. What prevents farming from being an effective use of human energy in much of the sahel is not just lack of rain, but also the impossibility of knowing when and where rain will fall. Ponds form and grasses spring up when it does rain, but sufficient rain for a good crop of grass may not fall in the same place the following year, let alone a good crop of millet. Live-stock, however, can be led to the grasses wherever they are; in addition, the animals' ability to move rapidly makes it possible for them to get to the grass at the time when it is the most nourishing and they can thus make its energy available for human consumption. An important side-effect of this process is that the cattle are being led away from ripening fields in the agricultural areas, and because they are well fed there may well be sufficient milk to support the herdman's entire household without recourse to millet.

As the ponds and waterholes in the non-agricultural areas dry up after the end of the rains, the herdmen are forced to bring their cattle back to regions of permanent settlement. Even if untouched pastures remain, they cannot be used if there is not water nearby. This is almost always a very tense time of year because the fields may not yet be harvested by the time the nomads come back and fights often break out over damage done to fields by cattle. Once the harvest is in, however, the cattle become a positive advantage in these areas: they can scavenge the fields and eat up the millet stalks, and they can manure the fields and thus help to ensure better crops next year for the farmers. Thus, during the dry season the presence of the nomads' cattle is generally a boon to the sedentary peoples, and those who have a little surplus millet can enrich their diet by trading millet for milk and

butter.

We have just seen that the existence of a short, uncertain rainy season and a long dry season is what makes the raising of cattle an efficient way of exploiting the environment. It is these same factors, however, which make life hard for herders, both nomadic and sedentary. The dry season is an unpleasantly hot time for everybody in the sahel, but farmers have little work that must be done then and can pursue a variety of other occupations, such as weaving, carpentry, housebuilding, tailoring, or trading. But it is in this period that herdmen must do their most demanding and grueling work, watering the cattle and taking them to and from pastures of dry grass. Some Wo'daa'be have an ox that they use to draw water by attaching the end of the bucket-rope to a cinch around its belly and then driving it away from the well with the rope passing over a wooden pulley (Dupire, 1962:90). Most men, however, must do this work by hand, and the wells can be as deep as forty meters (ibid.). This is obviously hard work, but it is made even harder, as the dry season progresses, by two other factors: first, the length of time required to water the herd increases because the amount of water in the well decreases. The person hauling the water gets a smaller amount each time he draws up the bucket, and he has to wait longer and longer between each haul for the water to seep into the bottom of the well. Thus towards the end of the dry season a man may easily spend night and day watering his cattle. Second, as the cattle eat up the grass in the vicinity of the well they have to be taken farther and farther away to get adequate food.

These inevitable difficulties and hardships of keeping a herd alive are among the factors that place upper limits on the number of animals a man can take care of and thereby they actually play an

important role in the success of the nomadic way of adapting to the environment. To understand this point better we need briefly to look at how land, water and animals are owned in nomadic Fulani society. Among all the nomadic peoples of the sahel it is generally felt that pastureland belongs to no one and that anyone therefore has a right to use it. At the same time, everyone recognizes the good sense of not pasturing cows near wells in the rainy season and thereby needlessly using up valuable dry season pasturage. In practice, however, conflicts can easily arise, for one group's rainy season pastureland might well be another's dry season reserve and might need to be protected by various forms of dissuasion including physical force. Similarly, among nomads, natural sources of water such as streams, ponds, and water holes are not considered to belong to individuals or groups. In the rainy season pasture areas water can be found nearly everywhere and, except for major ceremonies, people travel in small groups, spreading out over the landscape and thereby taking maximum advantage of fresh grass as it becomes available. Wells, however, are an entirely different matter. A well is owned by the person or group that dug it or had it dug. In principle, people other than the well's owner(s) may not use its water without permission. During the dry season, the Fulani move in small circuits about the wells which they own. According to Dupire, the Wo'daa'be do not know how to construct wells themselves, so the members of a "fraction" will together put up the money to pay the Hausa to do it for them (1962:90). The need for well-ownership in order to obtain water, and the fact that someone is going to have to work like hell in order to quench the thirst of a whole herd, are thus factors which help keep an upper limit to the size of herds and which thereby spread the cattle around as much as possible in the dry

season. No one is going to go to the trouble of constructing a well or trying to water his cattle in an area where the pasture is poor or where there is already too large a concentration of animals.

But if in reality the herds are unequal in size -- we saw that the average household herd ranged from ten to fifty animals, and there are a few households with a hundred or more animals -- then how does this "spreading around" take place? It takes place through two major social patterns, which are found both among the nomads and among many semi-sedentary groups. On the one hand, individuals who are poor in cattle attach themselves to households that are better off; more exactly, these individuals do not separate themselves from those members of their family, such as fathers, uncles, brothers or cousins, who have a substantial number of animals. On the other hand, regardless of how many cattle a person owns, he rarely has them all in the same place but has a certain number of them loaned out in various arrangements in the herds of other people. By the same token, the cattle in a household head's herd are never all his in an absolute sense. Not only will some of the animals be on loan from other people, but also each member of his immediate family may own some of the animals he takes care of. It is quite possible for a man to be manager of a large herd and yet be the actual owner of just a minority of the animals. For in Fulani society, anyone can own cattle, including women and seven-day-old children who have just received their names. Among nomadic Fulani, women and children are both like minors when it comes to actually disposing of their animals, for they normally have to make any transaction through the herd manager. On the other hand, the herd manager is limited in his freedom to do as he pleases with the herd. While it is customarily possible for him to sell a cow belonging to his wife or child for a

family emergency, or slaughter a family member's bull to honor a guest, if a person did this frequently without drawing on his own property in fair proportion to the others, he would soon suffer severe consequences. For owners of the cattle he managed would place them with other people if at all possible, and his children would desert him at the first opportunity. Let us take, for example, the case of the cattle a woman owns: in the early stages of her marriage, before it is clear whether she will stay with her husband or have children by him, she does not bring her cattle into his herd but leaves them with her father and/or brothers. These people benefit from the milk of those cows so long as they have the care of them. Thus a husband can only begin to benefit from cattle his wife might own when there is mutual trust between the partners and when the wife feels reasonably secure in her position.

The fact that many of the cows a man takes care of are not his own, and that many of his own cows may be in the herds of other men, contributes, we have just seen, to a wide dispersal of the cattle in both rainy and dry seasons and thus makes possible an effective utilization of the environment. There is another consequence of this practice that I will discuss in more depth later but that is worth mentioning now. Since a substantial proportion of the cattle a herdman takes care of are not his own, his attitude towards the animals is not properly one of ownership but of stewardship. John Aron Grayzel, in writing of the Fulani of Doukoloma in Mali, put it very well when he said that "For the Peul, cattle are capital, like stocks; something to be carefully watched and manipulated in the hope of accumulating sufficient wealth to live off the dividends (1976:28)," while "to the Bambara a herd of cattle is a savings account; a place to guard surplus funds

Toucouleur terms for different social categories are everywhere in use.

Let us look at a few of these terms, for they are important to know when dealing with Fulani. Toucouleur society, as well as other sedentary Fulani societies and most semi-sedentary ones, consisted in pre-colonial times of distinct groups or "castes" of people hierarchically ordered. At the top were the Ful'be (sing. Pullo) everywhere except in Toucouleur society itself, where the noble class were called Tooro'bbe (sing. Tooroddo). Then came a number of hereditary artisan castes such as blacksmiths, weavers, woodworkers, singers; there was also a caste of courtiers or councillors. All members of these groups were considered free (rim'be, sing. dimo), in contrast to people of servile condition called riimaay'be (sing. diimaa'jo) and maccu'be (sing. maccu'do -- the letter /c/ in Fula is always pronounced like the /ch/ in "cheese"). We won't be concerned with the Toucouleur any more in this essay, but the

for either special future outlays or unforeseen circumstances (ibid)." Thus for the Fulani, both nomadic and semi-sedentary, the herd manager is like the guardian of a trust. He and his family live off the dividends (i.e. the milk) of that trust, and he is thus very reluctant to part with any of the dividend-producing stock. The one exception, which is not really an exception, is that Fulani frequently sell bull calves. Since the Fulani are not at all oriented towards beef production, they see the raising of unnecessary males as useless expenditure of effort. Given their orientation, whenever possible they would like to use the money they get from selling a bull in order to buy a cow or heifer, but since everybody has the same attitude, heifers and milk cows rarely come on the market. Thus it doesn't pay to raise a bull or steer very long, and if expenses have to be met it is a young bull that will be sold. Such a sale would usually take place during the second or third year of the bull's life, because if sold earlier its mother's milk, which the people are using, might dry up prematurely.

I would be willing to bet that up to this point in this paper not one reader will yet have begun to wonder about the economic contribution of women in nomadic life and what their role in maintaining that life might be. If I win my bet, or come close, this is a significant reflection on our own prejudices and should alert us to the kinds of things we are likely to overlook when studying another culture in a development context. I will first describe briefly the direct economic contributions of women, and then discuss their work as homemakers and mothers.

The women play a key role in the economic life of the nomads because they are the ones who milk the cows, prepare the milk and butter for market, and then sell these products. Theoretically (that is,

according to Fulani ideals) the woman is the full owner of the milk she gets from cows that it is her right to milk, and she can dispose of the milk and the income from it in any way she wishes. In theory, too, the head of the household is supposed to be the sole provider of food for the family. In practice, however, both these ideals are contravened because of the overriding desire of both men and women to conserve their capital -- their animals. It is mainly through the women, then, that the nomadic Fulani become connected with the agricultural economy and are thereby enabled to live as pure nomads without having to practice agriculture themselves. While at first glance this work of the women might not seem very productive -- it is not part of the "productive sector" -- it is clearly indispensable to the nomadic way of life and it is hard to imagine a more efficient way of distributing milk and butter under sahelian conditions.

Most of the energy women expend during the day goes into keeping the home going and bringing up the children. The preparation of milk-products for the market can be done concurrently with preparing the family's own food, and the actual selling, as with many women's occupations, can be done with children in tow or being carried on the back. There is really no adequate way of comparing the quantity or difficulty of two different kinds of work, but there is no doubt in my mind that women do somewhat more work than men do, on the average. At the height of the dry season men are probably under greater physical stress than women ever are, however, except for the times when women are in "labor" itself. The woman really has complete responsibility for the domestic area of the camp -- the beds, the shelters, the hearth, and the cooking equipment. She packs and unpacks when the camp moves, she sets up the shelters and arranges the utensils in their places. She is responsible

for getting water and firewood, and she often buys the millet for the main meals with her "butter-money". She milks the cows, makes butter, pounds millet into flour and cooks the staple dishes and sauces, and washes the bowls and utensils before the next meal. She washes clothes, weaves the mats that serve as mattresses and blankets, takes care of small children of both sexes and is the main educator of her girl children until they leave the home to live with their husbands. All this makes for a lot of work, and it is just as relentless in its demands as is taking care of cattle. Think, for example, of the common situation where a woman will have to go several miles every day to get water -- and maybe more than once -- with a newborn baby on her back and a three year old child tagging along behind who will have to be picked up and comforted, or waited for, etc. during the trip.

