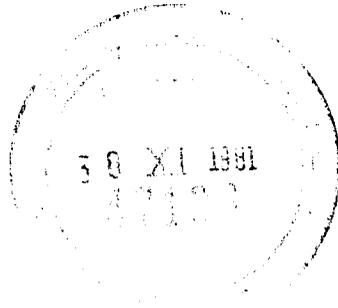


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**the future of pastoral peoples**

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# the future of pastoral peoples

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4–8 august 1980**

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## **herds, trade, and grain: pastoralism in a regional perspective**

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The fact that pastoralism needs to be seen in a regional perspective rather than as an isolated production system for an understanding of the changes in the living conditions of pastoralists has been pointed out by Bates and Lees (1977). They mention that local or regional subsistence activities have rapidly become part of much larger production systems based on exchange and specialization. Their suggestion in the case of pastoralism is that one must look at all options available to obtain nonpastoral products, and possible alternative reactions to change. I shall concentrate on a few aspects of relations between herds, trade, and grain, particularly in a situation of unbalanced pastoral production systems. The nature of the interface between pastoralism and other economic systems is ultimately formed by the marginal position of the pastoralist in the national political system. First, concern for politically important groups in the big urban centres governs the national goals for production in the arid areas, especially production of cheap meat. Second, the pacification of insurgents on countries' borders makes pastoral development seem important from a strategic point of view.

Although there is a vast spectrum of pastoral-farming combinations, I shall mainly deal with situations where pastoral produce has been the most reliable form of food and has dominated the system of production.<sup>1</sup> First, however, it is necessary to look at some of the constraints of pastoralism.

### pastoral production

The purest form of pastoralism is an economic system in which all food for the household is produced from domestic herds. However, few pastoralists depend solely on their livestock for food production. They supplement milk, meat, or blood output from their domestic herds with grain consumption. Of course, the degree of dependence on farm products varies as do the forms to obtain them, directly through farming pursuits or indirectly through trade. Even the Maasai in Kenya and Tanzania or the Samburu in Kenya, peoples that have been used as examples of pure pastoralism, rely to

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<sup>1</sup> There is, naturally, a wide range of literature within social anthropology that touches upon the issues at hand. Much of it focuses on relations between nomadic and sedentary ethnic societies (often hostile relations) whereas relatively little deals with the complementarity between certain forms of farming and animal husbandry.

a considerable extent on farm products. Therefore, analyzing pastoral food production solely in terms of production from family herds is only a first step.

Barth (1973) has suggested that the anthropologist, rather than concentrating on specific groups of people, should analyze the different production regimens that form part of the regional system of production, i.e., pastoralism, agriculture, crafts, trade, etc. I distinguish between different production systems also within pastoralism, depending on the species of domestic animals. The characteristics of the four different milk-producing animals predominant in Africa, Arabia, and Southwest Asia differ widely and have contrasting economic implications. I am thinking particularly of species-bound rates of reproduction, the requirements for mobility, the bulk of meat produced at each occasion of slaughter, the continuity and frequency of lactation, and finally, the market value. For example, subsistence on mobile camels and small stock requires activities different from those for relatively sedentary cattle and small stock, and camel pastoralism is similar to farming in that the family herd, like land for the farmer, is a fairly constant resource.

The production systems are geared largely toward subsistence production. Elsewhere Dahl and I (1976) have tried to demonstrate some of the biological restrictions on pastoral produce, i.e., those limitations that lie in rates of reproduction and level of expected production and in the temporal patterns of herd demography and seasonal production profiles, but a few major points are relevant for this discussion.

If an average household<sup>2</sup> were to subsist solely on its domestic herd, and if this herd were average in age and sex composition (in fact, rarely the case), the household nutritional requirements would be approximately 318 g protein and 13 800 kcal/day. If the household were to subsist solely on cattle herds without upsetting regrowth, a herd of 64 animals would be needed. An equivalent for camels is estimated to be 28 animals. The figures vary with different breeds; yet, they indicate the magnitude of required herd sizes. Variations among small stock are even greater (Dahl and Hjort 1976). Few pastoral households specialize in one species of domestic animal, so food production estimates similar to the ones worked out by Dahl and me (1976) for various species are useful.

