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PASTORAL LABOUR AND STOCK ALIENATION IN THE SUB-HUMID AND
ARID ZONES OF WEST AFRICA.

by

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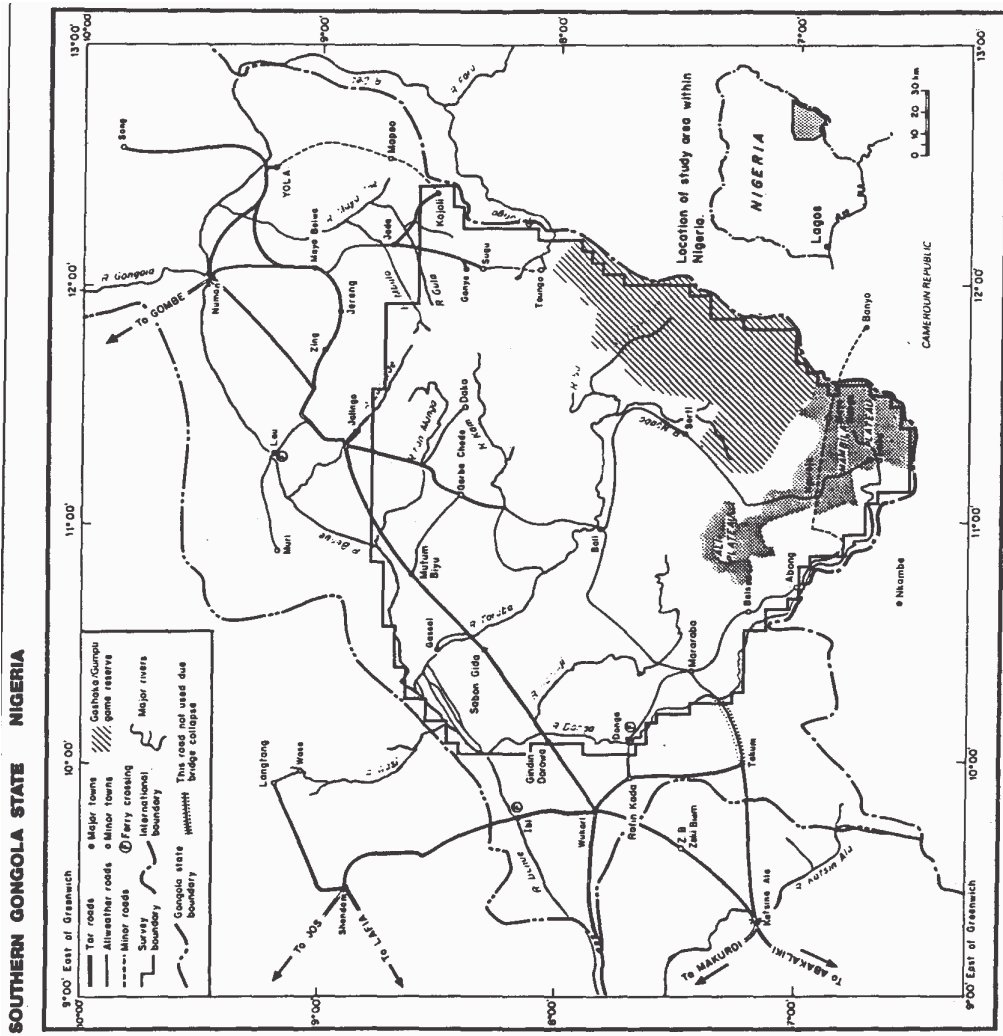
Introduction

1. The study of cattle pastoralism in general and pastoral labour in particular has concentrated on the arid and semi-arid zones, largely because the majority of cattle are located there. The absence of pastoral groups in humid and sub-humid environments is related to both the high arable populations in these regions and the incidence of trypanosomiasis.

2. In Nigeria, however, an unusual situation prevails; the arid zones and the coastal forest are heavily populated, but the 'Middle Belt', or Sub-humid Zone (SHZ), [1] has been sparsely inhabited certainly since 1900 (Buchanan & Pugh, 1955 p. 58 ff.). Such a clear pattern is not found elsewhere in West-Central Africa (Brass et al. , 1968:152) and it has generally been argued that the situation in Nigeria is a consequence of the extensive raiding from the Northern Emirates in the eighteenth and nineteenth centuries. Ballard (1971) reviews other arguments that have been put forward to account for this state of affairs, but most of them involve speculations about prehistory that will probably prove impossible to confirm conclusively. However, arable farmers have not avoided the Middle Belt for some ecological reason, such as tsetse (Bourn, 1983); both Agboola (1979) and Buchanan & Pugh (1955) confirm that the Middle Belt has a potential for supporting a much larger population.