For the man, the reward of doing his job well is seeing his herd grow over the years. For the woman, the rewards are in the close bond she forms with her children and that last for life, and in the measure of financial independence and pride she can get from properly handling the distribution of the milk products she controls. These two sources of well-being are interlocking in that in order to obtain milk and feed her family the woman has to have enough healthy cattle to work with. And for the man, having a growing herd is almost impossible without having a growing family as well. There are several reasons for this. The most basic one is that a man and a wife alone cannot manage a herd of cattle unassisted; if they have no children old enough to help them, then they must live in some kind of cooperative arrangement with other families, such as that of a father or older brother, and this means that they won't be fully independent and won't have full control of what happens to their herd. Second, one of the ways in which a young

man obtains cattle is by gifts to his children from relatives. Strictly speaking, these are not his own cattle, but he can use them (and their offspring of course) for twenty years or more until the child in question is old enough to set up an independent household.

The important thing to remember here, when looking at the nomadic Fulani in a development context, is that the less visible women's sphere cannot be ignored. The women's activities appear to run more or less by themselves, totally independent of the men's activities, but that is only an appearance. The effect on the life of women -- and thereby on the whole family as a productive unit -- of such changes as greater orientation to beef production or commercial milk-marketing schemes would have to be carefully thought through and preferably discussed with all parties before being tried.

Behind the male reward mentioned above of seeing one's herd grow over the years lies a more general and ultimate reward, that of being on a footing of dignity and equality with respect to one's peers and of having some sense of control over one's destiny. The nomadic Fulani, as well as most of the semi-sedentary ones, seem to be very anarchic in their political organization. Their chiefs (ar'do, pl. ar'be, meaning leaders) act as guides, arbitrators, and spokesmen for extended family groups that tend to move about more or less together. These groups range from a few households to as many as fifty, but rarely more (Dupire, 1962:289). These chiefs have no real powers of coercion over their followers, nor can they make binding agreements on their behalf. Though they usually have some hereditary right to rule, it is really only through demonstration of good qualities like intelligence, generosity, and patience, combined with persuasive eloquence, that they can actually get their followers to do as they say. This weakness

of the chiefs, and the small size of their constituencies, can be thought of in part as the consequence of the Fulani value of independence we have just mentioned. And the anarchic political organization indeed makes it difficult for a country to administer the Fulani or negotiate any kind of consistent economic, health, or educational program with them. But it is important to understand that both Fulani political organization and their love of independence contribute significantly to the Fulani ability to take advantage of the economic resources of the sahel. People who were brought up to always be told what to do, or who didn't feel comfortable unless lots of people were always nearby, would not make good herders. We have seen that the land is best utilized when people and cattle spread out to the maximum degree, and for this to happen people have to be relatively independent of one another, able to make their own decisions and take their own risks, and like being in that situation.

Historically, however, optimum utilization of the land has not always been people's prime consideration. In fact, I would argue that is only during the colonial and modern periods that such economic factors have been able to have free play. This idea is supported by the observation that most of the nomadic Fulani are newcomers to the regions they are found in today. (Dupire, 1962:51; Horowitz, 1972:106). It is probable that one of the reasons they have been able to infiltrate zones that were traditionally controlled by the Tuareg (cf. Dupire, 1962:91-92) is that the once powerful Tuareg society can no longer control its own territory by force of arms, nor frighten small bands of herders with the threat of violently robbing their cattle. In general, the dangers of violence and cattle theft, which had formerly been major influences on the ecological adaptation of sahelian peoples, have been almost negligible

in most areas for two to four generations. The effect of those dangers in the past would have been greatly to limit freedom of movement, to counteract the extreme tendencies to split up into small camps, and to slow down penetration into unexploited areas of the ahel. All of these effects together probably made the growth rate of both human and bovine populations lower than it is today. Another consequence of the violence of the precolonial period, however, was that some semi-sedentary Fulani took better care of their cattle than they do today. As we shall see in the next section, one of the ways the semi-sedentary life-style differs from the nomadic one is that constant surveillance of the cattle is not necessary for the former because much of the year they are in "home territory." The nomads, on the other hand, really have no home territory and must therefore be on their guard more of the time.

### B. The Non-Nomadic Populations

In the previous section I described a number of constants that are as true for the non-nomadic Fulani as they are for the nomads. In particular, the points to remember are the orientation towards milk-production rather than beef production; the long dry season and therefore the impossibility of living on milk alone all year round; finally, the need for mobility so as to be able to lead herds to the right places at the right times for optimal exploitation of the sahel environment. There are also many similarities in attitudes and social institutions. For our purposes among the most important to remember are the belief that nobody owns pastureland and natural water holes or ponds, while wells are owned by those who dig them or commission them. Herds are constituted in very much the same fashion, so that the herd managed by the household head in fact contains many animals that are not his own, and he, in turn, will have a part of his animals scattered in the herds of his friends and relatives. Other similarities will be mentioned as we come to them.

We have seen that the non-nomadic Fulani make up the vast majority of the total Fulani population, since of the total of nine million or more about 100,000 are pure nomads. The term "non-nomadic" of course covers too many different ways of life to deal with conveniently at the same time, so some way of classifying the different groups is necessary. Scholars writing on the Fulani have classified the various groups according to a wide variety of criteria. We passed over some of these in the historical review earlier on in this essay, but their main value for our purposes here is simple familiarity: it is useful to have a general idea of what an author is talking about when he mentions the

Peuls, the Toucouleur, or the Bororo.

There actually is no one criterion that makes the most sense for classifying the Fulani with a view to studying their possibilities for economic development. Therefore, I will classify the non-nomadic Fulani according to both social and geographic criteria into three main groups: 1) The "semi-sedentary", which includes all Fulani who farm and for whom cattle-herding is also important, regardless of how much they actually move around; 2) the "sedentary", which includes Fulani who farm or pursue other occupations, and who do not do a significant amount of cattle herding; 3) the religious elites, who form a class apart and who are supported by Fulani (and to some extent other) Moslems from all walks of life. Many authorities make a distinction between semi-nomadic and semi-sedentary, in order to suggest differing degrees of nomadisation, but I don't believe that that is a very significant difference, and there is no obvious place to draw the line between the two categories. Within my category of semi-sedentary Fulani there is, however, a significant geographical difference in that some of these Fulani, like the nomads, pasture their herds in dry pastures around wells in the dry season, while others during this season send their cattle to graze on the "burgu" grasses created by the flooding of the inland river deltas, especially that of the Niger. In what follows I will for the most part treat both major modes of semi-sedentary life together, and will point out regional and ecological variants as we go along. I will not discuss the sedentary Fulani in any detail, since their concerns and way of life fall, for the most part, outside the scope of this essay. I intend to highlight the religious elites, however, because I believe that religion is potentially the most powerful single force operating in Fulani life today. It is certainly the force that is most likely to mobilize people for

action, whether it be for good or ill.

Of the semi-sedentary Fulani we will be discussing the vast majority feed their cattle in the dry season on the standing hay around wells, but a significant minority utilize the "burgu" of the deltas. Unfortunately, it is almost impossible to estimate how many Fulani utilize the burgu. The main reason is that the actual number of herdmen bringing the cattle into the burgu is but a small proportion of the population that depends on those cattle. If we rely on figures for the number of cattle using the burgu, however, and divide that figure by the approximate number of cattle per person among the Fulani in that general area, we can at least get a good idea of the order of magnitude of the population we are dealing with. According to a study directed by the geographer Jean Gallais for the government of Mali in 1972, the number of cattle grazing on the burgu of the Niger delta in Mali in 1970 was 1,120,000 head, of which 630,000 came from the delta region and 490,000 came from neighboring regions (Rep. du Mali, 1972, "Rapport de Synthese": 66-67). Of course many of the cattle do not belong to Fulani, but most of them are herded by them. A significant minority are owned and herded by Tuaregs. If we take as a rough guess, then, that 1,000,000 of these cattle are being used by Fulani (granting that some cattle are actually owned by member of other ethnic groups) and if we estimate that the number of cattle per person among the Fulani is about five, then we get a figure of about 200,000 Fulani whose life-way depends on use of the burgu in Mali. In Senegal, the number of people using the Senegal river delta is much smaller. One study done in 1965 indicated that the number of cattle in the delta amounted to 46,678 (Sow, 1965:25). General population figures suggest that the same number of cattle per person holds here as 'n Mali, so we can infer that about 9,000 or 10,000 Fulani

graze their cattle on the flood plains of the Senegal river.

By taking the best figures I could get concerning the states of West Africa, I calculate the total "semi-sedentary" Fulani population to be about 3,018,143. This includes the 210,000 users of the burgrass of the river deltas that we estimated in the previous paragraph. The number of Fulani following the sedentary life-style amounts to nearly four million, mostly in northern Nigeria. To this figure we should add most of the Fulani population of Guinea, c. 1.5 million, since few Fulani there still live a pastoral way of life. Though the Toucouleur of Senegal and Mauritania do not define themselves as Fulani, they speak the same language; their lifestyle is definitely sedentary also. If we add in their population of 512,000, this would bring the total number of sedentary Fulani and Fulani speakers to approximately six million persons.

It is clear from these figures that from half to two-thirds of the Fula speaking peoples (depending on how you count the Fulani of Guinea) are sedentary in their way of life. Of the rest, the vast majority follow variants of the semi-sedentary life-style that I shall now describe.

Two major features distinguish the semi-sedentary from the nomadic Fulani: the practice of agriculture and the practice of transhumance. The necessity for transhumance arises really as a logical consequence of combining agriculture with pastoralism, but we will briefly discuss transhumance first since it is a term which has been used with different meanings by various authors and thus lends itself to confusion. In general, British authors have used the term transhumance to refer to all movements of people with their herds from one pasture area to another, while the French writers have restricted the meaning of the term to

long-distance herd movements during the rainy season. I will be using the term with a slightly more specialized meaning, namely the long distance movement of a herd in the rainy season under the guidance of a small number of male herders. Transhumance, in this definition, necessarily entails the seasonal splitting up of families and herds, with one part going on transhumance, the other part staying at or near "home".

During the rainy season, both the nomads and the transhumant herdmen from the semi-sedentary groups are moving about in the pastures of the sahel with their cattle. It is during this season also that both these groups take their herds to salt licks or salt earth areas, which are places where by licking or actually eating the ground the cattle can get a supply of many necessary minerals that are lacking in their usual diet. Both the nomads and the transhumant herdmen have an abundance of milk, but while the nomads use this to feed their whole families and to exchange for things they need, the herdmen cannot do this because they don't have women with them. The herdmen milk the cows for their own consumption, of course, but they do not make soured milk or butter for sale. In fact, the Jelgobe herders whom I accompanied on a transhumance trek in 1968 explained the non-success of our attempt to get milk to sour properly with the remark that only women really know how to do this (see Riesman, 1977:64). It is possible that this is an economic loss for the semi-sedentary Fulani. The bulk of the people are cut off from their cattle at the very time when their cattle are most productive. On the other hand, the milk is not really going to waste, for it feeds the calves which would otherwise be deprived of some of that milk when taken by humans. The semi-sedentary people who stay at home are not entirely without milk, for they do keep a few milk cows and their calves with them. This system does not give people an abundance of milk,

however, and it may be somewhat detrimental to the health of the cattle. In the Djibo area of Upper Volta, some families would send the cows on transhumance in two or more shifts, so that all the cattle would benefit from the salt cure and from the rich pastures, but due to a decrease in the number of young men willing to undertake this trek a considerable number of cattle every year do not get to go on transhumance. The Fulani all agree that this is not good for the health of the animals. The team of ecologists of the Malian-Dutch project "Primary Production Sahel" note in their analysis of a herd on transhumance from the village of Diafarabe (in the Niger delta) that the cattle that do not go on transhumance, "when they rejoin the herd at the beginning of the dry season...are in a worse condition than the other cattle. Most probably this adversely affects both birth rate and calf mortality (Bremen et al., 1978:14)."

