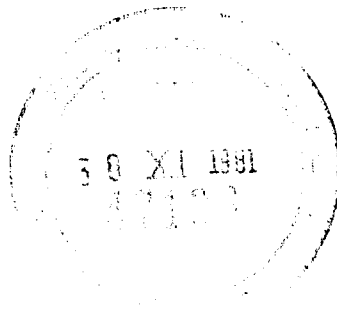


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**the future of pastoral peoples**

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# the future of pastoral peoples

**proceedings of a conference held in nairobi, kenya,  
4–8 august 1980**

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## the failure of pastoral economic development programs in africa<sup>1</sup>

Walter Goldschmidt, *University of California at Los Angeles, USA*

A map that marks off the high incidence of livestock in Africa delineates a giant figure 7 across the face of the continent. Starting in Senegal, the figure sweeps across the arid interface between the Sahara and the tropical forest all the way to Ethiopia and Somalia and then boldly down the east-centre of the continent to the southern tip. In all this region, the stock-keeping peoples have mixtures of cattle, sheep, and goats, occasionally supplemented with camels, donkeys, and horses.

Animal husbandry is one of the major productive enterprises in Africa. "There are over 100 million head of cattle south of the Sahara. They form a tremendous natural resource which is intimately linked with the way of life of the people who own them" (Creek 1972:27). The FAO (Food and Agriculture Organization) annual report (FAO Production Yearbook, 1977:Table 80, 81) indicates nearly 140 million cattle and 230 million sheep and goats on the continent for 1975. Brown (1971:94) estimates that half of the total land area, between 1300 and 1600 Mha, is devoted to livestock, and he estimates that 50 million Africans — 15% of the population — are dependent either wholly or largely upon livestock (Brown 1971:74). The estimate is reasonable; it means that there are about three head of cattle and about five sheep or goats for each man, woman, and child among those who are significantly involved in animal husbandry.

These data indicate a massive enterprise devoted to the production of an essential ingredient for human nutrition: protein. Yet the actual production of food is scant. Slaughter rates rarely exceed 10% of the cattle numbers in areas of livestock production. In East Africa, slaughter rates constitute 8.2% of the cattle on the hoof; in West Africa, the proportion reduces to 7.4% and in southern Africa rises to 12.8%. Carcass weights range from a low of 90 kg to a high of 233 per head of cattle. Again, the highest figures are in the southern part of the continent, averaging around 180 kg, as against 120 in East Africa and 113 in West Africa. These slaughter rates and carcass weights produce 10 kg beef/head of live cattle in East Africa; 7 in West Africa and from 10 to 30 in the South.

Milk production figures are no more encouraging. Dyson-Hudson and Dyson-Hudson (1970:111) estimate that about a fourth of the Karamojong adult cattle were lactating cows. The FAO data indicate that such a

<sup>1</sup> This paper was circulated as background for the meeting and is published here for the first time.

proportion is rarely achieved: 23% in Uganda, 24.7% in Mozambique, and an astonishing 40.2% in Swaziland, but more usual figures are between 10 and 14% and in Rhodesia dip to 2.2%. Milk yields per lactating animal vary widely, annual yields ranging from 250 to 600 kg/cow, except in European-dominated areas, where special dairying operations raise the yield to the order of 2000. The Dyson-Hudsons' data (1970:113) indicate that each lactating animal produces roughly 350 kg for human consumption. (The average milk production in the United States is 4000 kg.)

In summary, beef production in Africa in 1975 ranged from less than 1 kg/person to a maximum of 42; mutton and goat meat ranged from zero to 26 kg and liquid milk from nil to 100 kg. Except for small countries, almost totally devoted to livestock, the total annual beef and mutton production rarely exceeds 15 kg/person and of milk, 20.

The land devoted to pastoralism in Africa is not suitable for farming. A century of increased pressure on the African resource base has pushed agriculture into most of the land that is arable on a sustained basis without irrigation. As the debacle in the drought- and famine-stricken Sahel in the early '70s dramatically showed, much of this agricultural invasion was ill-advised. Until markets for specialty crops make an investment in irrigation economically feasible, there will be no massive development of intensive agriculture.

Neither colonial rule nor postcolonial economic development programs have improved the economy of pastoralism in Africa; instead, those actions that were initiated have been deleterious to the pastoral peoples and their animal husbandry. Most who have been in authority, whether African or European, have felt that cattle pastoralism should be discouraged or eradicated and have fostered the transformation to agricultural pursuits wherever feasible. Such schemes as have been formulated to serve the African stockholder have, almost without exception, been ill-conceived and ultimately destructive to the land, the livestock economy, and to the pastoralists themselves, however well-intentioned they were.

In this paper, I want to review the programs that have been promulgated over the past 50 years and to indicate why they have failed to meet the needs of a livestock industry capable of adequately serving the people. I have made a preliminary search of the literature dealing with efforts to cope with the problems of pastoral economies in Africa.<sup>2</sup> So far as I know, nobody has made this effort — and perhaps for good reason. Discussion of programs is scattered in a literature that is heterogeneous and often ephemeral; the usual guides are of little use and indexes often irrelevant. For these reasons, I cannot claim that the investigation is exhaustive, but I think it fairly reflects the realities of economic planning for the African pastoral economy.

