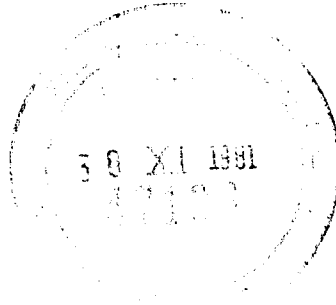


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the future of pastoral peoples

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the future of pastoral peoples

**proceedings of a conference held in nairobi, kenya,
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production in pastoral societies

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Early social studies of pastoralism — mainly pursued by anthropologists — focused on pastoral values and attitudes rather than on the pastoral economy, and thus an understanding of the pastoral economy has been slow to develop. The result is that the popular image of pastoralism is still largely marked by stereotypes of pastoral irrationality, conservatism, and “the cattle-complex” — traits that are used to explain pastoral behaviour such as the hoarding of animals or the “perverse supply–response” to market prices.

During the last decade, anthropologists, but also geographers and other social scientists, have spent much effort on trying to put pastoral behaviour into a more complete context. One way is to emphasize production and economic aspects. In such an approach, the pastoralists’ values are important, for they govern the goals of production and consumption and the orientation of people’s lives. But pastoral practice is also governed by a body of general cognitions about risks and more specific technical knowledge of soils, water quality, botany, animal diseases, and meteorology. And, fundamentally, pastoral activities are restricted by the material constraints such as access to labour, to basic natural resources (e.g., pastures, water, and minerals), and to the most effective mix of animals in herds. The pastoral society revolves around the problems of reproduction, care, and distribution of such resources. Therefore, an analysis of the pastoral society should begin from such a perspective. In other words, even if social and cultural behaviour is not directly dependent on an economic base, it may be fruitful to scrutinize the relation. This type of approach to culture has been dominant recently in “pastorology,” partly because “more than peoples with other adaptations, nomads are limited and conditioned in their social organization and culture by ecological factors. . . .” (Salzman 1967:121).

However important ecology has been historically, its importance in shaping pastoral modes of life is on the decline; the political and economic place of the pastoral society in a wider national and international context is, in my opinion, more important for the future of pastoralism.

When studying pastoral production, many “pastorologists” who have a social anthropological background have, like me, felt compelled to deal also with purely technical problems of pastoralism to a larger extent than is traditional within the discipline, feeling that sciences in the pastoral field have for a long time neglected research on the grassroots’ conditions of pastoral husbandry. Before the Sahel drought, the more technical sciences seemed

wholly uninterested in challenging the anthropologists' monopoly on pastoral studies. The one positive effect of the drought has been a change in this attitude. However, commercial interests still govern much of the agricultural research carried out in the tropics, either by directly financing it or by influencing its orientation toward production for the market. Granting of funds for basic research into improvements in subsistence production has obviously been neglected — a fact that is easily seen from the bias in husbandry and veterinary publications where the proportion of pages devoted to milk production from goats or the difficulties of camel-rearing are minute compared with the writings on beef cattle. A typical example is a camel research program recently launched by the International Foundation for Science in which the explicit object of the steering committee was to enhance the position of the camel in commercial production.

The reason for anthropological dominance in the field of "pastorology" can partly be traced to the fact that the discipline is almost unique in making it an academic merit to share somebody else's living conditions for a while (even if this in practice is only superficially done). However, I am happy to note that at least some more down-to-earth studies of pastoral production now seem to be under way particularly here in Kenya — I am thinking of studies such as those undertaken by David Western among the Maasai but also some of the research started in the Turkana and Marsabit areas.

A certain type of research for which I think there is still a need is that of pastoral ethnoscience. Sheer descriptive studies of ecological classification systems, ethnobotany, etc. do not receive much academic acclaim but are urgently needed. They are needed both to establish a reasonable platform for communication with pastoralists and to give proper appreciation of the pastoralists' substantial mass of useful knowledge. One may argue that such studies are not the business of anthropologists, but one cannot deny that it is their active duty to interest botanists, animal husbandry personnel, etc. in these fields.