3. As a consequence, the region has been available for colonisation by pastoral groups, to the extent that they are willing to risk their cattle in the tsetse belts. Pressure on pastoral resources in the arid zone seems to have increased throughout the nineteenth century for it is during this period that the FulBe cattle-herders seem to have begun to preferentially colonise the grasslands of the Middle Belt, both the Jos Plateau in Nigeria (Morrison, 1976:399 ff.), and the plateaux of Adamawa in Cameroun (Boutrais, 19714). These grasslands constitute an extremely favourable

[1] The concept of the Sub-Humid Zone was first adopted by ILCA, e.g. (ILCA, 1979:2) and includes a rather broader region than the 'Middle Belt' while excluding certain upland regions.



environment for cattle, and at this period they were probably only sparsely inhabited by arable farmers. The settlement of the Mambila Plateau began in the 1880's and the process only came to completion with the colonisation of the Fali Hills in southern Gongola State in Nigeria in the mid-1950's.

14. The grasslands have abundant pasture, high rainfall and trypanosomiasis are absent: the lowlands also have abundant pasture, particularly in river valleys, low population densities, although there is some risk from trypanosomiasis. This paper is intended to contrast the organization of pastoral labour in these extremely favourable environments with the situation in the arid zone of West Africa. In order to highlight the differences with pastoralists in other parts of West Africa the data is compared with recently available material on the WoDaaBe [2] in the Tahoua region of the pastoral zone of Niger (Swift et al. 1981). The recruitment of labour and strategies to deal with shortages are discussed in the context of the hiring of arable farmers as herdsman. The patterns of ownership of stock and their relation to emergent social stratification in the Nigerian situation are then described. Finally, the consequences of this for pastoral development strategies are considered.

5. The survey zone, the Toungo Block (Map 1), in southern Qongola State, Nigeria, is an area of some 1114,000 square kilometres, combining lowland forest and wooded savannah, high-altitude grasslands and extensive river flood-plains. It contains more than forty ethnic groups, most of them specialised in either agriculture or fishing. Only the FulBe are specialised in pastoralism, although two groups, the Samba of Ganye and the Mambila of the Mambila Plateau have recently begun to herd zebu cattle.

6. From the early 1960's onwards pressure on the pastoral resources of the

[2] The WoDaaBe constitute a section of the FulBe or Fulani, the most numerous traditional pastoral group in West Africa. In Niger 'FulBe' is taken to apply only to the non-WoDaaBe Fulani, but throughout this paper it is used as a cover-term for all Fulfulde-speaking pastoralists.

Toungo Block increased for two reasons; FulBe with exceptionally large herds (RIM, 1984:Map 6 & Blench, 1984a) were squeezed out of the arid zone and began to move into the lowland regions. At the same time, the grasslands cattle populations had begun to equal the dry season carrying capacity; as a result, further increases in livestock numbers could only be accommodated by the exploitation of lowland pasture for part of the year. However, the open frontiers during the colonial and early post-colonial period acted to reduce this pressure; until ca. 1970 herders could regularly take their excess stock across the border into Cameroun during the dry season.

7. The colonization of the lowlands is related to the gradual realization that the tsetse challenge was not as serious as believed by both administrators and the pastoralists themselves. Recent surveys by the Federal Department of Pest Control Services in Gongola State (RIM, 19814:29) established that the incidence of G. morsitans, the most serious threat to stock in this region, is much less prevalent than appears from Davies (1977:13), and moreover does not correspond to pastoralists' beliefs about the distribution of tsetse. This seems to have arisen because of a confusion between tsetse and the other species of blood-sucking fly such as the Tabanidae. Many pathologies identified with the Fulfulde term jola, usually translated 'trypanosomiasis', seem instead to be tick-borne diseases.