## an overview of pastoralism in sub-saharan africa

Over the centuries, tribal peoples throughout the continent have utilized the arid and semi-arid lands to serve their purposes by herding animals that feed on natural vegetation. In the process, they have not only evolved the

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<sup>2</sup> I am indebted to Walter McCall for his conscientious help in ferreting out information on this and related topics.

technical understanding necessary to this mode of economy but also devised the social institutions that are equally crucial to this difficult mode of production. The details of pastoralism vary from tribe to tribe, but some general features characterize most tribal African stock production:

- The animals kept are cattle, sheep, and goats in various proportions. Cattle are the most important in shaping life patterns, even when they are not the most important economically. Camels are important only in a limited area in the northeast.
- The pastoralists (with a few exceptions) are without horses and herd their animals on foot.
- The animals are exploited both for their meat and their milk (and sometimes blood is taken from live animals), but the relative importance of beef and milk varies from region to region.
- Cattle graze on arid lands that could not sustain agriculture with any degree of profit, so that pastoralism may be considered the highest economic use of the land.
- The rainfall in these lands is low, is extremely variable from year to year, and is spotty and variable in its distribution. As a result, the pastoralists must move their animals over wide areas in search of food.
- Grazing land is recognized by pastoralists as a public resource available to all stock owners in the community; only where land has been under cultivation are private rights recognized. The same applies to natural water sources, though access to dug wells, where they occur, is often limited to those who have created the facility.
- Animals are privately and individually owned, and the acquisition and husbanding of livestock is a measure of the individual's economic and social competence. These rights are in some degree invaded by the claims of the larger kin group upon the stock of its members so that in some societies the "owner" is viewed more as a custodian of the herd, with the basic right of disposal and the duty to care for the animals. These rights are also to various degrees impaired by the rights held by the other family members — rights that the owner cannot lightly brush aside in the management of the livestock.
- The animals play a significant role in the social life beyond their economic function, serving as prestige markers and social currency in the formation and reinforcement of social ties of all kinds (of which bride payments may be seen as prototypical). This means that the animals are not merely an economic resource to the owner but also an essential ingredient for the maintenance of social ties and obligations.
- Though cattle and other animals figure prominently in the ritual and belief systems, cattle are never considered sacred; rather, they are perceived as a productive resource with economic functions, as Stenning (1963) has emphasized.
- The care of livestock is normally the responsibility of the men, though women often milk animals and have special rights to them. This leads to an overwhelming tendency in these societies toward masculine unity in the social structure and to patrilineal rules of descent and inheritance. This probably relates to the natural hazards of herding as a pursuit, especially in those areas where warfare and raiding were endemic.



There are, of course, also important differences among pastoralists. The major ones are the degree of dependence upon livestock, the political structure in which they are involved, and the degree of assimilation into the modern economy. With respect to the first, there are a few who depend entirely on animals. Most pastoralists, however, do some farming, the proportion of energy devoted to it varying widely. In some groups, animal husbandry plays so minor a role that the members can no longer be considered pastoralists.

When I speak of pastoralism, I am concerned with those whose economy is dominated by animal husbandry, in the sense that their life patterns are basically set by these requirements. Most pastoralists traditionally had little or no political organization, but some were organized into elaborate nation states. Thus, in the South, nations like those of the Swazi and Sotho, and, in the lacustrine area, people like the Watutsi, lived within political systems that integrated agriculture with pastoralism.

Finally, most pastoral people, especially those who are heavily dependent upon their animals and those who have little or poorly developed political systems, are remote from Western influences, have retained most of their traditional culture, and have minimal involvement with the market economy.

## a review of development schemes

For the past half century hundreds of separate schemes and plans have been formulated and initiated in Africa in an attempt to “solve” the pastoralist “problem.” In this review of development plans and programs, I have found it useful, if sometimes rather arbitrary, to divide these efforts into four categories: those aimed at altering the environment, those directed toward improving the livestock, those that would change the characteristics of the pastoralists and their native institutions and values, and those that provide new economic and marketing facilities.

### environmental alteration

Perhaps the most obvious solution to the problem of arid-land pastoralists is to dig wells to provide water. The evidence suggests that this solution universally not only fails but exacerbates the pastoralists’ situation. Essentially, what happens is quite simple; under native practices, pastoralists hold back their animals from the wetter areas so as to keep the grass in reserve for the dry seasons. “The concern of a stock herder is to delay as long as possible resorting to permanent wells, not so much for fear that the wells will be exhausted, but to preserve the limited grazing within range of the well” (Baxter 1966:116). Digging wells breaks down this pattern of economizing.

Riesman (1978) noted that among the Fulani of Upper Volta and (quoting Bernus) in Northeast Tahona of the Illabakan territory, where the area was invaded by Fulani and Tuareg, the pastoralists settled near the well, overgrazed the area — the practice ultimately resulting in the desertification of the area and its abandonment. Results were similar for a World Bank project in Tanganyika in the 1950s with 20–30 surface water schemes, 15–20 pipeline schemes and 25–30 boreholes (International Bank for Reconstruction and Development 1961). UNESCO (1977) described similar

occurrences in Senegal, and, across the continent in Somalia, Swift (1976) found the same. Cruz de Carvalho (1971) found that the scheme to improve watering sites resulted in an increase in land claims so that Ovambo nomadic pastoralists of Southwest Angola lost both watering points and grazing land and that ecological deterioration later caused loss of grazing capacity. The ultimate irony in this situation was that as a result of localized overgrazing, the new holders of livestock had to adopt the traditional pastoral techniques.

I have no indication of any instance in which the use of wells has had any positive effect; yet the 1974 Somali Democratic Republic, in its 5-year development program, planned 300 deep wells and 100 water stations (Somali Democratic Republic 1974); in 1973 Rwanda planned to construct 80 water stations (Rwanda, République de, 1973) and Mauritania, 250 wells in 1970 (Mauritanie, République Islamique de, 1970). I do not know whether these plans materialized.

Efforts to improve the land directly are rare and generally falter on inadequate return from a high investment cost. Chief among such efforts is clearing brush for tsetse control. Thus Deshler (1964) discussed the Uganda governmental effort to expand the Dodos' grazing area in 1945-50. Temporary stock increases created a worsened animal overpopulation situation because by 1960 the cleared area was reinfested. The Uganda government also initiated clearance programs in South Angola (International Bank for Reconstruction and Development 1962) and in Bunyoro in conjunction with a ranching scheme.