The figures are based on averages as if seasonal fluctuations do not exist. But they do, and this complicates the picture, especially in areas with one rainy season. A seasonal perspective demonstrates the import of the combination of large and small stock for three reasons. Generally, the peak of meat consumption occurs when the consumption of cattle milk is low. Small stock are more easily slaughtered than are large stock. Because of their size they can be consumed immediately after slaughter within the household, and because of their fast reproduction they soon replace the lost beast. Second, the seasonal lactation pattern of small stock frequently complements that of cattle. Third, and for the same reason as for slaughter, small stock are ideal for marketing and are an important resource in exchange for grain.

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<sup>2</sup> The reference family consists of 4.9 adult equivalents — for example a father around 30, a pregnant mother of 25, two children of 3 and 8, and two related youngsters, one boy of 18 and one girl of 15.

## role of grain

An economy based on livestock products is very efficient in fulfilling human requirements for protein. A herd of 28 cattle or 40 goats and 16 cattle would be enough to meet the protein needs of a household. It takes a considerably larger number to meet caloric needs, a fact that suggests the contribution of grain to the diet. Grain is a seasonal replacement for milk but may also be a regular supplement or ultimate reserve for bad years. As Bates and Lees (1977) pointed out, pastoralists may also find it worthwhile to feed their livestock with grain at times. This is, for example, the only way to ensure herd survival for the Amar'ar Bedawiet of eastern Sudan who sometimes have to keep large numbers of camels and small stock stationary and feed them on *durra*, either produced by the household or purchased at the market.

Even the driest areas of Africa usually provide some physical opportunities for riverbed or rain-based "take-a-chance" cultivation. Frequently, however, the possibilities are limited by health hazards in areas with permanent water and by labour constraints that may not allow any family labour to stay at a cultivation camp. "Take-a-chance" cultivation of sorghum or maize at a well-watered spot along the transhumance route is the simplest and least labour-demanding form; the practice does not allow complicated crop selection but favours grains that do not demand much attention between planting and harvesting. Although the grain adds to the dry-season diet, it is rarely a food reserve, because successful harvests are most likely to be in years of good rainfall when there is also milk.

There are many cases of barter between pastoralists inhabiting dry lands and farmers in better-watered areas. A few examples in Kenya are the Turkana who have traditionally bartered small stock for maize (or formerly millet) from neighbouring Marakwet; Rendille and Borana, from the Meru farmers in the Nyambeni hills; and Maasai from Kikuyu farmers. All over, such trade seems to have been significant, even if it has been obscured to outsiders because of hostile relations between the groups concerned. In some cases, it may have been carried out by special groups.

The exchange rates of livestock to farm products are vital for the standard of the pastoralists. Swift (1979a) has calculated a barter cost-of-living index for Somali families. With the assumption that three-fourths of food consumption is covered by farm products during the dry season and one-fourth during the wet, it appears that producers of camels and cattle have experienced decreasing ratios, whereas producers of small stock maintain approximately a constant ratio (Swift 1979a). Another example is that of the pastoral Barabaig in Tanzania. Kjaerby (1976) has recorded a modest increase in cattle prices and dramatic increases in maize prices over the last 20 years, giving a net decrease in the exchange ratios.<sup>3</sup>

<sup>3</sup> Swift's figures for the number of camels needed to purchase the 725 kg of sorghum needed yearly by the reference family are: 1847 (0.7), 1891 (0.7), 1951–53 (1.5), 1956–58 (1.6), 1971–72 (2.6), and 1974–75 (0.7). The numbers of cattle needed for the same years are: 0.7, 0.8, 2.4, 2.8, 4.7, and 1.1; sheep: 4.3, 14.8, 9.0, 10.7, 9.9, and 4.3; and goats: 6.5, 30.2, 12.3, 13.7, 12.7, and 6.9. Kjaerby's calculation is based on prices in shillings instead of barter rates. His ratios therefore become expressed in numbers of bags of maize per head of cattle sold: 1957 (18.0–12.0), 1967 (12.3–9.25), 1969 (11.7–9.7), 1971 (8.3), 1972 (7.2), 1974 (3.1), and 1975 (1.8).

The general trend is that farm surplus, earlier bartered with pastoralists, is now sold on the national or international market. The regional integration into these markets has caused both an increased emphasis on cash cropping and a shift in local trade from barter to cash exchange. One effect for pastoralists is a decreased availability of grain. Even if price relations do not change on the local market, frequent shortages mean that there simply may be no grain available, whatever the price. In such a situation there is little point in selling animals in order to obtain cash. In spite of improved transportation systems that provide the pastoralists with access to grain, the marketing structure of agricultural products contradicts an improved standard for the pastoralists. In general terms, this means that production tends to be exported to areas with higher buying capacity even in times of shortage within the local region. Not only does this structural change mean that food is rechanneled away from pastoral areas, but also it frequently implies a whole reorientation of agricultural production in adjacent farming areas from subsistence crops to cash crops such as cotton, coffee, or tobacco.