8. As a result, FulBe pastoralists have moved into some regions of the Middle Belt in considerable numbers over the last forty years, and have adapted to environmental conditions remote from those described in the standard pastoral literature. On the southern escarpment of the Mambila Plateau, for example, they occupy seasonally the tropical rain-forest. The features of both grasslands and forest in the sub-humid regions of Gongola State relevant to the management of pastoral labour are;

a) Ready availability of water. Streams and rivers flow throughout the year, and no point in the Toungo Block was more than 15 kilometres from water even in the middle of the dry season (RIM, 1984, Map 8). Large lakea

in the region were avoided by pastoralists as their stagnant water was considered to transmit diseases to the cattle.

b) Ready availability of pasture. Apart from the heavily eroded parts of the Mambila Plateau, pasture is freely available throughout the Toungo Block, except around the Jada-Jalingo area. There is a general movement from uplands to flood-plains between wet and dry seasons, but today it is not very marked (RIM, 1984: Maps 11 & 12). This is in contrast to the picture presented in the early Sixties by Bawden & Tuley (1966: Map 11) although their schematic arrows, derived from administrative documents rather than interviews with pastoralists may not have corresponded closely to ethnographic reality.

c) Low arable farming population. No census of this region has been undertaken recently or at all, but aerial estimates of numbers of dwellings suggested a population density of 13.5 dwellings per square kilometre. This has tended to lessen the conflict between pastoralists and the local farming populations, although such conflict does occur (Blench, 1981b). A feature of the arable farming population that calls for comment is that the usual bases of interaction with pastoralists, the exchanges of cereals for dairy products and manure for cereal residues, are largely absent. The lowlands are dominated by yam cultivation in the south and maize in the north and on the grasslands; neither of these crops are considered by the FulBe to provide acceptable residues. Most of the human populations of this region do not drink milk and may be lactase-intolerant. Moreover, the FulBe say that they are unwilling to eat yams, and will make considerable efforts to preserve their diet of millet or sorghum. This eliminates the usual exchange relationships that can be formed between pastoralists and farmers.

9. The modes of cattle production in the Toungo Block in 1983- can be summarized as follows;

Nomadism. The nomadic groups among the FulBe are known as FulBe na'i and are only present in the lowland regions. They have been migrating across the Benue into the Toungo Block since the 1940's from both the Middle Belt

and Bornu. Although nomads are often conceived as moving opportunistically from site to site in search of fresh grass, the freely available pasture has allowed them to evolve regular movement patterns. Many of them stay on the shores and flood-plains throughout the dry season, moving north or to upland regions in the wet. Most of the FulBe na'i farm at their wet season locations, although this tends to be a casual affair, in a different place every year.

Transhumant Pastoralism. Transhumant pastoralists are those with permanent residences but whose herds are too large to be kept at the homestead throughout the year. Usually a milk-herd is left at the home, and the remainder sent with available male kin or hired herders to riverine areas for part of the dry season. It is practiced mostly by settled FulBe, such as the FulBe Wiiti, of the Ganye region, and by the FulBe permanently resident on the Mambila Plateau. Certain Samba cattle-owners also go on transhumance, although because their emphasis remains on agricultural production they are less willing than FulBe to be absent for long periods.

Mixed Farming. Practiced by the 'town' FulBe (FulBe wuro) of the Benue valley, and by Samba and Mambila cattle-owners, this involves the keeping of small numbers of cattle around the home farm, and sending them out daily with younger males from the household. Ploughs are not used in this region, and the arable farming peoples only sporadically milk their cattle, whose essential function is as a store of wealth.

10. It is difficult to be certain about the relative importance of these modes of production in the Toungo Block, especially as the nomadic and transhumant groups often migrate beyond its boundaries. However, the results of the aerial survey conducted by RIM (1984: Table 7) in the wet season of 1983 gave the following figures for rural habitation;

| Type of Dwelling | Absolute Number | Density per 10 sq. km. |
|-----------------------------------|-----------------|------------------------|
| ARABLE | 527,000 | 120.1 |
| AGRO-PASTORAL (=Mixed Farming) | 13,400 | 3.1 |
| TRANSHUMANT PASTORALIST | 16,500 | 3.8 |
| NOMADIC PASTORALIST | 8,600 | 2.0 |

Herd sizes and herd management units

11. Herd sizes in the Toungo Block seem to be abnormally large compared with all other regions of West Africa. Studies in the Benue Lowlands suggested a mean herd size, for numbers owned by individuals, of 182 animals and 248 for the Mambila Plateau (RIM, 1984: Fig. VIII). This seems high, but was confirmed by independently conducted animal production studies. Otchere (1984) arrived at a figure of 116 for Southern Zaria, while in the pastoral zone of Niger the figure is as low as 16 (Swift et al., 1984).