Control of grass-burning practices can also lead to disaster. Baker (1975a) reported that a prohibition on burning in the Karamoja reduced the nutritional value of dry-season grazing, increased tick infestation of the tall unburned grass that spreads East Coast Fever, and caused a growth of bush that brought about an invasion of tsetse fly.

Curtailling grazing is another way to improve the land and halt the destructive effects of grazing, and the most obvious way to do this is to initiate a stock reduction program. Only this kind of program does not work, as a Swaziland governmental report says in a straightforward manner: "Destocking has proved to be impracticable wherever it has been attempted" (Swaziland, Government of, n.d.:65). Baker (1967) discussed some of the difficulties among the Karamojong and, after briefly reviewing destocking programs in Tanzania and Rwanda-Burundi as well as in the Karamoja, concluded: "Destocking expresses a real issue in unreal terms" (1967:240). Even culling programs to eliminate the weakest members of a herd proved unworkable among the Karamojong. "This scheme was designed to net those animals too old or weak to be sold at the markets but which still competed with younger stock for grazing. There was resentment at being forced to give up animals without choice which the authorities attributed to the general malaise that 'there are many improvements . . . the Karamojong will find them all incomprehensible' whereas, in reality, the herders chafed at being forced to accept 7 shs [\$1.00] per head and considered the scheme an attempt to deprive them of their cattle" (Baker 1975a:198).

Stock reduction schemes do not work because they operate on fiat, creating resentment and antagonism among a traditionally independent people, because they cannot be equitably applied within the local social structure, and because, even if they are temporarily successful, the number of animals will rapidly return to the previous level, unless there is continued close policing.

Another way to control grazing is to establish a "block system." The tribal territory is separated into units or blocks and the pastoralists are forced to use them successively so that each block has a period of "fallow" in which the grass is rejuvenated. The scheme has been used in Kenya among the Pokot and the Samburu. Spencer (1973) has given an eloquent description of the failure, but I shall resist the temptation to quote *in extenso*. However, I shall merely repeat the expression of some of the more cynical European observers, "that the severe drought between 1959 and 1961 had done more to restore the balance of nature than nine years of grazing schemes."

### animal improvement

Three major forms of animal improvement have been tried: disease control, breeding, and culling. Of the three, the first is most frequently reported. It has regularly met with acceptance by the pastoralists and has often led to dramatic increases in the numbers of animals. The result of this success has, unfortunately, most often been disastrous, for the decreased mortality quickly exacerbates problems of overgrazing. Riesman (1978) reported this for the Fulani who, according to van Raay (1975), readily accepted this program so that it led to cattle overpopulation that worsened the 1968–74 drought in the Sahel. Bernard (1972) reported similar results among the Meru of Kenya; Deshler (1964) among the Dodos of Uganda. The International Bank for Reconstruction and Development (1962) supported a disease control program among the Karamojong, with which a marketing program was to be established. Baker (1975a) described the failure of the marketing efforts and the overgrazing that resulted from the program — a failure that worsened conditions among the Karamojong. The United Republic of Cameroon (1971) decided to "stabilize" the disease control program as a result of the erosion that resulted from increased animals.

The reports of breeding experimentation are less conclusive. Those researchers that report any results indicate that the program was of inadequate scale to be effective. Mortelmans and Kageruka (1976) indicated that the program was successful in Zaire only on the large ranches. Much earlier, the Nigerian Livestock Mission (1950:17) reported that efforts were too scattered to have been effective. Riesman (1978:63) claims that the effort among the Fulani of Upper Volta was also on too small a scale to be effective. Swaziland (1973:55) also found that selective breeding, which had been part of its earlier program, was not practiced in most areas. Baker (1967:48) reports that productivity improvement failed in the Karamoja because of small scale and inadequate cooperation.

Culling is less an aspect of breeding control than part of a destocking program. As such, it is generally resented by the pastoralists, as Spencer (1973) reported for the Samburu of Kenya. According to Baker (1975), payment for the culled animals was so low that the Karamojong were resentful and uncooperative. The Dyson-Hudsons (1970) gave social reasons for resistance to culling.

### policies directed toward pastoralists' behaviour

A third set of solutions strike at the behaviour of the stock keepers themselves. Both African governmental officials and external agents want somehow to change the character of the pastoralists — to make them over

into something more like farmers or townspeople. The urgent desire to eradicate pastoralism entirely was long ago expressed by Shaw and Colville (1950:36–37):

There can be no solution of Northern Nigeria's agricultural problem so long as the cattle population remains divorced from its soil; so long as a race of nomads can move those cattle from fly to fly-free country at will, with all the attendant risks of spreading both animal and human disease; so long as they can operate a selective method of grazing that is endangering the herbage and soil of wide areas; and so long as they and their cattle can continue their depredations onto the farms and the water supplies of the settled agriculturalists. No matter how aesthetically attractive the race may be, or how deep its roots in history, they and their cattle must become settled if the large issues in Nigeria are to be solved in the interests of the Nigerian people. There can be no question of their preservation as nomadic cattle owners, owing loyalty neither to the soil nor the Territory. The aim of policy should be their absorption into the country's agriculture.

Though such strong statements are no longer expressed, the sentiment is reflected in less bold forms, as for instance, in a recent Swaziland governmental report that the government "must transform [the pastoralists'] attitude toward cattle" (Swaziland, Government of, 1973:51). Other efforts to alter the sentiments and institutions of a pastoral people include: efforts to prohibit Maasai from buying cattle and from congregating in military age-sets (Jacobs 1973b); creating communal cattle ownership among the Tanzania Maasai (McCauley 1976); efforts to change Baila attitudes toward cattle maturity (Fielder 1973); the plans of the Swaziland government (1973), the United Republic of the Cameroon (1971), and the Republic of Senegal (1973) to change traditional practices from subsistence to commercial orientation; decreasing nomadism in Somalia to increase milk and meat productivity (Somali Democratic Republic 1974); efforts to break up Samburu age-sets (Spencer 1973); limiting movement of cattle among the Karamojong (Baker 1975a); education of pastoralists in the Republic of Togoland to change traditional patterns (Togo, Republique de, 1971); eliminating the ritual aspect of cattle among the Herero of Botswana (Vivelo 1977); and banning traditional oaths and use of stock in payment of fines among the Meru of Kenya (Bernard 1972). In only a few cases is there any record of success, and where there is success it generally had unfortunate consequences. Thus Bernard believes that Meru changes contributed to overproduction and overgrazing. Vivelo (1977) believes that the secularization of cattle destroyed the social and psychologic elements in social control and led to the unrest that was expressed in a revitalization movement in the 1960s.