In general, the distance covered during the rainy season by the transhumant herdmen is much greater than that covered by the nomads. For example, we can see from the maps published by Dupire (1962: p.75, and facing p.80) and by Stenning (1959:93) that the seasonal movements of many nomadic groups are on the order of 50 to 80 kilometers each way, and that very few are greater than 100 km each way. The people of Diafarabe, on the other hand, send their cattle into the sahel region of Mauritania during the rainy season, and then deeper into the Niger delta during the dry season, for a total distance of over 1,000 km (Bremen et al., op. cit.:6). The Fulani of Doukoloma, on the Bani river south-east of Segou, send their herds a total of about 500 km round trip during the year's transhumance (see Grayzel, op.cit.:15-22). John Grayzel did not, however, have the impression that the transhumance was more beneficial to the cattle than staying at home, though had the

cattle all stayed home there would not have been enough grass for them. He writes, "The Peuls are more successful [than the Bambara] not because their animals migrate annually, but because they are more concerned about their animals (1976:30)."

The population of semi-sedentary Fulani is so large, and they live in such a variety of ecological situations, that it is difficult to say anything that would be true of all of them. One very general point can be made, however, that in the rainy season the herders tend to take the cattle to regions which cannot be grazed during the dry season due to lack of surface water. The reasons why some groups take their herds long distances, while others, such as the Jelgobe I studied, do not move very far, very likely are as much historical as they are ecological or economic. This is particularly true of the Fulani groups which make use of the burgu, either extensively or to pass through it. When the Niger is in flood, it is important to be able to get out of the delta and onto the bank one wants to be on in time, and one has to know the cattle paths (burti) and where they go. Not only that, the whole delta region has a set of grazing regulations laid down over 150 years ago by Sheku Amadu, the founder of the Fulani empire of Macina. This set of regulations, which still has a certain force today, gave precedence to specific Fulani groups in designated areas, fixed a rate of toll to be levied on cattle belonging to foreign groups, and set up herding schedules such that the arrival of different herds on the scene would be staggered. And all of this was coordinated with a setting up of cattle paths and even overnight stopping places in such a way as to permit millet farming and particularly rice farming to go on at the same time (Gallais, 1975:357-362). The burgu is unlike any other pastoral region in Africa; it is certainly not an area that nomads can wander around in as is the case

with the steppe and savannah. Not only is access restricted, as we have just seen, but also each Fulani village within the delta maintains a pasture area for its "dumti"--non-transhumant cattle -- that is absolutely forbidden to foreign cattle. This pasture is called the "harrima" (Gallais, 1975:359). This sketch of the system, brief as it is, at least gives an idea of the complexity of the arrangements, and we can see that for a Fulani group to make effective use of these pastures and cattle paths it would have to have deep, historical connections with specific peoples and places of the area. I have no first hand knowledge of the Niger delta myself, and there are almost no published studies of specific Fulani groups in Mali which show how and why they use the delta as they do. Looked at in the context of the mode of subsistence of the semi-sedentary Fulani, the burgu is a very effective variation of the normal, dry-season pasturage system. It is both more dependable and usually more nourishing for the cattle than the method used by the majority of the Fulani of pasturing the cows on standing hay in the vicinity of wells. Because of expanding rice cultivation, however, its days may be numbered as a privileged area for pastoralists.

Thus far in this section of the essay, we have discussed transhumance among the semi-sedentary Fulani, and the ways in which this practice resembles and differs from the rainy season movements of the nomadic Fulani. Now we must look at what the rest of the people are doing during this time, and how they are organized. Their major pre-occupation, of course, is the cultivation of their millet fields; this work, in addition, must be combined, or juggled, with finding adequate pasture for the cattle if they have not gone on transhumance and at the same time with keeping those cattle out of the ripening fields. This is precisely the situation the Fulani I studied lived in, and I think

that a brief description of the major features of their ecology and way of life can be taken to exemplify how the majority of the semi-sedentary Fulani live, regardless of their actual location. For these people, as for the nomads, millet is the staple of their diet, but rather than buy it or trade for it, they grow it themselves. We shall try to analyze the reasons for this below. To combine the operations of cultivating fields and herding animals poses problems for the people that the nomads do not have. First, as we have seen, by sending some or most of his cattle on transhumance, the herd manager deprives himself of the benefits of the herd in the very season when milk is most abundant. Second, whether the herd manager retains some or all of his cattle close by, he has the problem of keeping those cattle, as well as those of other people, out of the ripening fields. Third, the protection of the fields and the transhumance of the cattle both require labor, which reduces the labor force that can be used on the fields. The device the Jelgobe use to deal with these problems is also used in most areas of the sahel where the Fulani are the majority of the local population, particularly the northeastern parts of Upper Volta, the western parts of Niger, and the southeastern parts of Mali. This device consists in building a fence (hoggo) of thorny branches around the fields so that the cattle can be left to wander untended in the neighboring bush. This device cannot be used in areas where agricultural peoples are the dominant population because these people, not having significant herds, do not have any reason to enclose their fields and therefore there must always be herdmen to keep the animals out of fields.

Although this system does help the manpower problem, other difficulties can arise. Perhaps the most serious one is that of the location of the family's field in the first place. There are good reasons to

have the field located near the dry season wells because then, in the dry season, the cattle can manure those fields while they are coming in from the bush to drink water at the wells. In the Djibo area of Upper Volta, families would set up their dry season huts in the middle of their own fields (completely bare by November or December) so that the cows, bedding down for the night around the huts, would leave their dung there. But in that case, the immediate bush nearby is also the dry season pasture, and there is danger of shortage of grass if all the cattle that stay there in the dry season stay there during the rains as well. What people whose fields were near the wells actually did when the rains came was to split their herd and send a large part of it to spend the rainy season with relatives whose fields were in the bush, far away from the wells. But those whose fields are far out in the bush have another problem to face. During the rainy season the situation is excellent, for the cattle are spread out thinly and have ample and rich pastures where they can graze with little supervision. In addition, while the men are working in their field they can eat the remains of the previous year's harvest stored in a bin made of wood and thatch and raised on stilts. But when the harvest is in and the surface water dries up, the people have to move away. There is little opportunity for the cattle to manure the field, so the productivity will decline and eventually a new field will have to be cleared whereas fields around wells are productive year after year. Worst of all, perhaps, when the family moves to the wells that it shares with other relatives, it is no longer near its millet supply, and family members must make constant trips back to the storage bin (two or more times per week, even using a donkey, as hardly any Fulani have carts) in order to get grain to feed themselves.

What is the contribution of the women among the semi-sedentary

Fulani? Their domestic role is just the same as among the nomads: they milk the cows and prepare milk products, they build and take down the houses, they prepare all the daily meals, including the getting of water and firewood, they wash dishes and clothes, and they take care of the children. They do not help out with the hoeing of millet, nor do they make gardens of their own (but a few cultivate a little patch of flax whose fibers they use to make the string that holds together their woven straw bed mats). They spin a little cotton into thread and either sell the thread or commission a weaver to make cloth from it, and they weave beautiful straw mats in a variety of sizes and designs for use as prayer-mats, bed-mats, bed-canopy mats, or to make a house out of. Conspicuous by its absence in this list of women's work is the selling of milk and butter. We saw in the case of the nomads that the selling of milk and butter was essential to the nomadic subsistence economy, but that kind of trade is unnecessary for the semi-sedentary Fulani because they have their own supply of millet. The markets are very few and far between in this part of the sahel, so it would be almost impossible for women to go to them on a regular basis. But they do go occasionally and they usually sell either soap, which they have made with the butter from milk of their cows, or mats of the type described above. The purpose of these sales is not family subsistence, however, but to obtain personal spending money that will be used for almost anything, from alms to clothing, gifts and jewelry.

Words are very tricky; they can tangle our thoughts up dangerously. I spoke above of the non-necessity of trading milk and butter for millet. That is perfectly true, but I think its implications are all wrong. It is not because the Fulani have millet that they do not need to trade for it -- rather it is because there is no opportunity to trade for it that

they have to grow it themselves. Even this formulation is only part of the story, as we shall see, but it is much closer to the Fulani perspective. The semi-sedentary Fulani think of themselves as cattle people, despite the fact that income from their herds plays a fairly small role in their economy, and most of them resent having to cultivate millet fields. It would be good to remind ourselves at this point of an important fact brought out earlier: we saw that living on milk products alone was not possible under sahelian conditions and that therefore somebody had to be cultivating grain if cattle-herding people were to thrive. The question is, who is that somebody going to be? In the case of the nomads, we found that they tended to be relative newcomers in their areas and that they formed a very small proportion of the total population of the region they move about in. I suspect that there is a threshold above which that proportion must not rise if the nomadic way of life is to be sustained. I also suspect, though I lack the data to make the calculation, that the proportion of transhumant herdmen in relation to those they leave behind would be of the same order. The next question is, why aren't there enough non-Fulani people around with whom the Fulani could trade? There are a number of factors involved here, of which perhaps the most important is that the Fulani have been very successful both in increasing their herds and in reproducing themselves. I am not impressed by the studies that show pastoralists as reproducing less fast than agriculturalists. This may be the case today, but it is important to remember that in precolonial times the pastoralists, because of better diet and more sanitary living conditions, may well have been augmenting faster than non-pastoralists. A related fact is that in the precolonial period there were non-Fulani populations with whom the Fulani traded -- by force. In all those areas where the Fulani are today the dominant

majority they were, in the nineteenth century, the masters of slaves or serfs (maccu'be and riimaay'be) who did all their agricultural work. These slaves were both the descendants of local conquered people and the descendants of people captured in foreign wars or bought at a slave market. This historical situation is one of the reasons why figures concerning Fulani population are so uncertain. Very often in a national census the Fulani and the riimaay'be both are added into the Fulani population for that country, and we often just don't know whether this has in fact been done and, if so, what the proportion of Fulani to riimaay'be is. Jean Gallais, for instance, in an essay discussing the Mopti region of Mali, says that the Peul account for 38 percent of that region's population. In the next sentence he says that the true Peul amount only to about 20 percent of the population, or a little more than half of the percentage reported in the census (1975:355). Similarly, I found in Djibo that 72 percent of the population was Peul, but that only 44 percent were actually Fulani. The national census does not make this breakdown. (See Riesman, 1977:18).