I do not necessarily think that anthropologists should shy away from technical matters. As long as other disciplines demonstrate a bias against extended work, within local areas, I think anthropologists must continue to have a go at them — and this may be the only way of opening communication across boundaries between disciplines. Nevertheless, the main contribution of anthropologists is in the analysis of the social elements in production, in distribution of capital assets and material resources, and in organization and reproduction of labour. And, perhaps, they are soon to have a new go at pastoral values and attitudes. I have an awkward feeling that much of what has been said and written about these values has been inferred from the aggregate effects of pastoral behaviour as perceived from outside the system (such as, in the seasonal market supply of livestock, in overgrazing patterns, etc.) rather than from a close scrutiny of models of the economy.

With an increased understanding of pastoral production, it is now time for anthropologists to take a fresh look at the value system as formulated in local terms, the production system acting as a background. What is "hoarding," prestige, generosity, sales, capital, growth, continuity, security, economic folly, investment, solidarity, etc. to a Bedawie, a Turkana, or a Barabaig? How are the symbolic expressions of the economic-ecological reality of pastoralism linked to larger systems of thought?

Each of the pastoral groups with which the participants at this symposium are concerned has a worthy cultural heritage. As anthropologists we should record it or work for economic opportunities for local scholars to document the traditions before they are forgotten. However, anthropologists are frequently accused of being conservationists, eager to keep traditional societies and cultures in their pristine shape as if they were treasures like the art pieces of Venice or Abu Simbel. I think that what should first and foremost motivate our concern with pastoralism is that it appears to have had a rather efficient way of providing people with food for centuries. If so, we need to identify the conditions for its continued functioning or the alternatives for employing the people and range resources concerned.

One should not idealize the past. Many authors refer to harsh regulatory mechanisms that in the past adjusted the ratios of human and animal populations to the pasture resources, mentioning such things as epizootics, starvation, territorial expansion, feuding, the expulsion of unviable units from the system (Haaland 1975), and so on. Most of us believe that a system regularly culled by starvation is not morally acceptable. Nevertheless, it should be recognized that we know very little about the history of pastoralism or how the effects of past regulatory mechanisms compare with those of the present.

The extent to which the regulation is attributed to dramatic disasters or more subtle processes is still a matter of personal speculation. For example, mass starvation of livestock may have decimated the herds, or, equally plausibly, the animal population may have been decimated in stress years mainly through increased slaughter and reduced fertility. Territorial expansion may have taken the form of bloody wars (certainly less devastating than those of today); or it may have been achieved by a more gradual shift in political dominance between one ethnic group and another — the migration and assimilation of individual groups rather than large-scale conquests. We do not know to what extent veterinary sciences in the truly pastoral areas really compensate for the introduction of nonindigenous epizootics like rinderpest during the era of European expansion.

Events in the meteorologic history can sometimes be traced in the vegetation; oral history provides some clues to the occurrence of serious disasters such as drought and epidemics. Still, it is difficult to ascertain the extent of periodic starvation. Drought is not an objective phenomenon depending solely on climatic factors; its effects can be harsh or not, depending on the resources for recuperation and general level of health of the society.

What is apparent is that in vast areas still under pastoral use, livestock has been reared by nomadic pastoralists for at least a couple of millenia without completely eroding the ecological base. Today, there are serious signs that nomadic pastoralism as a system of supplying provisions is breaking down; human impoverishment and land degradation are the most important expressions. It is no coincidence that during the 20th century the effects of the Western economic system permeate even the furthest villages of the world and that pastoral resource extraction appears to have exhausted its possibilities. One must avoid confusing the shortcomings of traditional practices with the symptoms of a changed resource base and must look more fairly into the reasons that this subsistence system is subject to repeated crises today.

the problem of continuity

Some of the salient characteristics of the pastoral production system are general aridity and unpredictability of rainfall. The pastoral system copes not only with wide seasonal changes in climate but also with abnormal years of drought (or excessive rains), which are almost as frequent as those that conform to a seasonal pattern of rainfall.

In the face of climatic unpredictability and the evasiveness of animal wealth, a dominant problem for the pastoralists becomes that of continuity. Much more than farmers, they constantly risk total losses of capital and production assets: much of their efforts must go into securing the regrowth of herds and safeguarding of future production of milk rather than maximizing immediate profits or consumption.