Repeatedly, one finds the pastoralists pushed back from their more productive land and forced into marginal areas. Lofchie (1975) showed that the famines of the early 1970s in West Africa were less a product of drought than of politics. He pointed out that the colonial era brought a dual economy of export crops and subsistence agriculture and that economic development was concerned only with the furtherance of the former. These policies rendered peasants, to various degrees, dependent upon wage labour, discouraged peasant production from direct competition with the commercial farming sector, and used pricing policies that "encouraged the shift in

land-use patterns away from food crops to export items" (Lofchie 1975:563). What Lofchie did not say was that this process had a kind of domino effect: peasants after giving up land to commercialized production invaded the poorer lands that had been a part of the pastoralists' domain and this in turn forced the stock owners into the use of still poorer lands.

This is a recurrent phenomenon in West Africa, where Fulani nomadic pastoralists have been forced into ever drier regions. MAB Technical Notes (UNESCO 1977) reported "The withdrawal of pastoralists toward the most arid regions which the farmers could not exploit, is largely responsible for the vulnerability of livestock breeding and for the disastrous effects of the recent drought in the Sahel." The pastures they had used during the dry season were gradually being lost to them as former stubble fields were cultivated to cotton, rivers planted to flood-retreat crops, etc. "It even happens that modern agricultural developments suddenly cut off the most valuable pastures, which had always been the livestock breeders' last resort."

Frantz is the single close scholar of African pastoralism who does not see this as a problem. According to him, sedentarization was encouraged by the Nigerian government and has been highly successful. He noted that the pastoral populations have become "incorporated into a trans-ethnic system of social relations" (Frantz 1975:346); non-Fulani live among other ethnic groups, whereas many Fulani have given up cattle pastoralism altogether; some Fulani have in fact taken up land formerly held by farming groups, and, although full-time nomadism and transhumance continues, it has been on the decline. He reported that cultural fusion among the ethnic groups was taking place. But the area to which Frantz's extensive research is applicable is atypical of pastoral economies of Africa in that it is less arid and more hospitable to a relatively intensive operation (Frantz 1978:102) and had been underpopulated. That this favourable adaptation is not generalized to the more arid portions of West Africa where pastoralism is practiced is indicated by Horowitz (1975) and Riesman (1978).

A similar problem arises in Kenya where some Maasai lands have been converted to wheat production, with potentially highly explosive results.

High potential, dry-season pastures, and water sources play an indispensable role in making the entire yearly cycle of Maasai transhumance possible; yet it is precisely these centres for which competition (with outside forces) is now the highest. The colonial formation of commercial ranches in the Rift Valley and in northern Tanzania represented only the initial erosion of Maasai access to these areas. The regions of Ngong and Loitokitok contain well-watered and fertile land and thus were obvious targets of agricultural expansion. This fact, combined with the opening of these highland areas to individual freehold title, resulted in a train of events now considered deplorable by Maasai. Maasai gained individual titles, land values escalated, and appreciable land was sold to outside cultivators with greater market sophistication and awareness of the future value of those regions. Today, Kikuyu dominate the Ngong area and, along with Chagga, control much of Loitokitok, effectively removing these regions from pastoral use, as well as from Maasai hands. Similarly, wheat schemes were formed on high potential lands in both Kajiado and Narok districts, commercial ventures now dominated by agrocorporations that bring capital into the region but at the expense of pastoralism (Galaty 1970:159–160).

This invasion of agriculture into traditionally pastoral territories under the best circumstances involves a "mixed economy" of farming and stock keeping. Such mixed operations are characteristic of most traditional production economies, and the people have usually optimized the relationship between the two strategies. Support given by governmental policies introduces an exogenous element into the situation with results that are often not ecologically optimal. Pastoralists traditionally use some land in their pastoral pursuits that would, of itself, yield reasonably good crops. Though such small portions of land might be more productive as farmland than as grass and browse for livestock, taking it from pastoral use may have deleterious effects on the total range available to the people and may reduce the overall production capacity. Such superior quality land within the pastoralists' domain is a fail-safe mechanism. This is a point that has been made by Jacobs (1973) with respect to developments that have taken place in Maasailand.

Of all the efforts to change the patterns of pastoral behaviour, the most appealing one to many Western development economists is to establish ranches, fenced or otherwise demarked tracts held in fee-simple title by individuals or groups. This accords with Euro-American notions of land holding, farming, and business operations and appears as simply being the right way to do things. That it is destructive to the native way of life is at best viewed as irrelevant, at worst as desirable. That, if successful, it would pauperize nine-tenths of a tribal people in the area is conveniently overlooked. These social considerations aside, such a plan simply does not work as an efficient means of utilizing the natural grasslands under conditions that exist in arid portions of Africa. (I am not here examining instances where Europeans under colonial rule have expropriated land and established commercial ranching operations. To the degree that these have been effective, they have utilized exceptionally favourable conditions and have, of course, shown no regard for the welfare of the indigenous people.)