It is often suggested that the sedentarization of nomads is an indication of the failure of nomadism as a way of life. While there is no doubt that mobility is essential to successful exploitation of the sahel environment, I would argue that the semi-sedentary way of life is actually the product of a highly successful nomadism which rapidly increased numbers of people and cattle and gave the nomads enough military power to drive out some and enslave others of the peoples among whom they lived. (See Riesman, 1977, pp. 43-45 for discussion of this idea in relation to the Djibo region). Derrick Stenning has also suggested that semi-sedentarism might be the result of success rather than failure, citing the example of the Jos Plateau Fulani (1959:8).

The semi-sedentary Fulani we are talking about, then, have been living through a period of drastic change in their way of life since the inception of the colonial period. How drastic this change has been is not obvious to the visitor because Fulani camps tend to have almost no Western goods or other evidences of the "influence" of Western civilization. The fact that in general the Fulani are using traditional African technology can easily lull one into thinking that they are living in an age-old, traditional life pattern. Actually, for the past two or three generations, they have been evolving an unprecedented life pattern whose major new parameters -- in order of appearance -- are impossibility of military action and organization, impossibility of getting millet supplies from the work of slaves or serfs, and progressive absorption of the whole economy into the world economic system.

It may seem that I have been emphasizing the difficulties and problems the semi-sedentary Fulani have in combining agriculture and cattle-raising. The reader may wonder at this point why they bother at all. I will return to the problems again in the next section of this essay, but would like to say a bit now about the advantages of this way of life. It seems to me that there are significant advantages in three spheres: 1) nutrition and health, 2) effective use of labor force, and 3) security. Let us look at each of these briefly. There is an incontestable advantage to having a supply of animal protein. Most West African children get almost no protein except what comes through their mother's milk, but semi-sedentary Fulani children do get milk -- sometimes all they can drink -- for three to five months of the year, since whether the cattle go on transhumance or not, there are always milk cows left behind (note also that in order for there always to be lactating cows, those animals must come from a much larger herd). Having cattle

(as well as sheep and goats which these Fulani also keep) means in addition that there are occasions when meat is eaten. Fulani do not kill their animals, as a rule, just to eat, but generally either for some ceremony or because the animal is dying anyway. Thus, though people do not get meat on a regular basis, there are occasionally times when they do eat it. When cows are being slaughtered because of being near death from disease, there can even be an abundance of meat. Along with the definite advantage of better diet, there may be a marginal advantage of more sanitary village conditions, for the simple reasons that the huts in semi-sedentary hamlets are more spread out than is the case with purely agricultural peoples, and that the people move a few times a year, which gives climatic and biological factors the time to dispose of accumulated refuse before the return of the seasons brings the inhabitants back again.

The effective use of the labor force can be seen in the fact that for semi-sedentary Fulani there is hard work to be done all year long. We saw that for the nomads, the hard time of the year is the dry season, while for the farmers it is the rainy season; the semi-sedentary people can be thought of as simply combining these two work systems. They are perhaps, then, exploiting the sahel environment in close to an ideal way. It is significant that the Fulani contribution to the annual labor exodus to Ghana and the Ivory coast is extremely low. The Mossi, for example, as is well known, have a very large proportion of their young men working away from home. Delgado found in his study of one Mossi village that nearly half its income came from remittances by family members living away from home (1977:14); over half (54%) of the households had no males between the ages of 18 and 30, and only five out of 29 households had more than one male between 13 and 39 present (op. cit., p. 12). Fulani

households surveyed in the same area had an average of two males between 15 and 60 as permanent residents (op.cit.:19). The Fulani way of life can thus be seen to be supporting a vigorous and growing population in the sahel by keeping most of the work force at home and with a minimum of support from sources outside the region.

The security which the Fulani way of life brings has to be thought of in relation to sahelian conditions. If we keep in mind that the sahel is a zone where the rainfall averages from 200 to 500 millimeters a year and where that rainfall is unpredictable both as to time and place, we can see in what sense there is a certain insecurity inherent in living in the sahel -- an insecurity that is much reduced in sudanic zones. In the northern parts of the sahel agriculture is not really possible at all, and in the southern parts it is always somewhat risky. Let me re-emphasize a point I made in connection with the nomads: if there were little risk inherent in the environment there would be no question but that agriculture would be a more efficient way of getting energy than cattle-herding is. It is precisely the riskiness of the agricultural venture that makes raising animals an efficient way of exploiting this environmental niche. What raising animals does, for those who grow crops in the sahel, is give them mobility so that they can take immediate advantage of a better-favored micro-region if their own should have bad luck one year, and it also gives them a back up source of capital which they can trade for grain if all else fails. People without cattle must live on last year's grain while they are cultivating what they hope will be the next harvest; herders, however, are not tied down to that grain supply since, if necessary, they can live on the milk of their cattle wherever they are while they do the cultivating.

Before giving a sketch of political organization among the semi-

sedentary Fulani, let me briefly discuss a small group of semi-sedentary Fulani whose ecological situation is a bit different from that described above. These are people living in sudanic rather than in sahelian regions, and living as small enclaves, sometimes individual families, among populations of other ethnic groups. Fulani in this type of situation can be found in nearly every West African country. In some places they eventually lose the Fulani language, but they do continue to specialize in herding cattle. Little is known about these small enclaves, but a few good studies have recently been done and the results suggest that each location is different enough from the others to preclude useful generalization (cf. Grayzel, 1977; Delgado, 1977). If we keep in mind the factors previously discussed that affect the nomadic and semi-sedentary ways of adapting to the environment, we could say that the Fulani of Doukoloma studied by Grayzel are, in a way, nomads who have struck it rich enough to settle down (similarly to the Jos Plateau Fulani mentioned by Stenning). They do plant fields, and they do send the cattle on long transhumances, as we have seen, but they are well off enough to pay the Bambara among whom they live to do the hard work for them. If they became much more numerous, however, this might no longer be possible (see Grayzel, 1977:75-78). The Fulani living among the Mossi near Tenkodogo do not seem quite so fortunate. Perhaps because the environment is harder on cattle, they are not as rich as the Doukoloma Fulani and they therefore have to cultivate their own field. At the same time, since the Mossi do not fence their fields, men are needed as full-time cattle herders so that fewer family members are available to work at hoeing (Mossi women hoe, while Fulani women do not). Another difference between the Fulani enclaves among the Bambara and among the Mossi is that the former do not as a rule herd

Bambara cattle, while the latter herd all the cattle belonging to the Mossi and in fact are enabled to survive as pastoralists because about 70 percent of the cattle they herd are owned by Mossi (Delgado, 1977:34).

With the exception of enclaves like the ones just described, the semi-sedentary Fulani tend to have stronger and larger political organizations than do the nomads. Most importantly, while the nomad groups -- together with their chiefs -- are often in the position of guests on foreign soil and thus subject to the chiefs of the dominant groups of the region (these may sometimes be sedentary or semi-sedentary Fulani), the semi-sedentary groups are usually the masters of their own area and their chiefs are above those of the other ethnic groups of their territory. Nonetheless, the anarchic tendencies mentioned before are very much present in these chiefdoms; here, as with the nomads, individual ownership of cattle makes it relatively easy for a family to head for other parts, such as distant relatives in another country, if the situation at home becomes difficult for any reason. The relation between a chief and his followers is in some ways like that of a President and the congress of the United States. Chiefs may differ in character and charisma: some will try to browbeat their followers, others will try to persuade them by appealing to precedent, morality, self-interest, or whatever, but in any case they cannot really order them to do anything. They have to have their followers' consent. The only people who can be ordered around are slaves and young children, and adult Fulani are neither. To order someone to do something is to humiliate him. Fulani generally make every effort to avoid humiliating a person. At the same time, the Fulani highly respect the office of chief, and willingly give their allegiance to a person who fills that office with dignity, intelligence, and respect for others.

In the context of working for economic and social development the implications of this political structure are that 1) one must make initiatives through the channels of the local system, since if one tries to bypass it both chiefs and followers may feel offended that they have not been treated with respect. 2) At the same time, the system is not a clear authority hierarchy like a bureaucracy where directives at one level regularly lead to execution at another. This means that "grass roots" work is absolutely necessary; discussions about projects must be held not only with chiefs, but also with all the people who might be affected. 3) Finally, opposition to a project by a chief does not mean it is doomed. All political societies have factions and disaffected people. A group might form a united front of opposition if the members sensed their chief was insulted, but if they thought he had been treated with respect they would feel quite free to think for themselves and make up their own minds about how to deal with some situation.

### C. The Religious Elites

If asked whether they believe in Allah and his prophet Mohammed, all Fulani today would say that they do. It is possible that here and there a handful of "animists" remains, but my survey of the literature on the Fulani suggests that while some Fulani have only recently become Muslims, and while there is a good deal of variation in the significance of Islam, both to specific groups and to individuals within groups, being a Muslim is today part of the ethnic identity of being Fulani. What is the role of Islam likely to be in Fulani development? One mistake outsiders often make when looking at non-Western peoples is to think of them as "in the grip of" their traditions, or as "dictated to" by their religion. It is true that religion is often conservative, acting as a brake on change, but if we look at this phenomenon sociologically we can see that there are good reasons for this. One fact of particular importance for understanding development problems is that religion or tradition often backs up practices that have long-range beneficial consequences for the group but which may seem "irrational" or "counter-productive" in the short term. A hypothetical, but fairly typical, example would be a tribe which refuses to use the wood from, or to farm in a "sacred" forest. An outsider might think that land was going to waste, while on closer inspection of the situation he would find that the village's source of water is located there, and that many unusual medical plants are found there and would eventually disappear if people gave in to the temptation to exploit the land in a more obvious, rational way.

We shall come back in a later section to the question of Fulani "fatalism" and the role of Islam in this. Here I want to emphasize

the dynamic role of Islam in Fulani society, and the important functions of the religious elites ( called "Marabouts" in French-speaking countries, "Mallams" in English-speaking ones). A glance back over African history of the past 200 years shows that wherever Fulani are masters of the region they live in (with the exception of Djibo in Upper Volta) it was a holy war (jihad) that enabled them to achieve sufficient organizational structure and unity of purpose to take over those territories. Previous to these holy wars, which we saw began in the late eighteenth and early nineteenth centuries, the Fulani nearly everywhere had been subject peoples in lands ruled by other ethnic groups. This accomplishment is all the more impressive given what we know about the anarchic tendencies in Fulani political organization. The powerful, unifying force of Islam for the Fulani can be seen both in twentieth century religious movements and in features of everyday life. Let me give an example of this. Cooperation, as we usually understand the term, does not exist in most Fulani societies. When we Westerners use that word we have in mind a group of people working together for a common goal, a goal that will benefit everyone relatively equally. Fulani do work together, but when they do so it is to help specific individuals, not the community as a whole. For the Fulani the community as a living entity in its own right does not exist; what does exist is the bond of friendship or kinship that links one person to another, and all help that people give one another aims at strengthening such bonds. What we call cooperation the Fulani see as a kind of coercion, because in working for the common good they are working to help people whom they do not want to help and whom they might well wish to harm. The only times when Fulani do work in what we might identify as a cooperative way are times when they are working "for God". When they help build

a mosque or when they collectively hoe the fields of their religious leaders there is a joyful and giving spirit which largely replaces the Fulani's usual suspicion and indifference concerning group projects.