12. It is important to emphasize that in the Toungo Block these herds are indeed owned by single individuals; one of the most frequent complaints of younger pastoralists was that elder FulBe now retain ownership of their cattle until death, rather than distributing to their kin before death. This contrasts with a more usual pattern of pre-inheritance described by Stenning (1959:100 ff.) and Dupire (1970:93 ff.). In Niger (Swift et al., 1981:318 ff.), the situation is the reversed with pre-inheritance becoming earlier, and an accelerating fragmentation of household units. On the

Mambila Plateau, the decline of pre-inheritance has led to larger residential units; the gain for elder FulBe may well be increased control over their offspring. This in turn is bound up with the widespread feeling among older pastoralists that young people are increasingly irresponsible; they are liable to disappear to the towns or sell cattle to buy a motorbike. This stereotype is not wholly untrue; in Niger, where family members regularly migrate to perform ill-paid labour elsewhere merely in order to eliminate the burden of maintaining them on a dwindling herd it is probably inaccurate to attribute labour migration to the lure of the towns; however, in Nigeria, where the towns of Adamawa and the North have large populations of influential settled FulBe their attraction is more natural.

13. Because of the large numbers of cattle accruing to single individuals the herds must be split into grazing units and labour found to manage them. In the environmental situation described above labour costs of herding are relatively low; in contrast to the arid zone, where high labour costs are incurred when cattle are watered at point-sources because buckets must be drawn from wells by hand, whereas in the sub-humid zone, the stock can drink freely at rivers. Pasture is not scarce, so stock does not have to be on the move all day in search of it. According to the FulBe in this region, a single experienced herder can manage a herd as large as 150 animals if under pressure although it is usual to split herds at between 75 and 100 animals where labour is available. Obviously, the amount of labour varies from one ecozone and another; in the wet season, when cattle are around the farms more labour is needed to control them than in the dry season. However, families among the transhumant FulBe are divided in the same manner as the cattle; women, children and older people are left at the homestead throughout the year and attend to the milk-herd. When the remaining animals return, the labour of children and older people is available to look after them. Similarly, the FulBe na'i, the more nomadic groups in the Benue Lowlands, leave their milk herds on the flood-plains, with the majority of their families, while the young men are sent south with the cattle at the time of the first rains to take advantage of the new

grass.

14. Even so, the large size of some individual herds [3] implies that some owners are short of labour to manage them. The trend not to redistribute animals before their owner's death, mentioned above, may also represent an attempt to control labour by concentrating it in large residential units. Nonetheless some households do experience labour shortages, because they do not have sufficient male offspring, because the children disappear to the towns, or because they attend school. A feature of the specifically Nigerian situation is the expansion of the education system since the introduction of Universal Primary Education in 1975. Clearly such an ambitious project could not be instantaneously realised, but in the last decade primary schools have been constructed in many remote areas, and many children of pastoralists have been inducted into the education system. Although this represents a clear conflict of interest for their parents in removing a significant source of domestic labour, until recently, the rewards for success in the school system were substantial. Recently, unemployment among secondary schoolleavers has begun to affect primary school attendance; but pastoralists in the last decade have had to make up for the absence of their children. [4] The variable demand for pastoral labour has been met by tapping another resource; the surplus labour of the neighbouring arabic farmers, in particular the Samba and Mambila. The next section provides a detailed case-study of FulBe relations with the Samba of the Ganye region.

Se~a pastoral labour and the transfer of cattle to an arable far.ing population

15. Throughout much of Nigeria, specialised cattle pastoralism is exclusively in the hands of the FulBe. However, in certain parts of

[3] Figure VIII in RIM (19814) shows that >15% of herds on Mambila and >7% in the Benue Lowlands were larger than 400 head.