There are five areas known to me where some kind of ranching scheme has been initiated, though in no instance is there a complete and detailed analysis of the activity. One of these is the Markoye Ranch. Riesman (1978:63) said of the Markoye Ranch developed as a demonstration by AID for the Fulani:

The ranch in no way represents anything that the Fulani would reasonably learn from. They did not need to be told that the grass would grow if cattle didn't eat it, and the fencing of the range was not only prohibitively expensive but contrary to Fulani custom. Finally, the Markoye Ranch was not extensive enough to overcome the spotty nature of Sahelian rainfall. . . . Yet had the ranch been much larger it would certainly have become the target of much anger on the part of local people.

Stenning (1959:237), discussing ranching plans in West Africa much earlier, said that ranching:

. . . has long been believed to be more practical [than mixed farming] in Bornu; this view had an early if ill-founded demonstration in the efforts of Speed and his 'African Ranches, Ltd.,' and has been suggested, although with reservations, by the authors of a recent report on Nigerian Livestock.

On the assumption that such ranches would be in the hands of the Fulani themselves, Stenning outlined the problems inherent in utilizing the existing social organization in such a program. Though he found many difficulties in such an adjustment, he did not find it impossible. Ranches have not been developed there or elsewhere in Africa using native social structures.

One of the most ambitious ranching efforts was developed in Western Uganda. Doornbos and Lofchie (1971:166–167), in an article appropriately titled “Ranching and Scheming,” have described the development:

The Ankole Ranching Scheme is a project assisted by the United States Agency for International Development (USAID) and undertaken by the government of Uganda to promote commercial cattle ranching in southwestern Uganda. The declared objective of the scheme is to construct more than one hundred cattle ranches, of several thousand acres each, and to place them in the hands of competent ranchers who will be able to undertake large-scale beef production on an economically viable basis. The highly complex scheme has involved a wide range of activities such as tsetse fly eradication projects, the construction of roads, bridges, and valley tanks, perimeter fencing, pasture research, and the creation of an experimental cattle breeding station adjacent to the ranch area proper. As such, the ranching scheme has involved a host of governmental decisions about a wide range of economic, technical, and, due to United States financial involvement, foreign policy matters. As of 1968, the scheme had not yet been completed, and only forty of an anticipated 125 ranches were allocated.

Doornbos and Lofchie showed how the political elite of Uganda took over control of these lands and succeeded in establishing themselves as absentee landowners over large tracts of Uganda’s rich grasslands. The implications for the economic conditions of the local pastoralists need no comment.

Cruz de Carvalho (1971) has examined the relationship between ranching and native production methods in Angola, where European operated ranches are in competition with traditional pastoralism. His detailed examination argues for the traditional methods, claiming a relatively low land : animal ratio, a high reproductive rate, a high slaughter rate, excellent female : male and young : old ratios, and a close adaptation to the environment. He noted many reasons that the Africans refuse to engage in ranching: social considerations such as established patterns of reciprocity and limitations on the privatization of rights to land and other resources and exchange agreements; environmental ones such as the diversity of grazing land that must be used in the course of a year; economic ones such as the impossibility of accumulating the capital requisite for such a program. He concluded (1971:28–31):

This skepticism appears to be confirmed in the experience of some of the ranches already in existence. While a great majority of the ranches are recent, clear signs of deterioration of grazing lands can already be seen in the older ones. For example, in 1968–69 there were 22 ranches in the Cunene Region, holding 33,775 head of cattle and occupying 945 square miles. Although the ranches had an average ratio of 17.7 acre–beast — higher than that for the communal grazing lands of the traditional sector (15.63) — more than one-third of the ranches also had to use the African communal grazing lands.

At least three ranching schemes have been initiated among the Maasai: individual and group ranches in Kenya and *Ujamaa* operations in Tanzania.

The development of Maasai ranching in Kenya was preceded by the alienation of land during the colonial period in the Ngong and Loitokitok areas. Maasai fears of this development, their concern with potential erosion of their lands under the new farmer-dominated Kenya government, and perhaps the memory of the 1961 drought, with its decimation of their herds, made this usually intractable people willing to accept extensive changes in their social arrangements.

The immediate response was the establishment in 1965 of 28 individual ranches in the Kaputei area, comprising 56 000 (~22 400 ha) of its 806 000 acres (~344 000 ha), mostly, if not entirely, allocated to wealthy or influential people (Hedlund 1971). It was as clear to the Maasai as it would be to anyone else that there was inadequate land to divide among all the Maasai, and hence a fear was engendered that many of them would remain landless, or else the units would be too small to be viable. The response was the development of a "land adjudication" program, the formation of group ranches with registered memberships. In the Kaputei area, 14 ranches averaging 47 500 acres (~19 000 ha) and about 100 families were established in the latter part of the 1960s (Davis 1971). Though this registration process was readily accepted by the Maasai, both Galaty (1980) and Hedlund (1971) recognized that the major motive was fear of alternative governmental actions rather than enthusiasm for the proposals. Even the conservative segments favoured land registration and gave limited approval to the group ranch idea, though they would have preferred no internal division to their established sections. As one elder was quoted as saying, "If there is rain in Kenyawa [south Kaputei] and people have ranches there, I cannot move [my cattle] into that place. You educated people want us to settle down, so our land becomes like Kikuyuland [i.e., individually controlled]" (Hedlund 1971:4). Traditional and established Maasai social units were not used as a basis for demarcating these group ranches despite anthropological advice at the time. The Maasai were aware that the group ranches would not always be capable of supporting year-round grazing and for that reason at least the more aware among them arranged to have family members registered in separate ranches so that the patterns of kinship reciprocity could be used as a source of access to lands in other ranches when it became necessary as a result of scattered patterns of rainfall and drought.

The creation of individual ranches has had two major influences; it has established among the Maasai a politically active distinct upper social class (Hedlund 1971), and it has disengaged this group from the normal patterns of social and economic reciprocity that have been so vital a factor in the handling of localized disasters.

The group ranches have not transformed Maasai cattle economy from a subsistence to a commercial production operation, according to Galaty (1980:164–165).