The marabouts (moodi'bbe), sing. moodibbo) have a number of different functions in contemporary Fulani society. Though a number of them have been important political leaders in the formation of Fulani states, they do not hold political power as a group. The reason for this is that the class of marabouts has no internal structure; it consists of isolated individuals or small family groups scattered throughout the sedentary and semi-sedentary Fulani communities. Some families are traditionally marabout families. They have the family name Cissé, which is actually a title equivalent to something like "reverend" or "doctor" in English, though I don't know what its etymological meaning is. Not all people with this family name, of course, are practicing marabouts. For being a marabout is to follow a calling, very much like entering the ministry in our own society. Anyone can attempt to become a marabout, regardless of family or ethnic background; the process is one of prolonged study, often with a sequence of teachers who may be scattered all over West Africa. Early on in this sequence, there is a formal sanction when one learns to recite the Koran by heart, but after that there are no formal grades or degrees, and one's success as a marabout depends not on the extent of one's studies but on how well one functions as a marabout.

The major functions here are curing illness, both physical and mental, acting as therapist, marriage counselor, and advisor on religious and moral questions, instructing children in the basics of prayer and other religious observances, teaching more advanced students the finer points of one's own areas of knowledge (such as theology,

philosophy, mathematics, or law), and guiding and officiating in the various rituals of the society, particularly birth, death, and marriage. Thus there are marabouts of all sorts in Fulani society, just as there are priests, doctors, and professors of all sorts in ours. While some of them are venial, narrow-minded, or dull, many are well-educated in their fields, curious and broad-minded, and very stimulating conversationalists. Many of the ones I know myself are part-time marabouts, in the sense that they make their living the same way everyone else does, but use their free time to study on their own and to give people help when they need it. Some of these services, such as the writing of protective charms, have a widely accepted standard price; more elaborate services, such as foretelling the future, would usually have a fee agreed upon in advance. Other services, such as consultation about personal problems or officiating at a marriage, might be paid for by gifts.

A marabout with a reputation for knowledge, kindness, and success, will usually have a following and may often be the effective principal of a school whose students support him and his family by monetary contributions and by performing most of the hard work, both agricultural and domestic, of his household. It would be incorrect to say that marabouts as a class are looked up to, though nearly all marabouts inspire some fear because a person never knows whether a marabout might have some secret means of harming one. But the best marabouts are viewed by people as being both wise and somewhat detached from the everyday struggles of life, and they can therefore be looked to for guidance in difficult times. In addition, recommendations for action that a marabout makes have a very different ring from suggestions a chief makes: to do what the marabout says is to affirm your faith in God

and to express your hope for yourself and your salvation, while to do what the chief says is equivalent to admitting your submission to him.

The implication of these observations for social development among the Fulani is that consultation with marabouts might be helpful preliminary to undertaking any project in a given area. One reason for this is that the marabouts are generally the intellectuals of the community and might be more able than others to convey to foreigners (such as AID experts) how their fellow citizens perceive and feel about particular issues. Secondly, if a project had the support of the marabouts it would have a good chance of at least getting a fair hearing and careful attention from the people whom it was supposed to benefit. Finally, if the project required cooperative work or action, a religious emphasis might be more successful than an approach that appealed primarily to reason, self-interest, or fairness.

## CHAPTER III

### The Fulani and Development

#### A. Fulani Responses to Stress and Change

A key personal quality in the Fulani sense of who they are is a strong sense of honor and shame. Not only do the Fulani believe they have this quality to a greater degree than their neighbors do, but the neighboring peoples themselves willingly concede the point. One saying that I heard in Upper Volta, though unfortunately I can't remember from whom, was that if a Fulani's horse farted the Fulani would die from shame. Though this is not true of course, it can certainly seem to an outsider that Fulani carry their concern with honor and shame to a point that would be considered crazy in our culture. Suicide, for example, seems to be extremely rare in Fulani society, and the only cases I found out about when diligently investigating the question were ones where the person was making a final protest against indignity. In one case, early in the colonial period, a chief who was arrested by the French used a concealed knife to kill himself before he could be taken to jail. Another chief who was taken to jail, at a later period, refused to eat and died of starvation. A good friend of mine told me that he had been arrested under false pretenses once and had also refused to eat; he would have starved himself had the authorities not realized they had made a mistake and let him go. The tough, rebellious spirit that these stories -- and there are many more -- bring out might well appeal to us Americans, at least at a distance. It must be quite obvious to any reader, however that

working with such people close up can be extremely touchy. Frankly, while I was pursuing my anthropological research I kept thanking my lucky stars that I was not there to try to get the Fulani to do anything or change their way of life. We shall return later on to the significance of all these arrests of chiefs, for they have a bearing on development projects among the Fulani.

A corollary of this high sensitivity to honor and shame is an attitude of superiority and haughtiness towards almost anybody who is not Fulani. This is not at all a kind of group pride such as a patriotic American might have. Where an American would say "my country right or wrong," the Fulani would at most say "my relatives right or wrong." A Fulani has no feeling for the Fulani as an ethnic group, but he has pride in himself because he can uphold the standard he was given by being born a Fulani. Being a Fulani is a supremely valuable thing, but it is also very difficult to do it; at bottom, you really have to be born a Fulani to succeed in being one.

Interestingly enough this superior attitude towards members of other ethnic groups does not seem to carry over into attitudes towards the natural world and especially towards cattle. Many Americans who achieve success in some line of work, whether it be farming, business, or ballet, believe that it was their own intelligence, hard work, and perseverance that enabled them to get ahead. The Fulani, however, would laugh at this idea of success and say instead that success comes from God and from luck. There are a number of reasons for this difference of view, but I will just discuss one of them briefly here: in both cases the view corresponds to the common, actual experience of people in the society. For an American, success really does seem to depend on choosing a proper line of work for one's talents and on

working hard. For a Fulani, however, the major goal is to increase one's livestock and to have many children, and both of these depend on what we would call "natural" forces, namely the fertility of women and cattle and the ability of the young to survive. Fulani would not deny the value of hard work. They consider failure to cultivate a field or to take proper care of cattle as sheer stupidity. But in their experience there is just no direct relation between the amount of work one puts in and the reward in number of cattle or children. (An important exception to this existed when cattle could be obtained by raiding and "children", too, could be gotten in the form of slaves.)

We have seen that the actual, economic dependence of people on cattle is greater among the nomadic Fulani than among the semi-sedentary ones, but both groups perceive their dependence to be very great. The Fulani, like Christians and Jews, consider God to be a father to them, and they view cattle as somewhat like a father also because they sense that their whole way of life depends so completely on cattle. It is significant that the marabouts and the more fervent Muslims often criticize the less fervent ones by saying, "They don't follow God, they just follow their cows. That's enough for them." This relationship to the cow does not lead to attitudes of awe or worship, but to one of profound respect. This is expressed in everyday life in a number of ways. One of these is to never show greediness for, or undue interest in, the products of the cow. Once when I told a friend that I found the meat we were eating delicious, he said that Fulani would never dare say such a thing; underlying this remark is the notion that to reveal desire for meat or milk is tantamount to viewing the cow's products not as a gift but as a commodity that one controls. Now, from a strictly economic point of view, the cow's products are

commodities and the Fulani do control them. Can it be, then, that the Fulani do not perceive this basic economic reality? I believe that Fulani could be led to understand this viewpoint, but that for the most part it is not the relevant one for them. In most areas, raising cattle is not a money-making proposition, but rather a non-profit, people-and-cattle-making one. Fulani see both children and the produce and increase of their cows as gifts of God; their own labor is not seen as "creating" these products at all, but simply as maintaining them while they grow up of themselves.

Another example of Fulani respect for their cattle is their idea that cattle are very intelligent. This doesn't mean they believe that cattle are smarter than men, but that cattle do have a good sense of what is best for themselves and certain sensitivities which other animals and men do not have. Unlike sheep and goats, for example, cattle can leave camp in the morning on their own, wander around all day, and come back at night. Cows that have previously made the transhumance to the salt earth area have been known to leave on their own if their masters don't take them there in time. Cattle are sensitive to dangerous animals and their fine sense of smell can also detect the location of water when rain has fallen great distances away. Finally, each cow knows its own name and responds individually or together with the rest of the herd to its master's calls. Melle Dupire writes that Wo'daa'be herdmen can use their herds as a weapon, both for attack and especially defense. "It is an astonishing sight to see the demonstration. The herdman takes off at a run, calling his zebus; they follow him at a faster and faster pace, then, at his signal, they stop and surround him. Protected by a half-wild herd that will obey him alone, he can defend against an outside attack (Dupire, 1962:97)."

One evening I was sitting with some children around the fire outside our hut. Cattle were milling around the huts, as usual, mooing and bellowing before bedding down for the night. Suddenly a boy of about eleven said, "Do you like that cow's voice?"

"I don't know," I replied. "Do you?"

"Oh, it's so beautiful," he said. "It makes me feel like jumping up and down."

The point of these examples is to emphasize that the close relation of people and cattle is not just economic. Some of the joys of life, and the possibility of pride in being Fulani, come directly from this intimate relation. As we shall see in more detail in the next chapter, there is a kind of feed-back such that these joys and this pride and the other attitudes I have been describing are actually crucial to the very economic viability of the whole pastoral system.

How does this whole system respond to stress? In one sense, we have already seen this, for we have emphasized that a fundamental quality of the sahel environment is its riskiness. Now we can spell this point out just a little more. The key to the adaptation of both nomadic and semi-sedentary Fulani to the environment is mobility. The specific organization of herd movements varies from group to group and from region to region, but in all cases these movements enable people to get energy -- in the form of milk and herd growth -- that would otherwise be lost. The cows' bellies are collectors of photosynthesized solar energy. Perhaps because the basic adaptation is so successful, it is applied to many other situations of stress, including serious famine, family conflicts, population pressure, political struggles, and war. From our Western perspective we might be tempted to think the Fulani are always "running away" from their problems, rather than facing them

and solving them. In my view, however, this is another one of those places where words can mislead us. In our culture, "running away" applies to cases like the man who ends up fighting with every employer he has and keeps leaving in hopes that the next situation will be better. For the kinds of problems the Fulani have, however, leaving a place and striking out on one's own can be a true solution -- as in the case of overcrowding on the land in a given area. In addition, some social problems, such as political and family conflicts, are partly caused by ecological pressures and can be seen, from an ecological point of view, as a further social mechanism to keep people and cattle thinly spread out so as to make most effective use of the sahel environmental niche.

Another Fulani response to stress is resignation. Just as they do not believe their work has much effect on whether they succeed in life, they regard failures and disasters as being caused by forces over which they have no control also. Resignation is a very common response to problems all over the world, but some Fulani go even a little further in this than their sedentary neighbors, such as the Mossi. Exceptionally, the Wo'daa'be have the reputation of being good at magic and the preparation of medicines for various illnesses, but semi-sedentary groups generally do not have such expertise. The Jelgobe of Upper Volta are singularly lacking in medical knowledge. They believe in magic and believe that miraculous cures can be accomplished, but when they want this kind of help they usually go to non-Fulani practitioners. They also go rather rarely to sources of Western medical help, except for people with conditions which have a long history of successful cure, such as spinal meningitis, syphilis, bladder stones, and difficulties in childbirth. (I can only skim the surface of Fulani beliefs and attitudes concerning medicine; proper treatment of that subject would

require an essay or even a book in itself.)