## livestock marketing

The expanding monetary economy is felt not only through changes in the local availability or price level of grain but also through changed facilities for marketing of livestock. Pastoralists have a reputation for being reluctant to sell their animals, cattle in particular. Several partial explanations have been suggested. Historically, the market structure has not been beneficial for pastoralists. The purchasing policies of the main buyers of livestock favour the activities of intermediaries who decrease the profit of small producers and manipulate the timing of sales and auctions (Hjort 1979). The general policy has been based on political considerations to provide cheap meat for the urban population, a fact that keeps prices too low. There are technical constraints such as long trekking routes to markets, infrequent markets, quarantine restrictions, etc. It is also suggested that most pastoral livestock are needed within the pastoral production system, including oxen that provide a live store of meat and blood for dry seasons. Only during droughts when animals are dying are slaughter stock sold on a large scale. Under such circumstances the meat is of poor quality, and prices are low.

The majority of cattle for slaughter in a family herd are young bullocks, followed by old females with low reproduction, and old bulls whose services have become less efficient (Dahl and Hjort 1976). These categories of animals for immediate slaughter make up about 8% of the total herd on average at any particular time. This compares well with reported annual offtakes. Another 8% of the total herd die natural deaths or are killed in emergency slaughter.

An owner who foresees an animal's death may prefer to market it; this becomes a particular issue in times of disaster such as drought. Then the choice is between trading weak animals with a low return or gambling on their survival.

The effects of droughts are by no means limited to the period. Because of the mortality distribution (high among old and very young animals) and because of fluctuations in reproduction (no reproduction during a drought and unusually high immediately afterward), a drought may be felt for many years (see Dahl and Hjort 1979 for a discussion of such long-term effects).

Typically, post-drought, no older male stock or old cows are left. Also young males are nonexistent due to the cessation of reproduction during the drought. Hence, a shortage follows for at least 4–5 years of marketable animals and, particularly, of mature oxen that may be favoured on the market by price conditions. Some animals can come to the market 2 years after the end of the drought when prices are likely still to be high. However, commonly people prefer not to sell, a fact that has been labeled “a perverse supply response.” From the pastoralists’ point of view much labour has been invested in young bullocks but little extra is needed to fatten them for sale when they are fully grown. Only if the pastoralists have immediate cash needs, will they sell, because it costs them practically nothing to keep the animals. The risk, of course, is that by the time the bullocks are ready for the market, prices will have gone down. This risk is often too real, especially because the high prices are related to a general shortage; once pastoralists start to sell on a large scale, prices come down. In other words, the explanation for refusal to sell may not be as simple as a noncorrelation between stock prices and pastoral supply or the numbers of marketable livestock in the pastoral herds.

The “stratified livestock production system” is one in which the arid pastoral areas are pastures for immature stock and ranches in the better-watered areas are pastures for later fattening. The most labour-consuming part of beef production is the care connected with calf birth and the rearing of young calves and their mothers until weaning. The pastoralists do this work all the time; in fact, their dependence on milk demands a close relation between milch dams and their milkers. In the pastoral system, immature oxen are almost a by-product of work oriented to the production of milk and of reproductive stock that can ensure future food. Large-scale commercial ranches that depend on wage labour frequently buy immatures from the pastoralists because this is cheaper than hiring labour to provide intensive care for newborn calves and their mothers. A fully grown steer usually brings a better price than a yearling, and it is relatively easy for the pastoral household to let it follow the herd until it reaches maturity. Thus, they tend to be unwilling to part with their immatures unless forced by circumstances, such as immediate needs for cash.

### pastoralism off-balance

Although grain is becoming less available in many regions because of attractive prices elsewhere, the dependency on grain is not decreasing nor is the need for money to buy grain. It is rather disconcerting that there is no scarcity of circumstances that force pastoralists to sell their stock prematurely.