This concern with constant risks of loss can, in many pastoral societies, be shown as institutionalized in the social system. One of the several ritual, political, juridical, and economic functions of descent groups is to provide mutual insurance against disaster: to make redistributions of capital to those who have lost their livestock. The herd owner not only adapts herding arrangements to accommodate risks but also usually engages in relations of livestock exchange (stock friendship) or mutual risk-sharing to create a fund of goodwill or direct claims to stock (Dahl and Hjort 1979). Success in this respect often depends on the initial wealth of the herd owner even if most East African pastoral cultures ostensibly honour people who are generous.

For the individual herd owner, continuity must also be represented in the composition of the household herd; disturbances in herd composition created by drought or war can upset the economy for a long time after the return of rain or peace. When one realizes the importance of continuity both in milk production and in the production and survival of calves, one can also appreciate the need for a better understanding of livestock "demography" not only of the trends in absolute numbers but also of the internal structural changes to which herds are subject (Dahl and Hjort 1976).

The understanding of the demographic processes acting on livestock herds has deepened during the last decade. Building large herds solely by reproduction has been shown to be less possible than earlier assumed; primarily postdrought growth rates, which are abnormally high, have been recognized as unsuitable for herd projections covering a longer time. The differences in growth rates between herds of camels, cattle, and small stock have also been recognized as consequential for the economic organization and value systems prevalent among pastoralists specializing in only one type. Although some progress in model-building of internal herd dynamics has been made, there is still a lot to do in this field, to refine the models — for instance, studies of age-bound fertility, fecundity, and mortality. There is also room for many long-term empirical, demographic studies of animal herds and of how their composition is affected by climatic fluctuations. Badly needed are studies that follow the same herd for several years — studies that have a sound institutional base so that they can be independent from the enthusiasm or boredom felt by specific researchers and from the constraints in research planning inherent in the way individual research tends to be financed.

Even where milk is the staple of the diet, it is not usually available in the same amount all year. Slacks in milk production occur partly because of the

fact that the animals do not calve and lactate evenly over the year, partly because of changes in the quality and quantity of fodder. Low milk production tends to coincide with periods of high-labour demands. This problem is particularly acute in regions with only one rainy season. Similar problems occur also in the two-season belt as soon as one of the rains fails; for instance, a cycle of monoseasonal breeding may result from drought and last for some years (Dahl and Hjort 1979). Of all the livestock species used by African pastoralists, only camels are able to lactate for a full year. However, the lactation pattern of camels is more vulnerable to disturbances than that of cattle, because of the extended periods between camel calvings.

A combination of small and large livestock evens out the milk supply to some extent because of the different and sometimes complementary lactation patterns (Dahl and Hjort 1976). A combination also provides an easy way to supplement the diet with meat during the slack season. Dry-season bleeding and slaughtering of oxen otherwise fulfill this purpose, as does "take-a-chance" farming or the import of grain. Again, the coincidence of the period of pastoral food shortage with the peak of labour demand is one of the most urgent problems to be solved and one that needs focus in development efforts to improve pastoral living conditions.

strategies for security

What are the most important ways that herders can limit their risks? Or, what are the main strategies in herding and husbandry practices? I believe they are the mobility of stock, species diversification, herd dispersion, and herd maximization. Of these, mobility of stock is the most conspicuous and has drawn the most attention from outside observers. Its main purposes are to ensure that the animals can take advantage of fresh and protein-rich pasture and get a sufficient mix of necessary minerals, avoid overgrazing resources, and avoid disease-carrying insects.

Geographers and anthropologists have tried to classify pastoral households and societies according to their patterns of movement. Such patterns are regulated mainly by the degree of seasonal predictability of rainfall and pasture that may or may not allow the monopolization of certain migration routes. If the seasonal changes are regular, transhumance is along narrowly fixed routes of migration between dry-season areas and wet-season areas. In contrast, if rainfall varies widely, for example in northern Kenya, a constantly changing pattern of migration develops between dry-season and wet-season poles. Mobile management of livestock often also entails mobility of humans but not always of complete households.

Frequently, there are several different kinds of mobility represented simultaneously, such as in the special case when the herd is divided into a milch and a fallow section (Dahl and Hjort 1976). The milch stock are kept with the household camps and are taken only on short daily trips for pasture and water; the camp is shifted seldomly, perhaps only after a few weeks or even a year. The fallow herd consists of dry stock not needed for household consumption. The animals of this herd are taken on continual searches for the best pasture.