It is important to understand the attitude of resignation, because it, too, has its positive side. Though resignation, or fatalism, may hold people back from taking active steps to change a difficult or disastrous situation, it also lifts from them the terrible psychological burden of feeling responsible for that situation. Think of the horrible guilt feelings of a parent in our society, for example, who believes that his or her child could have been cured of an illness if only X, Y, or Z had been done. Given the conditions the Fulani live under, where alternatives X, Y, and Z almost never exist, if people did not believe in their own helplessness they would suffer tremendous levels of guilt and frustration.

If I am correct in my impression that the semi-sedentary Fulani are more resigned in their sense of what they can do than the nomads are, this difference in attitude supports the point I made earlier about the drastic changes which colonial rule brought about in the semi-sedentary life-style. The nomads, we saw earlier, benefitted from colonialism because they could now move where they wished without fear of their cattle being stolen or confiscated. Colonial rule thus enhanced their all-important capacity to move. But while semi-sedentary Fulani benefitted too from this enhanced mobility, they lost the possibility of a third response to stress which had been important to them, namely the ability to recoup losses or increase their wealth by cattle rustling and by warfare. Today, I believe, there is not any decisive action a young man can take if he wants to increase his herd. Working harder is not the answer, for he is already herding the cattle of many people and there is no guarantee that the work he puts in will benefit his cattle more than those of his friends and relatives. And suppose

that for some reason his cattle did start to increase faster than the others that he was herding? People would begin to get suspicious and wonder if he wasn't somehow cheating on them or even practicing some nefarious magic or witchcraft. Before the colonial take-over, however, the decisive action of a raid was possible. The reward of success was great, because one's newly increased herd was not only legitimate but admired. And if one died in battle, the anticipated reward was also great, namely that of being remembered and celebrated in song and story. The importance of this cannot be overemphasized. Everybody knows the stories about the heroes of the past. Even for people born long after those days were over, that model for action is the one by which they judge how they are coping with life today. Many young men would say to me, when I played recordings of the traditional music that accompanies the telling of great deeds of the past, "This music stirs me up so much that I feel like going out and killing somebody." Don't in the least take this to mean that the Fulani are about to go on the warpath or are plotting the overthrow of the states they live in. They are quite convinced that this could not happen. The point here is that the closing off of one of their major channels of action, combined with the loss we mentioned before of their slaves and of their political autonomy (the colonial regime tended to arrest or depose independent-minded chiefs), has undoubtedly increased the Fulani sense of helplessness and the feeling that God alone can help them now.

## B. Selected Examples of Projects Tried Among the Fulani

This selection of projects is necessarily limited and personal, for much of what is written on such projects is unpublished and was not available to me, or is published in government documents of the countries concerned that are extremely hard to come by. Thus I do not pretend that this selection is exhaustive or up to date. It does include, however, the major areas of life in which development projects have been tried.

THE DJIBO BUTTER COOP. My information about this comes from casual conversations while in Djibo, Upper Volta. It appears that in the 1930's a French Commandant de Cercle tried to set up a butter cooperative in Djibo. This was short-lived for several reasons: 1) the people were simply ordered to bring in their milk and most of them never saw any return; 2) there were nearly insurmountable problems of refrigeration and transport; 3) because of seasonal fluctuations in supply and growing refusal of the people to participate, it became impossible to assure a constant flow of butter to the market. This case touches on a number of points made earlier in this article, but I will just highlight one fact which returns with sad monotony in West African development projects. Whatever the intentions of the planners, the actual details of the projects are frequently executed in an authoritarian and inconsiderate manner.

THE MARKOYE RANCH. My information about this project also comes from casual conversations, primarily with AID personnel and technical consultants, during the period when the Ranch was being set up and after its demise. The original purpose of this AID project seems to have been to demonstrate good range management techniques to the local

population and to make available to them breeding bulls for the improvement of their own herds. I don't know whether local herders made use of these bulls or not, but the ranch simply could not be a going concern because it was too expensive. Even if there had been enough water -- I believe there were problems in this area -- the ranch in no way represented anything that the Fulani could reasonably learn from. They did not need to be told that grass would grow if cattle didn't eat it, and the fencing in of the range is not only prohibitively expensive but contrary to Fulani custom. Finally, the Markove ranch was not extensive enough to overcome the spotty nature of sahelian rainfall that we have already mentioned several times. Yet had the ranch been much larger it would certainly have become the target of much anger on the part of local people.

WELLS AND BORE-HOLES. Water has been perceived by everybody, including the Fulani themselves, as the major area where help is needed to improve life in the sahel. Consequently, well-drilling and construction have long been major priorities for the utilization of foreign technical assistance there. One of the advantages of a well, from the point of view of the government or the donor, is that once a team is set up to do the work, each job is relatively quick and simple, while the result remains quasi-permanently, serving the people for years and years. We all know how nice it is to have something concrete to show for our effort and money -- especially reinforced concrete. Generally speaking, when such a well has been constructed in a village to provide a more sanitary water supply to the people, the desired goal has been attained. But the situation is quite different in the case of wells for the watering of animal herds. We saw earlier that among pastoral peoples each well belongs to the person or group that digs it or commissions it.

An important ecological side-effect of this social arrangement is that only the cattle belonging to a restricted group of people will normally water at any given well; this limits the number of cattle in a particular area during the dry season and thus helps ensure that there will be enough standing hay to feed those cattle until the rains come. Although pasture is not considered to belong to persons or groups, this arrangement leads to the same result as pasture ownership would. Thus the system of well ownership is a kind of unconscious range management practice.

What is the effect of establishing a public well for watering cattle by hand or a pumping station that brings up the water by diesel power? In both cases, but especially the second, such a concentration of animals arrives at the wells that the pasture all around them is soon used up and their water thus becomes unusable for the rest of the dry season. Not only that, before this extreme point is reached a law of diminishing returns operates such that the effort saved in not having to extract the water by hand is effectively wiped out by the effort it takes to bring the herd from the pasture to the well and back again, not to mention the effort of getting and transporting water for human use over ten to fifteen kilometers. This has been observed both in eastern Senegal and in Niger, where the major projects have been tried. Edmond Bernus, a French geographer who specializes in studying the Tuareg, has analyzed the consequences of setting up a pumping station at In Waggeur in the territory of the Illabakan Tuareg northeast of Tahoua (Bernus, 1974a). Prior to 1948 the Illabakan had been able to stay in that region only until the drying up of ponds, which occurs between October and December. In 1948, however, a cement well 90 meters deep was constructed, from which the water had to be drawn by

hand. This allowed the group to remain in the region through the dry season. Then in 1961 the In Waggeur pumping station was set up, and almost immediately the Illabakan found their territory invaded by many foreign groups, both other Tuareg tribes and Fulani. The number of animals watering there was triple the number originally planned to maintain balanced pasturage; at other similar stations, the figure was at least double the figure originally planned and in one case (Abalak) it was four times that figure. The Illabakan were of course very unhappy at this turn of events and they eventually requested the administration to turn off the pump. Some families had even moved away to the edge of the denuded zone and started to dig their own wells by hand. In 1971, perhaps because of the Illabakan's request, the In Waggeur pumping station was closed. That year, the Illabakan put their old well back into operation and were able to pass the dry season near it. "All the tribes that had come these last years had deserted the region, and the Illabakan were the sole masters again, as they had been nine years before (Bernus, 1974a:125)."

If my report thus far has been a good one, the reader should now have in mind the background information that would enable him to analyze what went wrong here. The immediate problem was that neither the government nor the Illabakan had any effective way of limiting access to that water, which was extremely attractive both because of its location (in fresh pasture) and because it relieved people of the exhausting task of lifting water 90 meters. One reason why access could not be limited is clearly that the well is an anomaly in being a dry-season source of water that belongs to no one. There were no precedents in custom for dealing with that situation. And really serious thought and discussion by the Tuareg about this anomaly was precluded by uncertainty as to

whether the machine would really stay in operation or what the state was going to do. Most machines in West Africa eventually stop running and are not fixed or replaced; people are not going to adopt a major change in their lifestyle for anything so precarious.

What should have been done in this situation? I have no ready answer. This is as it should be, for, as we shall see in more detail later on, the kinds of difficulties this project faced could only have been avoided -- if at all -- through long discussion with the parties that were supposed to benefit from the bore-hole. I am sure that early in such discussion the major difficulties which actually occurred would have been brought up for consideration and good suggestions for dealing with them made.

#### INTRODUCTION OF CHEMICAL FERTILIZERS, FUNGICIDES AND PESTICIDES.

While I was living with the Jelgobe Fulani a French agricultural extension worker (supported, I believe, by the F.E.D.) came around about once a year to try to encourage the Fulani to protect their growing crops and their harvests with chemicals. I present what follows because it sheds light on how the Fulani react to this kind of project in general. This extension worker would show a film depicting a farmer getting and applying these products to his crops. The film was acted by Mossi, but was dubbed in Fula so that what was going on was easily understandable to all. The extension worker spoke Fula himself and was at that time actually married to a Fulani woman; thus he, if anyone, ought to have been well-placed to induce the Fulani to use these products. But he had little success. Why? For one thing, he never actively sought to learn how the Fulani perceived what he was doing and the products he was selling. Thus he had little awareness of what their objections might be and did not actively try to deal with those objections. The

main objections centered around the fact that these products were powerful poisons. Just the idea of having poisons frightens the Fulani because they immediately think of the possibility that their animals might accidentally eat some. In addition, the Fulani have little storage space where they could keep such dangerous products safely away from children. Finally, some Fulani even told me that putting poison in Fulani hands was dangerous because people would use it to poison one another's cows or wells. I am convinced that fear of being regarded as up to no good dissuaded some Fulani from trying these products. (I haven't studied the question sufficiently to decide whether the value of pesticides really does outweigh their hazards, but I think the issue is debatable.)

LEGISLATION OF PASTORAL AND AGRICULTURAL ZONES. In most sahelian countries there has been a gradual encroachment of cultivated fields on grasslands traditionally used by the pastoralists. This has undoubtedly been caused by the pressure of population growth combined with the inability of pastoralists in the colonial and post-colonial periods to take steps of their own to prevent immigration of farmers into their territories. This is more serious than it might sound because "encroachment" does not mean just a gradual creeping northward of the edges of the farmers' fields: it means generally that the farmer carves out his field in a dry-season pasture area near a well. When this happens, precious pasture reserves for the dry season can be lost (see Barral, 1967). With fields planted near rainy-season ponds or water holes, the problem is the blocking of herd access to the water. Whether this spread of agriculture is good or bad I cannot say. It seems to me inevitable that it will be tried while more and more mouths keep arriving to be fed. The most common way of conciliating the conflicting

modes of land use is to insist on keeping open a corridor in the millet fields allowing access to the water. Often this is handled at the local level rather than by national decree (see Horowitz, 1975:398). Niger has promulgated laws with the express intention of limiting the extension of cultivated fields into the pastoral zones, but these have been ineffective in practice because a few good years of rainfall attract the farmers beyond the established frontier (Bernus, 1974b:141).