[4] The FulBe na'i have traditionally shown less interest in sending their children to school because their management systems are more strictly dependent on their children's labour.

southern Gongola state there has been a significant transfer of cattle to the farming populations since 1930. The main group to begin cattle ownership were the Samba, living in the Ganye region. When the Samba first began to acquire cattle, the purchase of cattle on the open market was very difficult; grain prices were low in comparison to live stock, and the absence of an established marketing system in the region restricted accumulation of capital. However, the FulBe, whose herds began to expand rapidly after the 1920's when they first moved into the region in substantial numbers, soon required additional labour to take their herds on long-distance transhumance. Their solution was to take on Samba men to work for them and to pay them in cattle. Normal payment at that period was a bull for an entire year's labour; [5] the bull could either be sold by the herder, kept with the herds of his employer, or looked after separately at the homestead. Frobenius (1913) reported that the Samba kept the small muturu (dwarf West African shorthorns), in the previous century, and that they were eliminated by the rinderpest epidemics of the 1890's. The memory of this practice may well have encouraged them to begin herding the large Adamawa gudali zebu herded by the FulBe.

16. However, the availability of surplus labour was probably more important; by no means all agricultural societies can afford to lose the labour of their youngest and healthiest men. But the Samba have unusually favourable conditions for agriculture; the Ganye region is wet, sparsely populated and suitable for all types of cereals and tubers. Combined with this was the relative inaccessibility of the area; although in the nineteenth century it was situated close to trade routes passing through Laro and Kontcha, the establishment of international frontiers in the colonial period had the effect of isolating the region. As a result the Samba did not tend to drift towards the towns in search of work, and the lack of schools and other infrastructure meant that it was difficult to obtain the necessary qualifications for positions in the colonial

[5] In Niger, herding contracts were usually to herd a specific number of animals, whereas in this situation, Samba were hired labourers~ directed by the more professional FulBe herders.

administration. As a result, there was surplus labour and a lack of alternative investment opportunities; cattle became the obvious route to the accumulation of surplus capital. In the early period Samba worked for their FulBe employers to build the nucleus of a breeding herd; in order to obtain breeding females they would either buy them from nomadic FulBe or exchange bulls for females. Samba do not market or exploit the dairy products of their stock and were therefore interested in the cattle essentially as stores of wealth. As they accumulated larger herds they began to go on transhumance on their own account; with an intermediate herd of 5-15 animals they might pay a FulBe herder to take the stock on transhumance.

17. This process should not be interpreted as similar to that described by White (19814) and Swift et al. (1984), —the gradual alienation of pastoral herds to arable farmers and urban capitalists through a process of absentee animal ownership. On the whole, Samba are only too anxious to withdraw their cattle from the FulBe, who are believed not to care for them properly. (6) 18. In the course of this century, many of the Samba cattle-herders have built up sufficiently large breeding herds to become independent mixed farmers. Most of today's Samba cattle-owners inherited their cattle from their fathers.

18. Development. in the national economy have created a situation where there is a surplus of cash in rural areas, and farmers are seeking to invest it.

Improved roads and a spectacular expansion in urban demand for staples has increased the value of the labour of arable farmers; so actual cash incomes from surplus cereal sales are higher. In 1975, a mudu (half a medium calabash), of sorghum sold for ten kobo in rural Nigerian markets. In 1983, the average price was approximately one Naira [7] or ten times as much.

[6] A survey in other parts of the Nigerian Middle Belt (Blench, 1984a) found that other arable groups who had chosen to invest in cattle had recently removed them from the care of the FulBe who were said to be increasingly untrustworthy.

[7] The Nigerian Naira is currently worth about one pound sterling at official exchange rates.

In addition to this, the relative price of grain against milk has increased several hundred per cent in favour of grain since the early 1970's. As a consequence, FulBe pastoralists who depend on sales of dairy produce for subsistence must increasingly sell stock to meet their grain needs. A pastoralist with a herd of 100 animals in 1984 would expect to sell 15 animals, mostly barren females and bulls, in order to meet the needs of an average family.