Mobility of livestock is probably the basic condition for a nondestructive pastoralism — a condition that has been undermined in many places by the establishment of game parks and commercial ranches or by the extension of

dry or irrigated farming, involving a loss of vital drought recourses. Mobility is also very labour-demanding and, hence, vulnerable to disturbances in the local access to food, the lack of which may push herders temporarily or permanently from an area. The result is a vicious circle: decreased numbers of personnel leading to declining mobility, which further decreases the numbers, and so on. Mobility is also sensitive to political unrest and security regulations. An important but long-neglected field of study that has drawn the attention of a UNESCO team in northern Kenya is the role of camels for maintaining the mobility of other types of herds.

The signs of declining mobility are exemplified in overgrazing close to permanent water points. Overgrazing is usually interpreted as a symptom of overstocking. I would suggest that labour shortage and the loss of land are reasons that are at least as common as those cited by Pratt and Gwynne (1977) in their recent book on grassland ecology in East Africa. They note that overgrazing may be due to excessive human populations and the need to keep enough animals to survive or that it may be due to an overaccumulation of stock in relation to needs.

Herd diversification is the combination of herds of different species under the same management. It is motivated by the fact that cattle, goats, camels, and sheep fulfill different purposes and have different production profiles of milk, meat, wool, fat, and blood. Herd diversification is advantageous because it allows the household to extend the period when milk is available. It also implies an opportunity to reduce the risk of a total loss, for different species are subject to different disease risks, and it makes possible a more efficient use of the available pasture resources, the animals having different and mostly noncompetitive grazing and browsing habits. In response to drought, small stock have superior recovery rates, and the qualities of quick reproduction and small size make them a useful complement to the less liquid wealth of cattle or camels.

As in stock mobility, the setback in diversification is the labour cost; normally each category of stock requires its own personnel, and this requirement may add to the strain already caused by the fact that even within one species not all animals can be treated the same. For example, dry stock cattle may need their own herder, the milch cows theirs, the big calves theirs, and the newborn or sick beasts theirs. The labour needs are one reason that, although frequently small stock and cattle or camels are together, it is difficult for a household to breed both milch camels and cattle; it is rare even in areas where pastures for both exist. Sometimes camels are kept along with cattle and used for transport but not often are they bred together. Using the animal as a load carrier does not entail as much work as maintaining it for reproduction. Perhaps one should not apply the concept of diversification to such cases but rather reserve it for a combination of two (or more) species that are locally bred and used as food producers.

Herd dispersion, the third approach to risk reduction, refers to the practice of spreading one's animals into several localities to counteract local risks of disease or theft. Frequently, it is rather an aspect of considerations than a practice in its own right; it may take the form of distributing stock loans, dividing the property into two or more herding units, or even splitting whole households between two neighbourhoods.

The fourth strategy of reducing risks, which partly follows from the others, is keeping as many female animals as possible. It is closely related to production yields; as seen in Hjort's paper to this conference the minimal size

of the basic herd needed to maintain a family is in itself rather large. In effect, the basic herd has to be even larger than the minimum so that it has a margin wide enough to provide both immediate food production after a large-scale loss and long-term recuperation of the herds. There is also security in numbers in the sense that the larger the population of livestock, the smaller the probability of a skewed distribution — e.g., of too many bull calves or of all cows' drying up at the same time.

Adaptation to insecurity depends on labour-consuming devices. A large herd can sustain more labour and, hence, make possible specialized care for several categories of stock. It is quite logical from the individual's point of view to expand both the animal herd and the assets of labour one controls. Prestige, which used to be seen as the driving force behind the wish to expand, is only part of it — and prestige lies as much in the ability to lavish generosity and to have a secure position as manager of a large herding unit of people and stock as in sheer numbers of cattle.

The logics of individual economy and husbandry favour the accumulation of large herds, but there is little known about whether the pastoral households can be said to hoard in the sense of maintaining herds far larger than their subsistence needs. There are few, if any, provinces or districts in the semi-arid zone that can boast accurate figures on human or animal populations, although the idea of a universal population explosion among cattle in arid areas is widely accepted. Trustworthy averages for the animal-human ratio are equally difficult to find, and correct estimates for the distribution of cattle-for-use or property holdings are only available for limited localities. Where it is known that there are more animals than the range can carry, it is certainly not known whether there are more animals than the minimum needed to support the population or whether the available animals are equitably distributed or held by the wealthy few.