CATTLE VACCINATION PROGRAMS. All the sahelian countries received considerable technical and economic aid to carry out the Joint Rinderpest Campaign of the 1960's. This campaign seems to have been very successful, and one reason for this success was the assurance given and observed that the number of cattle vaccinated would not be used to determine the cattle tax which all owners had to pay. Fulani and government officials alike agree that the vaccination campaign has been beneficial. It is just possible, however, that its medium- and long-range effects are not all good. There is some evidence that this and earlier veterinary interventions have contributed to a kind of population explosion in cattle which human institutions, particularly in the severe stress of the 1968-74 drought, were not equipped to cope with. Randall Baker, in an essay on the Karamojong of Uganda, criticizes the disease eradication program carried out there in the 1940's and 1950's in terms that could apply equally well to the rinderpest campaign.

"...the programme was devastatingly successful and virtually removed the second major check [after shortage of water] on cattle numbers in the district... Disease control ... was considered in vacuo. Just as water development had no complimentary grazing programme, so disease control had no rider to explain how all the extra surviving cattle were to be accommodated on the grazing available (1975:195)."

Baker goes on to say that the growth rate of herds, in the absence

of major cattle diseases, was about five percent per year (ibid.): this means a doubling of the population in just under fifteen years. A glance at the figures for the number of cattle in the "burgu" region of Mali between 1957 and 1970 (Rép. du Mali, "Rapport de Synthèse", 1972:66) indicates that the growth rate there was about five percent too.

With a growth rate like that, worse famines are clearly in store. One aggravating difficulty is that the human population is growing even faster (see next section), so that to the Fulani it does not seem that there are more and more cattle, but less and less. Add to this the factor already discussed, namely that many if not most of the cows in a herd are not the personal property of the herd manager, and we have a situation where choosing which animal to get rid of is agonizing at best. Only a pressing need that everyone recognizes as legitimate justifies selling an animal.

HUMAN HEALTH PROGRAMS. If the human population were constant, or growing significantly more slowly than the animal population, then it might make sense to speak of reducing herd size. As we have seen, people and cattle live in a mutually dependent relation such that the ratio between the two has upper and lower limits that cannot be overshot without entailing serious consequences. The pastoralist population, however, is growing very rapidly, though somewhat less rapidly than is the sedentary population in West Africa. According to demographic studies cited by Jean Gallais, the annual rate of population increase among the Bororo is 11 percent, while the average for all the sedentary populations of Niger is 25 percent per year (Gallais, 1972a:307). In concert with the peace established by the colonial regimes, health programs on a vast scale have undoubtedly played a major role in

creating this population explosion. Campaigns against smallpox, leprosy, tuberculosis, sleeping sickness, and measles have had a tremendous impact. Birth control programs, however, have not been tried anywhere and under current conditions there is not a ray of hope for them even if they should be proposed. There are two basic reasons for this, reasons that we have already seen in different contexts: one is that every person's success in life, both economic and social, depends on having children. When the family is a productive unit, as in Fulani society, children are not only necessary for the unit's operation, but they are also the basis for the society's "social security" system. Secondly, just as with opponents of birth control in our own society, to interfere with gestation and birth appears to the Fulani tantamount to trying to control an essentially divine process. The only rural Fulani I ever met who had the slightest interest in birth control were occasional women who wanted some way of stopping their rivals or co-wives from having children. Earlier in this chapter I tried to show that the Fulani attitudes of resignation -- "the Lord giveth and the Lord taketh away" -- had important psychological and social functions. I would not expect this attitude to change unless there were a radical change toward greater independence in the Fulani political situation in the countries Fulani live in. In the meantime, birth control programs or any other health programs which require the Fulani to take an essentially secular, "rational" attitude towards life processes and the phenomena of health and illness will at best be re-interpreted according to the Fulani view of how the world works, and at worst be mis-applied or totally rejected.

## CHAPTER IV

### Where Do We Go From Here? Appropriate Strategies

#### For the Dilemmas of Development

##### A. Problems and Pitfalls

It is apparent from the preceding pages, I think, that the most massive problem the Fulani face, along with the rest of Africa, is a population explosion that is partly or even largely caused by Western intervention in their lives. It might even be more accurate to leave out the middle term and say that the Fulani's most serious problem is simply the continued impingement of the world economy and Western technology on their traditional ways of life. That is a problem that will not go away and that cannot be "solved". It would be premature to say whether the Fulani have to modernize -- after all, the Amish have not -- but it is certain that they do have to adjust to living in the modern world. The most that AID can hope for, I think, is to facilitate that adjustment by helping to ease the painful aspects of it, and especially by trying to see to it that human energy does not get wasted nor natural resources destroyed. In more down-to-earth terms, population pressure means increased competition for land, both among pastoralists and between pastoralists and farmers. It means that any augmentation of production may not be available for export, but will be absorbed by the greater local need. On the other hand, it means that the demand for beef will continue to rise and that herders will be able to get higher prices when they sell. Any efforts to curb

population growth would have to be undertaken at the national level, for no ethnic group would voluntarily let the others "get ahead" of it.

In almost all the projects among the Fulani that AID is likely to be involved in, there lurks a serious dilemma that will sometimes be evident, sometimes hidden. There is a basic conflict between the Fulani and the state, and goals that seem relatively straightforward on paper may turn out to be incompatible in practice. I mentioned in the introduction to this essay that sahelian governments were eager to increase beef production because it gave them the possibility of foreign exchange. In Upper Volta, for example, cattle bring in 70 percent of the country's export revenues (Gallais, 1972b:368). But we have seen all along in this study that the Fulani are not generally interested in beef production; they are interested in Fulani production. The question is, then, are there ways of increasing beef production that do not lead to diminished milk production or other undesirable consequences?

I would like to point out two areas in which undesirable consequences might well arise. The first might have come to the reader's mind already, for we have hinted at it before, namely the division of labor between men and women in Fulani society. If an increase in beef production was going to mean a necessary decrease in milk cows and milk production, this could have serious effects on the husband-wife relation and on the viability of the family as a productive unit. I don't mean to imply that Fulani society would necessarily collapse because of this, but that the problem must be watched out for. The second area of undesirable consequences is less direct, yet it may already be operating. When we speak of "beef" or "milk" we are in both cases looking at the

commercial end product from the viewpoint of people used to living in a market economy. But the Fulani still live largely in a subsistence economy, so that from their point of view the choice is not between milk and beef but between milk and money.

Now, what would the Fulani want money for, on the scale they would get it if they sold fully grown animals? Out in the bush, there is nothing to buy except more cows, and if a person has money and doesn't spend it, it will soon be frittered away in the form of small gifts (to friends, wives, children) or large gifts (to griots or beautiful women). In the city, on the other hand, there are plenty of ways to spend money: clothes, radios, tape-recorders, bicycles, mopeds, and so on. The only problem is, you just don't see Fulani herdmen strolling through the bush alone with their cattle and wearing fine gowns as they listen to the news on their latest model Hitachi eight-band portable radio and cassette-recorder. All these items are symbols of luxury and leisure, and they are coveted mainly to impress and attract other people. We in American culture work hard to be able to acquire such items and then convince ourselves we have leisure because we use or display them a few hours a week or even a few hours a year (such as a sailboat). For the Fulani, to work hard for such a goal would be absurd. To be rich is synonymous with not having to work and with having friends, servants, hangers-on constantly around to chat with or do one's bidding. The griots, as they declaim flattering phrases to a chief, often praise him for being always surrounded by company: "You are never alone," they say.

This is the model of wealth that the Fulani know. It is exemplified by chiefs, important marabouts, traders, goldsmiths and, nowadays, civil servants. It involves an essentially sedentary lifestyle that is

radically different in spirit from the way of life lived by the pastoral Fulani in the bush. Though pastoral Fulani would generally say that such a life is not for them, they recognize its attractiveness, and some young and middle-aged men do long desperately to be able to emulate that way of living. A few can't resist the temptation to seek its pleasures and buy the goods that symbolize it. They sell their cattle, sometimes other people's as well, and disappear more or less permanently into the cities.

A key cultural factor that helps maintain the gap between the pastoral and the sedentary systems of value is the view we have already noted of cattle as a kind of investment portfolio. Thus while it is possible to convert this "portfolio" into cash, there is an extreme reluctance to do so. It is significant that the normal way of saying "to spend money" in Fula is to say that you "eat" the money. To say of someone that he "ate" money is invariably a critical remark not only because it implies that he was self-indulgent, but also because eating itself is somewhat shameful in Fulani culture. It implies a giving in to base human needs that is unworthy of a true noble. We saw earlier that while it was all right to accept the gifts (milk, and occasionally meat) that the cow offered man, it was very bad form to appear to want them. This is where the importance of Fulani pride shows up in the economic system. An essential part of the pride of being a Fulani lies in the capacity for self-mastery which is highly cultivated in Fulani society. Thus there is strong social pressure against selling cows not because they are prestige items, but because to do so diminishes one's capital and at the same time reveals one as "eating", i.e. giving into a weakness unworthy of a Fulani. Do we not also speak of "eating into capital"?

The reason I dwell on this so long is that these cultural facts have several serious implications for development. One is that keeping alive traditional Fulani values is probably crucial for the Fulani ability to maintain their herds in the difficult sahel environment. Everything depends on not giving in to the temptation to "eat" the cows. Encouraging the Fulani to become oriented to beef production, however, inevitably means increasing the temptations to sell animals. This could be highly dangerous unless valid alternatives to "eating" the money were available.

To put the conflict in a slightly different way, and as concisely as possible: the pastoral way of life (both nomadic and semi-sedentary) is hard; therefore its practitioners must have rewards and those rewards must be usable while continuing to live as a pastoralist; money, today at least, appears not to fulfill this condition. Of course the traditional rewards of being a Fulani do fulfill this condition very well, but, as we have seen, the colonial and post-colonial experiences have weakened some of those rewards. This is particularly true for the semi-sedentary Fulani, with their reduced political independence and the unavailability of a resort to arms. I may have been witnessing the effect of this trend during my stay with the Jelgobe of Upper Volta. There was general agreement among old and young both that people did not "love" cows as they used to. This was evidenced by the fact that fewer young men were willing to go on transhumance than in previous times (not just the "old days," but even ten years before), and that cattle were allowed to wander every day in the bush untended. Only rarely would someone, usually an older person, graze the cattle in the middle of the night, which is one of the best feeding times for cattle. The Jelgobe themselves gave me two other yet related interpretations of

these trends. Some people said the reason people no longer guarded the animals was that there was no longer any danger of raids by foreign rustlers, Fulani or Tuareg. The explanation given by the chief of Djibo was simply that the people had enough to eat. This came out in a conversation we had in 1974 or 1975 concerning the recent famine; the chief was predicting that I would see people taking better care of their cows now that they were hungry than before the famine, when they were full. Unfortunately, my observations were not extensive enough to confirm or disconfirm his prediction, but my hunch is that he was right.