19. One response to this has been the evolution of a group of 'farming nomads' —FulBe na'i whose herds cannot support this high offtake, and so who produce enough grain to feed their families through agriculture. According to a group of Jaafun FulBe now farming near Sunkani, this began in 1980. Their farms are always on previously cleared fallow land, sometimes by agreement with a nearby farmer who has previously used the land. They have moved the farm every year since they began this. Since the 1930's there has been considerable development in the commercialization of livestock markets in the Toungo Block. There are now official government markets, ~ throughout the region, and in some regions large informal markets (RIM, 1984: Map 5). The market at Mayo Ndaga, for example, was said to be processing 3,000 head of cattle every week in the early 1980's. A higher cash income, and a greater availability of stock on the open market has induced more Samba to buy animals on the open market. Ironically, wealthier Samba now sometimes compete to hire cattleless FulBe [8] to do their herding, thus reversing the traditional relationship.

20. In the meantime, another result of the development of the cash economy in Nigeria has been to increase the level of bridewealth payments among Samba. As a result, temporary employment as herders has become a popular method for Samba to earn cash to pay bridewealth, thus providing a flexible pool of labour.

21. However, unlike the situation in Niger, where WoDaaBe are driven by poverty and take exploitative management contracts such as those of the jokkere type (Swift et al. 1984:320), FulBe in the southwestern Adamawa must search for pastoral labour because their herds are too large to be managed by kin, fictive or otherwise.

22. As a result, hired herders have effectively negotiated a rise in wages; the amount of labour considered equivalent to a two-year-old bull has been forced down. In 1983 it was six months – but during the second period of fieldwork in 1984, it had been brought down to five months in some regions. The equation put to their employers by the hired herders is simple; how much work is equivalent to the cash that could be earned by producing surplus grains and selling them to traders? Given that the actual sources of supply of cattle are no longer limited, the opportunity-cost of labour, i.e. the potential rewards of other uses of surplus labour, are presently increasing.

23. The response of FulBe employers has been similar to that of employers in capitalist economies elsewhere; they have attempted to look elsewhere for their sources of labour. The western part of the Benue Lowlands region is inhabited by non-Muslim arable farming groups such as the Mumuye, the Bali, the Kpasham, the Wurkum and Wurbo. Relations between farmers and pastoralists have generally been poor in this region; moreover, these societies did not have surplus-producing agricultural economies or evolved marketing systems. However, the Mumuye have recently begun to accumulate surplus wealth from the yam trade, and the FulBe have in the last few years begun to negotiate with the parents to take their sons on transhumance and initiate them into pastoral practices. They are able to use Mumuye parents' relative inexperience of this type of arrangement to obtain labour contracts on more favourable terms; however, the situation among the Samba will undoubtedly recur among the Mumuye, perhaps more rapidly, in view of increased inter-communication between regions in modern Nigeria.

24. Essentially, this elaborate case-history suggests two things; that the price of surplus labour available to pastoralists reflects sensitively its availability, and also its cash value, measured in terms of alternative strategies for investing it. It also suggests that the principal pastoralists have over-extended their principal capital asset, their herds, for the available labour and so cannot control the labour market; they are constrained by its fluctuations unlike other regions of pastoral production.

Alienation of stock and emerging social stratification

25. Little (1985) provides a comprehensive review of materials on absentee animal ownership and the consequent impoverishment of herders. Detailed data is provide by Swift et al. (1984) and White (1984) concerning the process of stock alienation. In the pastoral zone of Niger, expanding arable populations together with ecological constraints have tended to force cattle pastoralists into increasingly marginal regions. WoDaaBe in Niger have moved into areas of lower rainfall further north [9] since 1920. The marginal conditions have made it increasingly difficult to maintain 'viable' herds, that is herds that can reproduce themselves, at the level of offtake necessary to maintain the family group.

26. The most common solution in West Africa to such a dilemma is settlement and the movement into agricultural production; a solution that is widespread throughout Nigeria, and continues apace in some regions. In marginal zones this solution is not always practical, especially since the establishment of international boundaries has restricted this type of free movement of populations. The pastoral zone of Niger is outside the arable region and the density of agricultural settlement makes this type of relocation extremely difficult. The only alternative is to sell stock; which can only be a temporary solution. This creates an appropriate opportunity for urban investors with surplus capital; they buy the cattle

and then loan them to herders who no longer have viable herds.

27. The contracts are essentially similar to the debt-traps created in certain types of landholding situation in South America; the debtor can never accumulate enough capital to buy out. In this case the pastoralist can never build up a large enough surplus, because of his dwindling capital base to free himself from the contracts. In the event, some FulBe simply give up the pastoral mode of production entirely and migrate to another country where land is available to farm. FulBe from the arid zone appear to have adopted this solution since the mid-1970's, although, since the process must be clandestine in the political climate of modern West Africa, it would be difficult to prove.