In its pure or undistorted form, nomadic pastoralism represents a balance between human population size, animal population size, and pasture (Dahl 1979). It remains viable as long as the populations (human and animal) stay static, or as long as population growth can be met with territorial expansion. Today, however, most pastoralists live in a political situation where grazing land cannot be expanded, and, furthermore, pasture qualities seem to deteriorate. The balance is upset by exogenous factors. Regional development may, on the one hand, bring improvements into the system, such as enhanced health care or a more efficient outlet for surplus stock, but, on the other hand, its unplanned effects may be to siphon off crucial parts of

the labour force or to cause losses of important pieces of land. The ecological model is no longer solely based on uncertain weather conditions but also on planned or unplanned economic and political changes. The focus of study has to be transferred from the problems caused by ecology to those caused by dependence and regional inequality and must take into account increasing political centralization and the submersion of subsistence economies under capitalism. The stream of change may even set such conditions for the model that no point of balance remains, generating, instead, a vicious circle of interrelated losses.

The dwindling of land for the pastoralists is primarily felt in the reserved grazing areas, used primarily during dry years. An example is provided by the wheat farms within Maasailand in Kenya. The local population agreed to set aside land for large-scale mechanized farming, but, when drought occurred later, they expected access to the better-watered land within the farming area. Their claim was that the agreement was made under normal circumstances and that during exceptional periods they must follow the same principles as in the past, utilizing the farmland for grazing.

There is also an increased competition over grazing resources between pastoralists and agropastoralists. By agropastoralism, I mean a system where the main basis of food production is cultivation but where farm surplus is invested in livestock, only later to be reinvested in agriculture (Brandstrom et al. 1979). Cattle are the dominant means of expanding one's labour force, thereby increasing the cultivated area and, hence, the surplus . . . and so on. In agropastoralism, food production from cattle is less important than is their value as wealth. Agropastoralism may be an implicitly expansive and ecodestructive system, because it encourages a husbandry oriented toward a maximization of numbers rather than of quality as is necessary in milk-based, pure pastoralism (Haaland 1975). In a competitive situation, the agropastoralists exploit pastures more than do the nomadic pastoralists because they are content with merely keeping the livestock alive. They maintain the largest herd that the land will support. Hence, the two are vastly different production systems. Integrated in a growth-oriented Western economy, agropastoralists spend cash crop earnings on increasing their livestock herds and expand into areas formerly monopolized by nomadic pastoralists, creating a double impoverishment for nomadic pastoralists who experience competition for the limited pastures and can no longer obtain food within the region.

Competition for dry-season land, however, is not just between pastoralists and agropastoralists but occurs regularly between pastoralists and agencies wishing to utilize the land for other development purposes, connected with wildlife, tourism, commercial ranching, and irrigated farming.

The integration of pastoral societies into regional and national contexts has prompted rapid stratification in local communities with respect to economic, political, and social influence. The emerging leaders spread their risks by diversifying their economic undertakings. Of particular importance is their mediating place between the general pastoral population and the administration and national bureaucracy.

Many are wealthy, controlling labour through an extension of traditional forms of paternalistic protection, elderhood status, and food redistribution. Their followings of dependants become large and their households influential in the pastoral community. The internal power structure of the community can be fundamentally altered, and yet, seen from the outside, the system

appears unchanged. Inside, established principles for redistribution of capital may have largely ceased because of the new links between pastoralism and modern capitalism. Individualistic forms of “insurance” against drought replace traditional institutions, such as stock friendship and clan solidarity, worsening the position of the less fortunate members of the group (Hjort 1979; Southall 1979). Many poor pastoralists turn to employment for extremely low wages. To support their families, low-wage labourers need the backing of kin or friends who are food producers. Thus, the pastoral sector supports the modern sector by providing subsistence for the families of wage labourers and, at the same time, loses members of its own labour force who may be vital to the maintenance of proper husbandry practices.

The stratification contributes to a double conversion of pastoralists to farmers (Barth 1964b; Baxter 1975): the rich invest in cultivation as a mode of diversifying and reducing risks, and the poor engage in small-scale cultivation — the only option for those who have no opportunity to leave their families or no market for their labour. The poor farmers cultivate either only for their own consumption or also for the market, in which case local officials tend to view them as promising participants in the development process. Similar processes may have occurred throughout history; they may even have been viewed as regulatory, balancing the ratios between humans, animals, and land. However, they are occurring more widely today than probably ever before. The reason lies beyond the ecological model in economic and political development. Regional differences increase; stratification evolves within ethnic communities; dependency, and patron–client relations grow.