[It does not] appear . . . that the Group Ranches are serving the function of radically transforming Maasai pastoralism from subsistence to commercial herding. . . . Further, it is uncertain that such a transformation could be carried out as a result of grazing and stocking limitations. . . . The Group Ranches are, however, serving as organizational mechanisms



for the improvement of livestock management techniques, through the investment of capital in cooperative facilities such as cattle dips, spray equipment, and marketing, and facilitation of the dissemination of information.

In addition, says Davis (1970:27):

The group ranches have not set up a method by which stock reduction could be developed. Indeed, they are in a Catch-22 situation. If the ranch committee makes no allocation of rights, grazing is not reduced and all share the inevitable disaster; if they do, they must institutionalize social inequality. Do they make allocations to those men who can make the most profit, thereby increasing total income but creating social discriminations? The issue is one for which Maasai have no precedent.

Because the Maasai were, from the outset, apprehensive about the formation of boundaries with limited rights of access, they adapted their own cultural conventions to circumvent such limitations; however, they were unable to stem the flow of others into their areas (Galaty 1980:167–168).

While individual families are often able to move across such boundaries with the agreement of host negotiators, the gradual pushing into a region by several homesteads without such agreement is interpreted as a form of annexation. In the context of the 1960's and 1970's, such incursion involves the added threat of loss of the land through adjudication if such 'facts' were allowed to stand.

Galaty (1980) examined three instances of armed clashes between sections over issues involving territorial invasion and grazing rights. Each of these outbreaks (in two of which many Maasai were killed) demonstrated that deep-seated traditional affinities continue to influence lines of mutual assistance, and have nothing to do with the boundary mechanisms that delineate the group ranches. He then concluded that any success that has been achieved during the group ranch plan would have been derived despite their existence rather than because of them. At best, the scheme serves to regulate the relationships between the Maasai and the central government, giving them among other things some access to credit and other aids, but it does nothing for the relationships among the Maasai themselves or between the Maasai and their environment.

Apparently the Tanganyika colonial administration endeavoured to set up cooperatives as early as the 1930s, but these efforts failed. President Julius Nyerere endeavoured to apply the concept of *Ujamaa* (socialist community) to pastoralism as early as 1964 under the Range Development and Management Act. This involved settlement of pastoralists into clustered villages, introduction of crop production, and establishment of communally owned herds. Baldus (1977:40) reported:

Twenty Ranching Associations were to be established in the Maasai area. However, up to 1973 only two associations had been registered. Another two had applied for registration and four more were being organized. . . . It became evident, however, that the Range Development Programme strongly influenced by U.S.A.I.D. was too much oriented towards a technocratic-commercial development of a cattle industry. High capital investment to develop meat production was undertaken; but no

consistent strategy was worked out which could have brought about the necessary changes in social structure, the attitudes, and cultural patterns of the Masai people.

A change in policy became evident in 1972 when the authorities started registering the few existing associations as multi-purpose cooperatives and subdividing them afterwards into cooperative Ujamaa groups. This, however, was not a reaction to the above critical remarks, but rather a belated effort to somehow integrate the Range Development Programme into the Ujamaa programme.

Baldus (1977) said that the government tried to win over the Maasai with such incentives as housing and permanent water supply but met with little success. Efforts at coercion in the "domestication" of the nomads evoked criticism as being counter to the principles of self-determination. Even concessions allowing the Maasai to keep private ownership proved unsuccessful.

In 1973, with substantial support from the United States and the World Bank, a large-scale program for the establishment of state ranches was launched. These ranches were to be cooperatives rather than communal. Baldus (1977:42) said:

... these Ujamaa ranches are to be managed on a cooperative basis. The voluntary participating members are to bring in their own private cattle and contribute their labour. Herds will be held as communal property. . . .

The main problem, that of introducing changes in the herding practices of nomadic pastoralists, is not touched by this programme. . . . Only in the case of a few Ujamaa villages have the members decided to take their own cattle for building up communal herds. Thus, most of the cattle in the villages do not belong to the cooperative sector as yet.

Even in those cases where *Ujamaa* villages were supplied with communal cattle subsidized by the government to serve as a basis for collective ownership, "the motivation of members was negatively influenced by this government assistance which runs contrary to the principle of self-reliance: the development of the modern herd takes place in isolation from the traditional sector and thus does not contribute towards the transformation of the traditional system of keeping cattle which members continue to practice" (Baldus 1977:43).

Baldus (1977:44) commented: "It would be better if while still retaining some forms of nomadism an attempt were made to achieve a gradual transition towards cooperative property and herd management." He (1977:44-45) noted: "the Ujamaa programme had learned a lesson from the failure of the former capital-intensive settlement programme of the early 1960's . . . therefore postulated the principle of self-reliance of the Ujamaa villages." He concluded: "The complicated structure of such big ranches is above the technological level and organization and administrative capacity of the pastoralist people and will therefore endanger the economic and political self-determination of the producers which is the government's goal."

In Swaziland, the problem of overgrazing received special attention in an administrative seminar (Presswood 1976). The seminar recommended the establishment of group ranches and what it called Sisa ranches for the

management and upgrading of Swazi-owned breeding stock. It avoided direct confrontation with the issue of overgrazing and destocking programs.

Ranching schemes constitute both the most extensive and the most creative efforts at altering pastoral economies, but each of the instances cited indicates their essential failure. Where individual ranches are created, they inevitably disenfranchise and pauperize the major sector of the population, and, as the Maasai instance indicates, dissociate the ranchers themselves from their own communities. The most ambitious scheme, that of the group ranches in Kenya, has succeeded only by Maasai creativity in circumventing the established regulations — and even then has resulted in bloodshed.