### B. Building on Fulani Strengths

We have seen that down to the present the nomadic and semi-sedentary Fulani have been living a mode of life that is particularly well-adapted to capitalizing on the riskiness inherent in the sahel environment. It is a life of considerable physical hardship and discomfort, with the additional stress for those who practice transhumance, of living away from the family (and usually without women) for long stretches of time. The Fulani have made virtues of the ability to face these hardships and have evolved a number of social devices that help them resist the temptation to sell off their cattle and live more lavishly: for instance, their disdain for neighboring peoples who live a "softer" life. The other side of the coin of this reluctance to sell their cattle is that the Fulani at the moment have almost no dependence on Western products or the Western economies in general. This is in striking contrast to the situation of many farmers in Third World countries who must sell their harvests on the world market in order to make their living. In my opinion, the Fulani are better off for this isolation. I don't mean to suggest by this that interdependence in general is bad, but that it is a relation to be entered with great caution at a time when the industrial economies are themselves uncertain and the price of petroleum-based energy is soaring with no prospect of it ever coming down. In any case, I feel it would be irresponsible at this historical juncture to push machines or processes that would increase petroleum consumption. Especially if our own economy should get into more serious trouble in the next decade or so, there is no reason the Fulani should have to suffer because of that.

Thus we are confronted with what appears to be a paradox: one of

the major Fulani strengths in a development context is their conservatism. We noted in Chapter I the Fulani resistance to education. While that resistance may have had consequences for them, I think we can see now that it is part and parcel of attitudes that are necessary for good herd management. Cattle are not viewed as a means to the end of making money, but are a kind of end in themselves. Although the Fulani definitely believe in individual ownership of cattle, their fundamental attitude toward them is more like that of a trustee watching over a trust. We have seen that in fact the cows tended by a herd manager do not all belong to him, and even his own cows are viewed as belonging partly to the inheritors who will eventually receive them. That the Fulani tend to place the health and safety of their cattle ahead of their own ease and comfort is a definite asset in the time of severe stress that the economies of the sahelian countries are now entering. I believe that the development programs that will most benefit the Fulani and the countries they inhabit are ones which build on, rather than attack, these basic Fulani values.

Another strength the Fulani have is the ability to recognize a problem and take concerted action to deal with it in a traditional framework. We saw that cooperation in our usual understanding of the term is foreign to Fulani thinking, but there are other modes of concerted action. The difficulty with these modes is that they tend to have political, religious, or military overtones which are either threatening to governmental authority or illegal in the context of national order. The most striking example of this sort of "self-help" is the pastoral code of the Dina, set up by Sheku Amadu and the Great Council in year three (1821) of the Dina, the Fulani religious empire of Macina. The aim and largely successful accomplishment of this

code was to organize the movement of cattle and other ruminants so that the delta region of the Niger could support both pastoral and non-pastoral economic activities such as millet farming, rice farming, and fishing. Areas for pasturing in the burgu and for farming were clearly delineated; migration tracks were given fixed locations, as were stopping places and river-crossing points. Sheku Amadu wanted the Fulani to be more settled so that they could pay more attention to God, so he gave to the transhumance practices a quasi-military organization which enabled the majority of the faithful to remain at home while a small number of young men took all but a few milk cows to distant pastures and salt earth areas (Gallais, 1975:358-359; Rép. du Mali, 1972, "Annexe A; "Aspects sociobiologiques des conditions de l'élevage en région de Mopti":AII/4-AII/6).

Other examples of action, on a smaller scale, that I have heard about or seen are, driving off diseased cattle from wells so as not to spread the infection to other cows, policing the bush to prevent unauthorized cutting of tree-branches to feed goats, and putting out a brush fire and punishing the people who set it. This last case is interesting because it illustrates the bind the Fulani are in with respect to the authority of the state. As soon as the smoke was spotted on the horizon, people mobilized for action. Fire was dangerous here, because what was burning was dry season pasture. Men took axes and hurried to the scene, which was about ten kilometers from the village I was living in. People poured in from all the surrounding villages. Women followed as fast as they could, carrying pots of water on their heads -- not to put out the fire, but to refresh the men. Basically, the technique used was to beat out the burning grass with leafy branches. Towards evening the fire was under control and the older men held a

council. Some were for following the tradition in such cases, which was that everyone go and "eat" the person who had started the fire. This means simply that all the men pay a visit to the offender; as a good Fulani, he must offer food to his guests or suffer great humiliation. To feed such a large delegation would be equivalent to a large fine, since he might have to slaughter most of his animals (note, however, that no one person would get a profit, since the "fine" is consumed on the spot). Other men felt that they might get in trouble with the government if they followed this tradition and said that they should do nothing until the authorities had been notified. This recommendation finally prevailed; the authorities were notified; the gendarmes came and arrested the youths who had set the fire (through negligence), and let them off after a light fine.

Finally, I would like to mention a fascinating example of initiative being undertaken by most of the nomadic and semi-sedentary Fulani living near the left bank of the Niger river south of a line from Tillabery to Filingue. The aim of this initiative is to formalize traditional patterns of lending out animals, to build an institution that can enforce the obligations these loans entail, and to develop a spirit of cooperation based on religious feelings and on traditional Fulani attitudes towards cattle and herding. This institution is called Laawol Fulfulde, which I would translate as "The Way of Fulani Wisdom"; this phrase has been translated into French as, "La Voie de l'éducation peul (The Way of Fulani Education)." It is based on a custom called nanga na'i or ha'bba na'i ("grab cows," or "tie up cows") which is common to both nomads and semi-sedentary Fulani in the Niger-Nigeria border region. This custom, as described for the Wo'daa'be for instance (Dupire, 1962: 136-138), involves only the contracting parties and their descendants

who continue the relation, while Laawol Fulfulde is a kind of club which herders join voluntarily and which not only enforces the obligations of men who have such a loan between them, but also acts to ensure that no harm comes to the cattle of members and that members help one another in time of need. For example, if a member sees that a fellow member's cow is hurt, or has strayed into a field, and does nothing about it, then Laawol Fulfulde will fine that person for his inaction. Similarly, if a man's wife is sick and he wants the herding group to put off its departure until she is well, the group is supposed to wait. But if one person leaves anyway, Laawol Fulfulde will fine him also. These are but a few of many situations dealt with (CRRDIO, 1969, "Ha'bbanaaji" pars. 12-16).

### C. Recommendations

Throughout this essay I have mentioned implications for policy of the facts and ideas I have been discussing. Here I will reiterate a few of these and suggest more specifically what kind of help I think would be most beneficial to the Fulani. Keep in mind in what follows, however, that one of the best things that could happen, namely a slowing down of the rate of population growth, would have to be handled -- if it can be affected at all -- at the national and international level rather than the level of the ethnic group.

THINGS TO BE CAREFUL ABOUT. The Fulani, like other traditionally oriented peoples, have many practices which do not appear to be "rational" according to our way of understanding. I have tried to show in this essay that many of these practices have reasons for being that are not immediately apparent. A good rule of thumb to follow, then, when envisaging a change in a seemingly "irrational" practice, is to assume that there is some valuable end which that practice serves and which the people may or may not be able to articulate. The point here is not that changes should never be made; obviously some changes are necessary. Rather, it is that we should know as completely as possible what we are actually giving up when we make a change so that we can better judge its true potential value.

Second, there are two potential dangers should an increase in the efficiency of Fulani cattle production occur: one is that it might simply drive large numbers of Fulani out of the sahel, since they would no longer be needed to produce the same number of cattle. But to go where? This would ultimately be a disservice both to the Fulani

and to the particular country concerned. The other potential danger is a shift in emphasis from an interest in cattle to an interest in money and what money can buy. To some extent this transformation is already occurring; among its effects are the too rapid selling off of cattle and a reluctance to go on enduring the hardships that accompany taking proper care of cattle in the sahel. This being the case, it is imperative that if there is an attempt to orient the Fulani towards beef production some suitable way be found of immediately investing the money from sale of a large animal. An intriguing response to that very problem might be Walter Goldschmidt's concept of the "national livestock bank." This is a kind of savings bank in which the owner would "deposit" an animal and receive a certificate which would be redeemable at any time for an equivalent animal. This would get unwanted animals off the range (they could then be fattened also) and would give the owner the assurance of having a redeemable animal in case of bad times (Goldschmidt, 1975).

THE BEST APPROACH. A major cause of the failure in large development projects is that the people who are supposed to benefit from them rarely participate in planning or executing them. This means that the experts lack information of two kinds: they lack the pastoralists' own detailed knowledge of their milieu and their animals and they lack insight into how pastoralists would react to or make use of the project's installations. There may indeed be some proposals to establish infrastructure which could be quite beneficial to the Fulani, but what the Fulani need most right now is good communication. Fulani are always talking among themselves about what they see happening in the world around them, but they seriously lack information that would help them

make better decisions. Up to the present, when anyone has done anything for the Fulani, whether it be building a well or performing surgery, the process has always been authoritarian, unilateral, and without sufficient explanation of what is going on. For example, many people have been vaccinated against smallpox and measles without having the slightest idea what was being done to them -- just another strange order they had to obey or risk being thrown in jail.

The Fulani lack information about the services available to them in their countries, about the laws and their sanctions, about the reliability and side-effects of various medicines, both for humans and animals, about how events in the world outside might impinge on them, such as rising prices for oil, beef, coffee, cocoa, and grain. One of the best things AID could do would be to help create channels of communication that would be non-threatening to the Fulani so that this sort of information would be available to them.

The way I suggest that this be done is through people who would be somewhat like county agents in the United States. They would also be part teacher and part "group facilitator". Their job would then include both informing the Fulani of world events and trends that are relevant for their concerns, and learning from the Fulani what they see as their greatest problems. After such a person had lived somewhere long enough to become familiar to the people, for example, I can well imagine that he might get the local imam to help him organize meetings at the mosque after the Friday prayers where such information and points of view could be exchanged. People already use these occasions to talk among themselves about current issues. The "facilitator" might also have a more active function: he could prod people into thinking about and talking over problems which they had not yet

fully faced or noticed, and he could propose to them solutions or ideas which had been tried or thought up in other places. In addition, if a road, dam or abattoir was to be built, such a person would be extremely well-placed to learn how it is viewed by the Fulani and thus how the Fulani would react to its installation. At the same time he could help the local population work out a fruitful adjustment to the changes it would create in their lives.

The project I am proposing involves people rather than material. These two factors do not exclude each other at all, but I strongly feel that better communication is a necessary precondition for any investment in material or public works. I do not know enough about how AID works to say much about how such a project should actually be carried out. I suspect, however, that AID lacks personnel with the necessary training and interest to do this kind of work. One way of getting around this problem would be to subcontract the communications part of the work out to the Peace Corps, or to graduate students in anthropology, sociology, linguistics, religion, psychology, etc. who would jump at the chance to live with an exotic people for a couple of years. These people could be in continuous discussion and training with AID technical experts in various relevant fields, such as range management, veterinary medicine, agronomy, and so on. Such a program might very well lead naturally into more technical projects, and in any case it would have the indisputable value of being informative to all concerned and of helping to head off projects that would be boondoggles or disasters.

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