Even when herd owners are willing to reveal the number of cattle they own and the property structure of the herd they manage, collecting the information is a tedious and time-consuming task that most researchers abhor. Funds for large-scale censuses or aerial surveys are never sufficient to obtain such refined data. Hence, the relation between so-called hoarding and overstocking is always vague.

labour, property, and pastoral production

The dominant strategies for pastoral insurance, i.e., species diversification and herd mobility, favour large units of labour. Although all tasks connected with pastoralism are not physically as taxing as those connected with cultivation, pastoralism is labour-intensive in that it demands the involvement of many hands, especially if all age, sex, and species categories of stock are to be given special treatment according to their needs and capacity to move. Therefore, planning for development schemes needs to be based on a larger unit than the nuclear family. The need for more consideration of the subject of pastoral labour has been brought up at this conference by Peter Rigby and Stephen Sandford among others. Rigby has underlined the importance of evaluating the relative returns to labour in cultivation and pastoral systems and stresses that one should strive after a labour-based estimation of the value of grain and livestock products. Sandford points out the need for more precise quantitative data on the

relations between herd size and labour demands. But it is also important to give more attention to the qualitative aspects of labour organization. A framework for a study both of the internal structure of pastoral society and of its integration into a wider context can be built on the simple questions of who carries out what for whom and who is gaining the profits of pastoral labour in terms of food as well as capital growth.

The African pastoral herd owners usually rely on labour from their closest relatives and in-laws. The risks of misappropriation of products or of animal theft mean that the owner-manager exercises a strong degree of social control on those who carry out the pastoral work. It is easiest to rely on people with whom one has bonds of reciprocal solidarity or over whom one wields some form of control, for example by their future inheritance. In fact, many of the independent pastoral units are aggregates of nuclear families who are not able to maintain viability as separate entities. Sometimes they are households of poor clan members or clients. In other cases they are families of women and children, linked together by common ties to a particular man who may be the father, husband, brother, or son.

The herd-owning unit can only manage independently as long as a pastoralist has access to enough labour (sons, sons-in-law, younger brothers, nephews, or clients). The development cycle of the family is therefore critical. When a herd owner is able to engage labour from outside the household, the relation between herd owner and worker frequently takes on a kinship character or is cemented through marriage.

The number of persons needed to care for a herd does not increase evenly with herd size. In simple terms, it does not take more persons to look after 60 cattle than to herd 30. The numbers of people depend on the mix of stock, age, sex, and species. Ideally, even small herds are mixed; consequently wealthy households with access to labour not only can achieve a refined division of work for itself but also has a theoretical margin where they can add animals to their herding unit at a low labour cost. Poorer people not able to maintain a whole set of herders ally themselves with rich herd owners, adding their animals to the larger herds and ensuring suitable care. In effect, this is a way whereby the leader of a large herding unit can get access to cheap herding labour. In normal times, unviable pastoral households can remain in the pastoral community through this system as submerged herding units either in perpetuity or until they have recovered.

The distribution of animal wealth over the population is not static but changes constantly with stochastic luck in breeding a good proportion of female calves, with managerial skills, with the social demands for stock, and with the vicissitudes of theft and disease.

The property concept itself may allow for flexibility in the organization of labour and allocation of authority over stock. Property relations are a field where pastoral culture often contrasts sharply with Western culture, which is implicit in the professional culture of African planners and administrators. This adds to the difficulties in registering wealth. Ownership of stock is often not clear-cut. The local culture may, for example, in theory or practice differentiate between the rights to sell and dispose of stock; the rights to milk cattle and slaughter their offspring; and the rights to make decisions over the care and herding of stock. Particularly between grandparents, parents, and children, rights may be fractionated so that the son's property is counted as part of his father's property, which in turn is part of the grandfather's property. Each of them may equally refer to the animals as his. Similarly,

“my herd” may refer to the herd under one’s management or to animals owned but placed with friends and relatives.