### provision of modern economic services

Many planning reports express concern over the relation of pastoralists to the market and mention one or more of the following institutional possibilities: improved facilities, abattoirs (including mobile abattoirs), transport, processing plants, feed lots and fattening facilities (International Bank for Reconstruction and Development 1961, 1962; Federation of Rhodesia and Nyasaland 1956; Zambia, Government of, 1971; East African Royal Commission 1955; Sénégal, République du, 1974, Swaziland, Government of, n.d.; Somali Democratic Republic 1971, 1974). Although these reports indicate in many instances that some of these facilities have been initiated, there is usually no indication as to whether their adoption had proved effective.

A recurrent failure of government-sponsored marketing schemes relates to pricing policy. As early as 1956, the Federation of Rhodesia and Nyasaland (1956) reported on the disparity between sales prices for natives and Europeans at cattle sales that caused hostility not only to the marketing program but, by extension, to other schemes. Jacobs (1973b) has claimed that government-sponsored marketing facilities were virtually ignored by the Maasai because both prices and marketing arrangements of native butchers were better. The Karamojong (Dyson-Hudson and Dyson-Hudson 1970) sold to nongovernmental buyers except in very bad years. Similarly, the Teso did not use marketing facilities in Soroti, Uganda (Baker 1967). Bernard (1972) said that the Meru responded to the local hide market established by the local native council in the 1940s and 1950s, but its operation was discontinued because it was only marginally effective. The East African Royal Commission (1955) reported that the Kenya Meat Commission had, in fact, depressed the overall price of meat by establishing arbitrary area quotas, and a similar result, according to Mackenzie (1972; Jacobs 1973b) was brought about by the creation of a monopoly in marketing in Tanzania in the form of the Tanganyika Ranchers Ltd and the Tanganyika Packers Ltd, which drove the pastoralists into the black market. The Somali Democratic Republic (1971) reported that its marketing operations were limited by the inadequacy of the scale of operation, the failure to provide transportation facilities, and the lack of adaptation to pastoralists' native practices.

Marketing schemes frequently involve processing plants. Baker (1967) reported that the canning factory at Soroti failed to compete with local prices; Federation of Rhodesia and Nyasaland (1956) argued that the Cold Storage Commission needed to change its pricing policy if it were to avoid the hostility of native producers, a sentiment also expressed by Colson and Chona (1965) with reference to the Tonga.

Transportation facilities are recognized as a problem in the marketing of livestock by IBRD, which recommended annual investments to improve stock routes in Tanganyika (1961), by the Republic of Cameroon (1971), and by the Somali Democratic Republic (1974). Ansell (1971) noted difficulties in the marketing of Botswana cattle because of the poor roads and the fact that there is only one railroad, which is prohibitive to Botswana sellers. Transport is a major problem.

Throughout Africa, peasant producers suffer from a lack of credit. Thus the World Bank report on Kenya (International Bank for Reconstruction and Development 1975) said that of some 1.2 million smallholders, fewer than 200 000 have access to formal credit, most in the top 20% in farm size, because the administration of credit is imbalanced in favour of the large operations. The issue is an old one, for the East African Royal Commission (1955) said that it was a part of East African colonial policy to prevent the African "from acquiring a burden of unproductive indebtedness." That has made it "difficult for the African to borrow for productive purposes."

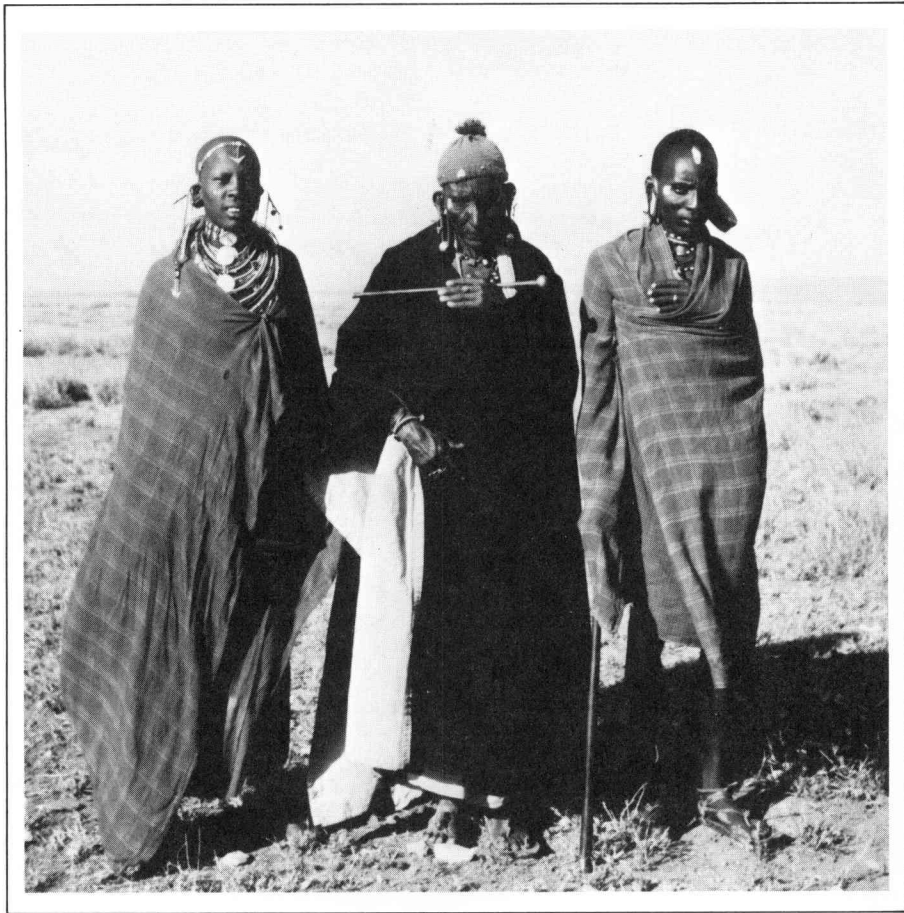
If there are difficulties for the African farmers, these are compounded for the pastoralists. Thus van Raay (1975:136) wrote:

Although it may not have been the intention to exclude either nomadic or sedentary Fulani pastoralists, there is little doubt that the government's insistence that farmers control a sizeable acreage of land to be eligible for loans has militated against the spread of advanced mixed farming practices among the Fulani pastoralists.