28. The end result is emergent social stratification on a national basis; there is a trend for cattle-herders in the pastoral zone of Niger to become the permanent debtors of wealthy entrepreneurs and no longer control surplus production of their own labour. This process of decapitalization has accelerated since the drought of 1973-4, when many WoDaaBe were compelled to sell breeding stock for food. The references in Little (1985) give some indication of the extent and degree of this process in sub-Saharan Africa, but it seems likely to be occurring throughout the arid zones, wherever there is a similar squeeze on resources.

29. The contrastive situation in southern Gongola State goes beyond purely ecological variation. Although diseases such as trypanosomiasis make considerable impact on cattle numbers, cattle are not in otherwise marginal areas and therefore are not subject to other environmental pressures. The expansion of arable farmers is not critical at present as most of the region except the Mambila grasslands has a low density population. Herds therefore tend to increase faster than the labour expands to manage them. Therefore, in contrast to Niger, labour has the upper hand; there is no possibility of enforcing the contracts of the type common in Niger.

30. The other factor of crucial importance in Nigeria is the broad spectrum of investment possibilities. In many underdeveloped countries, surplus capital has only limited opportunities for investment; livestock are locally available and a traditional and familiar cultural institution. A limited commercial infrastructure restricts the potential for economic innovation. However, in Nigeria, with its abundant population and oil-wealth, many types of commercial enterprise have seen remarkable growth over the last two decades. If you discuss the investment of surplus wealth, almost inevitably people will talk in terms of transport, such as buying shares in a taxi, or in trade-goods, such as clothes or soup-flavouring cubes. Returns on these are rapidly available and do not involve the building-up of long-term relations of entrustment. As a result, urban entrepreneurs are presently not very interested in livestock for investment.

31. This is not to deny that social stratification is developing in Nigeria; the two decades since 1965 have seen a considerable growth in both the urban elites and their disposable income. At the same time, there are a certain number of cattleless Fulbe on whom Fulbe employers prefer to depend. However, the presence of such a group does not indicate a permanently dispossessed class; these are almost inevitably pastoralists who have lost their herds through disease or bad management. The importance of non-Fulbe herdsman in the Toungo Block reflects the low numbers of dispossessed Fulbe; because for most pastoralists it is economically more practical to turn to grain-farming to recoup losses. Many Fulbe in the Ganye region were compelled to begin grain-farming for the first time in 1983 as a result of the rinderpest epidemic; they unanimously said that this was a quicker way to rebuild herds than working for someone else.

32. There are, however, a number of ranches in one location; the Mambila

Plateau. Some of these are government, some privately owned, but both effectively are the property of a new powerful urban elite. This elite is powerful enough to displace the traditional owners of the land, but not to

control their subsequent movements. The crucial difference from the situation in the arid zone is that the FulBe on the Mambila Plateau do have land to expand into; the forest and wooded savannah at the foot of the escarpment. Although the risk of trypanosomiasis has deterred any of the FulBe from the uplands settling permanently in the lowlands, their use as dry season grazing essentially prevents the process of loss of stock and the spiral of decapitalization described for Niger and northern Kenya.

33. The grassy uplands of the Mambila are highly suitable for stock-raising, as they are wet, treeless and farming is confined to river valleys. However, the expansion of cattle over the last half-century has allowed much of the pasture to become seriously degraded (RIM, 1984:57). Therefore, only enclosed land is likely to continue to support herds. If the process of enclosure continues, so that the original pastoralists on the Plateau have no option but to move permanently down to the base of the escarpment, then the high incidence of tsetse infestation may well have serious consequences for the reproduction of their herds.

34. Such large owners buy their stock on the open market; a farm manager is then installed to administer the ranch. The displacement of the population with traditional rights to the land has resulted in increasing exploitation of the lowland regions. In 1977, FulBe living on the western edge of the Plateau began to use the rain-forest on the Baissa road as dry season pasture. During the same period, they began to move off the northern edge of the Plateau to the forest around Serti and Mayo Selbe.