Such references are a question more of difficulties of translation and communication than of confusion of concepts on the part of the pastoralists. However, in combination with traditional systems of paternalistic protection, a fractionated property system implies a certain flexibility for shuffling around both livestock and labour between different herding units. The wealthy in this system combine a substantial number of animals to which they have full disposition rights with the unviable property units of a large number of dependants. Relying on the work carried out by dependants, they acquire labour cheaply from the point of view of monetary expenses but have obligations of a wider scope and more diffuse than those of the employer to employee.

Such flexibility in the composition of households and herding units may have worked as a source of social security in times when losses were not made on a community-wide scale and an absolute shortage of food was not at hand. Today’s disturbances as a consequence of drought in combination with a shrinking resource base, however, are of such scope that a large number of unviable units can no longer be absorbed. Labour migration, the present solution, does not work as a restoring mechanism but acts selectively on the categories of labour most desperately needed to maintain the system and secure it against further disasters. At the same time, the integration of pastoral production and society into a national economy and administrative system tends to freeze the prevalent structures of inequality in control over capital and monopolize the means of protection against disaster in the hands of a pastoral elite. This elite is closely associated with the local bureaucracy and merchant class. In that context, the traditional labour relations may acquire a more feudal character, where the labour from a rich herd owner’s closest family members is diverted to other, nonpastoral tasks and substituted for by the work of more distant kin. A dual split of pastoral society may occur such that on one hand are town-based leaders who control the distribution, use, and care of livestock and on the other hand the people of the camps who are struggling to maintain or achieve a minimal level of household viability but largely referred to the protection of wealthy, more-or-less absent patrons. To monitor the trends and their effects on the pattern of land use and production should be anthropologists’ most important task as social scientists and “pastorologists” during the 1980s.

discussion

Willby: I am surprised that there was no mention of the effect of massive population increase on livestock production. The basic resource is the land and the forage it produces. As the rangeland decreases (through parks, cultivations, etc.), nutritional intake may drop below optimal or customary levels. Although a society’s herd may grow in numbers, total output remains static or even lower, mainly as a result of poor reproduction stemming from poor nutrition. In many pastoral contexts, this overpopulation is the major factor affecting livestock production, hence the emphasis in most range-development projects on increasing range capacity by various technical interventions.

Dahl: I agree that we must see land as the basic resource for pastoralism; loss of land is the ultimate threat to pastoral viability and should perhaps be our main concern here at this conference. However, in my paper, I draw attention to the risk of overgeneralization when it comes to assumptions of a livestock population explosion. The question posed by Willby seems to imply that livestock population growth follows logically from human population growth, which is of course questionable. Pastoral land-use patterns are the result of a complexity of factors, and we must take care not to form too-hasty conclusions. If there is at all such a thing as overgrazing — which Meadows, for example, asks us to doubt — a high overstocking rate is certainly likely to lead to widespread degradation of pastures. Understocking, on the other hand, is likely to result in similar, but localized, patterns of overuse in important areas near permanent water. The reason for this is that people are required to assure mobility, and people need food. When mobility is reduced by labour shortage, this may have detrimental effects on vegetation and on animal health and nutrition, even though the general density of animals is low.

Khogali: The situation in the Red Sea hills region is different from that in many other nomadic areas. Because of an increase of animals at one time (also because of fluctuations of rainfall), the vegetative cover deteriorated. Because of the hilly nature of the region, widescale soil erosion occurred. The region has not, since the 1940s, recovered its vegetative cover; the number of animals could not be increased and in fact may have continued to decrease.

Aronson: This has been an exchange typical of those between anthropologists and development agents. The issue of population growth, or population : resource ratios, is a sacred cow for each side. If the ratio is not declining, much of the justification for development projects is lost. If it is, anthropologists can't hope much longer that pastoralists will muddle through. If we only agreed that this profound but contradictory pair of assumptions must be rigorously tested, we would have accomplished something at this conference.

van Drunen: If nomads themselves are turning more and more to alternative means of subsistence, involving education, migrant labour, and farming, is this not an indication that they themselves understand that herd maximization is outdated? And if people say there are fewer animals than before, perhaps they mean per family, rather than in total? The Merrymans (who have worked among Somali) found that, through outside activities, nomads manage to replenish their herds at an accelerated rate after disastrous periods like war and drought; the average herd per family had increased, whereas at the same time there was a movement from the nomadic sector.