Manners (1962:515) said: "private lenders or banks, of which there are three in Kencho, would be unwilling to accept cattle for security, since these could prove most elusive to a creditor who wanted to seize them for sale" and went on to say that though the government has from time to time launched cooperatives for the sake of hides and skins among the Kipsigis, none has had the backing of the Kipsigis Traders' Cooperative and all have been unsuccessful (Manners 1962). Ruthenberg (1966:49), writing of Kenya, said: "... typical grazing schemes have included provision for loans for investments necessary in culling, castration, rotational grazing, dips, water projects and the like. These all contain provisions that would enforce radical changes to husbandry techniques, including elimination of transhumance." The IBRD (International Bank for Reconstruction and Development 1961) report on the Tanganyika Five Year Agricultural Development Plan of 1956 said that a majority of the 140 submitted proposals were crop-oriented and that the use of credit facilities was generally unsatisfactory because of the limitation on eligibility and the small size. The group ranching scheme established for the Maasai involved legal incorporation that would enable the rancher to receive governmental loans (Davis 1971) and this was one of the incentives for the Maasai to enter into it.

The World Bank report on Kenya (International Bank for Reconstruction and Development 1975:488) found: "... rigid adherence to the use of land as collateral and related credit worthiness requirements obstruct the efficient use of credit" and went on to say:

A concerted program to expand credit use is needed. Credit is required for land purchases, to permit capital reconstruction, particularly for livestock after drought periods. . . . But the greatest scope for credit use is



*Having more than one wife is common in Maasai culture. The second wife (left) of this Maasai elder is the same age as his son (right). Often, social change occurs — such as the incorporation of pastoralists in group ranches — while other social and economic practices remain.*

in lubricating the adoption of improved husbandry practices, especially where fairly radical changes are being promoted.

## pastoral adaptability and economic planning

The picture that emerges from this review is one of almost unrelieved failure. Nothing seems to work, few pastoral people's lives have improved, there is no evidence of increased production of meat and milk, the land continues to deteriorate, and millions of dollars have been spent. What is wrong?

The easy answer is to blame the pastoralists themselves; they are too ignorant, too traditional, too stubborn; they do not want to be helped. But that the pastoralists are willing and able to change their ways is easily demonstrated. Those quintessential African pastoralists, the Maasai, re-

peatedly became fixed farmers or predominantly farmers, as exemplified by the Warush. My own work in East Africa has centred on this recurrent phenomenon (Goldschmidt 1975a and elsewhere), and I have given direct attention to it recently (Goldschmidt 1980). Schneider (1979) has called attention to similar events that have taken place under the stimulus of opportunities created by colonialism among the Teso of Uganda, the Kipsigis, and to a lesser extent the Nandi of Kenya. Under such circumstances of natural sedentarization, there is a gradual adaptation of old institutions to new purposes and even occasionally the invention of new techniques for handling social relationships (Goldschmidt 1976).

If the answer does not lie in the pastoralists themselves, it must lie in the planning process. Leaving aside those ill-intentioned cases where prejudice against pastoralists inspired calculated harmful action, I note several basic flaws in planning for economic development. First, planners do not learn from their own mistakes. To see governments plan to make elaborate installations of water holes or to launch stock-reduction programs after these have been repeatedly branded as failures makes one wonder why writing was ever invented. Significantly, those engaged in planning have made no review of their own programs, such as this attempt from the outside.<sup>3</sup>

Second, there is a consistent disregard of pastoral peoples' own knowledge. The fact that they have made adaptations to a difficult environment that they know intimately does not faze the experts who believe they are armed with superior knowledge. The pastoralists' use of the landscape, especially their exploitation of a range of resources to counter the quixotic character of the climate is especially relevant here. Closely related is the failure to recognize the functional significance of the established social organization and value system of the people themselves. The conquest of areas inhabited by pastoralists requires a unique blend of individualism and cooperation, for which institutions of stock ownership and stock transfers, age-sets, kin groups, etc. have created the necessary motivation and patterns of collaboration. It is an understatement to say that inadequate attention has been given to social factors, for in fact virtually no attention has been given to them. Yet the organization of effort is always an essential element in production and, often, is the crucial element. Technological innovation, in the absence of appropriate social innovation, fails with dismal regularity. In more particular terms, neither fences nor wells can solve the problems of the pastoralists; what is needed is appropriate social devices.

Finally, programs are initiated without coordination. They are in the hands of technical experts, each of whom is concerned only with his or her own area of expertise. There is no effort to relate the actions taken to the full cycle of activities necessarily involved. This is best exemplified by the failure that results from success in stock disease eradication programs, but quite clearly it is a generic problem.

What is needed is a coordinated approach. This means that such technical matters as disease control, land improvement, and marketing operations are to be developed in a concerted, integrated fashion. It means

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<sup>3</sup> An earlier, more extensive version of the present analysis was sent to the livestock officer of the World Bank, who rejected the analysis (H.J.S. Marples personal communication 1979): "In my view many of the sentiments you express . . . are quite unsupported by the facts." My earnest effort to get citations elicited no response.

that the legitimate interests and aims of the pastoralists, including their use of livestock as factors in their social relationships, are taken into account. I have elsewhere suggested (Goldschmidt 1975a) the establishment of a special livestock credit system that would be coordinated with marketing, stock improvements, and other programs that I believe would induce pastoral peoples to produce more meat for the market and at the same time would reduce the number of animals in the kraals. Whether or not the specifics of that program are viable, it is quite clear, first, that what has been accomplished thus far has not proved to be the answer and, second, that the solutions to the problems inherent in utilizing the arid grasslands of Africa will require a bold, many-faceted approach that is sympathetic to the needs of the native stock owners.