35. To give a concrete case-history, Alhaji Jaalike, who lives in the Mambila uplands, owns seven 'herds', amounting to some 800 animals. In the post-Independence period, his cattle were sent to the river valleys near Bamenda every dry season. About 1970, the Cameroun government ceased to allow cattle to cross the frontier seasonally, and he began to send them to the Donga valley. Since 1980, this has been prohibited by the Mambila Local Government, on the grounds that the watering of the herds interferes with the extensive valley farming in this region. Since then he has been

compelled to send the cattle to Mai Idanu, in the lowland forest north of the Plateau.

36. However, at no point in this sequence has he been compelled to reduce the numbers of animals herded. Alhaji Jaalike farms sufficient maize to support his family, and because some of his children now go to school, he has been compelled to hire more herders in recent years. So, although the exigencies of modern politics have forced changes in pastoral strategy on herders, they have so far been able to maintain their exceptionally large herds. So the 'dwindling capital' and virtual serfdom that characterises the situation among the WoDaaBe in Niger has no parallel in Nigeria.

37. In consequence, there is no exploited underclass of the type familiar from the 'debt-trap' cycle. At the most basic level, this is because of an unusual abundance of resources both in terms of land, pasture and water. Traditional pastoralists, far from having to alienate their own labour, must attract non-pastoralists into herd management.

Consequences for Livestock Development

38. In the sparsely populated regions of the Middle Belt, livestock development must take account of a different set of variables from the arid zone. Far from trying to assist pastoralists to co-operate to prevent the extinction of pastoralism and pastoral groups, priority should be assigned to encouraging herd-owners to destock, or diversify their investment of capital so that livestock is available to as many potential stock-rearers as is appropriate within the framework of an overall livestock policy.

39. In Niger, the proposed livestock development strategy was the formation of herders' co-operatives to receive credit and pool resources (Swift & Maliki, 1981). In discussing similar ventures with pastoralists in southern Gongola State it rapidly became clear that co-operatives would have a small chance of success, because the favourable material conditions tend to reward private economic initiatives.

40. For example, one of the most frequent requests for livestock development in the northern frontier of the Toungo Block was for dams to hold water during the dry season. Inevitably pastoralists first suggested that the Federal Government should construct and pay for these. After it was made clear that this was unlikely to happen, it was suggested that the wealthiest cattle-owners in the district combine to pay for the dam. These owners were prepared to make such money available. This type of cooperation was then suggested as an example of a more general co-operation among pastoralists to protect their interests; however, the herd-owners flatly refused. The relative security of their situation allowed them to dispense with co-operation, outside the context of specific inputs with immediate benefits.

41. Development strategies depend on the objectives of national governments; a region with low population density in a country with an expanding population may be seen as an ideal location for the expansion of livestock, or alternatively, to be used for 'overspill' arable populations. Nigerian Federal Government objectives for the Toungo Block are generally in line with the notion of a region of pastoral expansion. However, the present situation, with over-large herds, and unplanned colonization by arable farmers along the edges of newly-constructed roads is leading to inefficient land-use and land degradation.

42. Ideally, therefore, pastoralists with excessive herds would be encouraged to destock and to invest their surplus wealth in more diverse economic enterprises. In practice, such schemes have been unsuccessful in the past, and this trend is likely to continue. One argument put forward by pastoralists against destocking was the lack of other possible investments; however, a more important factor in this is the prevalence of disease; large numbers of stock constitute insurance against disease. The recent rinderpest epidemic (1983-4) unfortunately acted to confirm this pattern; those herders with a number of herds geographically dispersed retained their capital base in livestock, while those with single herds were sometimes wiped out completely. Destocking is therefore only likely

to occur;

a) When a range of alternative investment opportunities bringing comparable returns are available.

b) When infrastructural institutions, such as banking and veterinary services, are sufficiently well developed to provide security for the stock-owner against loss of the capital base.

c) When the pressure on land is sufficiently high as to make the management of large herds around farms prohibitively costly.

42. These conditions are unlikely to prevail throughout southern Gongola State for some time to come. The absence of any type of integrated rural development scheme effectively allows the present situation to continue. Development must therefore be based on the provision of inputs to appropriate 'nodal points' (RIM,1984:150); towns and regions where the building-up of infrastructure is designed to have the greatest impact on pastoral production systems.

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