The most visible expression of pastoral integration into larger political and economic systems is the emergence of small towns or rural centres that exist primarily for trade and administrative activities. They are the economic link between rural and urban lives through which consumer goods, livestock, and grain may be traded. For the administrator, they are the natural centres of communication and social service. For the entrepreneur, they are a source of cheap, occasional labour, and they filter rural (in this case pastoral) people into urban life.

Development efforts to involve pastoralists in a market economy should provide ways for them to invest cash and to obtain substitutional food. First priority needs to be given to efforts to improve the subsistence situation of the pastoralists so that a *real* surplus is created before resources are siphoned off. Not until a balance is obtained can a substantial offtake (meat, milk, or milk products) be sought for the national market. If a balance is not achieved, the societal costs may be high — violent large-scale migration of the pastoralists to the cities.

Any intervention in the existing production system has multiple and long-term effects. The interdependence between an expansive agropastoral production system and a pastoral production system exemplifies the complexities facing planners who wish to restructure existing land-use principles or to introduce new ones. Another example is the change in the production system of fishing projects parallel to a pastoral sector. The Turkana who fish in Lake Rudolf have purchased livestock, entering a traditional economic sphere by means of a new principle — buying. Their entry into livestock rearing has increased pressure on grazing in the area. Individual access to regular cash income may have two effects: the net effect

may be a rapid increase in the area herd through a purchase of livestock from outside or a change in the structure of ownership such that one builds up an unreasonably strong economic and political position in the traditional economy (Henriksen 1974). The transfer of wealth from one sphere to another should be discouraged but perhaps is unavoidable. A minimum ambition should be that no section of the population suffers as a result of regional development input. However, this may also be a difficult goal because the effects of every input are manifold not only because of the complexity of existing production systems but also because of the economic and political reality where development projects are to operate. Serious preparatory studies in combination with continuous evaluation of inputs are the sole possibility for success in at least understanding a particular development.

I do not mean that the studies need to be complicated but primarily that they need to deal with issues that might be politically sensitive because they need to include expressions of regional inequalities and of stratification as well as more technical aspects. The necessity for continuous evaluations of development projects has often been emphasized.

## discussion

*Hopcraft:* The terms of trade between stock and grain may actually be better than was here suggested. The issue is the nonsale of male animals, primarily oxen, that have little productive value in the pastoral system. Also, what is a social irrationality exists despite *individual* rationality. Government intervention may increase profit by decreasing the number of animals and thus decreasing competition.

*Sandford:* One should beware of using data from a few years to prove long-term shifts in the terms of trade between grain and pastoral products. Short-term variability is greater than on a long term, and the use of a few data at the end of a long period to describe trends can be misleading. Also, you refer to profits made by intermediaries, implying these are high. Empirical studies generally show that though margins may be high, most margin is accounted for by traders' costs, and *profit* rates tend to be low.

*Hjort:* Yes, I agree entirely on the first point. My intention here was to illustrate a hypothesis, nothing more. With respect to the second point, the issue is not profit for the intermediaries, but the loss of profit for the pastoralists.

*Willby:* Pastoralists trade livestock for foods, other than grain, that are important to dietary intake — honey and sugar for instance (which are preferred to grains in Somalia, which has one of the highest per-capita consumptions of sugar in the world), beer, bananas, beans, etc. They also trade livestock to obtain cash for a growing variety of needs, such as education (directly and indirectly in the form of clothing, bedding, etc.), veterinary drugs, radios, etc. Some pastoral groups commonly hire labour, either to cultivate for them, to clean out and repair wells, or even to look after herds. Often they pay in kind, that is with livestock, which in some instances is the accepted way for the hired cultivator to start a herd. However, such interdependence is often not a happy one; contrary to what was said in earlier sessions, pastoralists have usually been the aggressors, not the

victims, in clashes with agricultural societies. In most countries with significant pastoral populations, the livestock of pastoralists have been the main supply of meat for the nation and, in some cases (notably Somalia), a major component of the country's foreign trade. Lack of investment opportunities or reluctance to bank earnings from livestock trade is by no means universal. In Somalia, for example, pastoralists reinvest in small shops, trucks, water storage, etc., and a recent study of the livestock trade revealed numerous pastoralists have large savings in banks in the major towns, as well as with traders and business people. Pastoralists trade livestock for many reasons other than to supplement their diet with grain.