

## MIGRATION IN WEST AFRICA: A SAVANNA VILLAGE PERSPECTIVE

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Migration in the West African savanna today is a powerful demographic force. A tradition of local migration by many and long-distance migration by a minority of warriors and traders has been transformed in the last several generations. Now there is a mass movement from the interior savanna to the wealthier forest and coastal areas, where work opportunities in commercial agriculture and cities are relatively abundant. For most this is followed by a return move to the savanna. For nine West African countries during the period around 1975 it has been estimated that 1.9 million people from the savanna were living in coastal and forest areas, a number equal to 12.3 per cent of the savanna population (Zachariah and Condé, 1981: 58).

The debate over whether migration in West Africa and the Third World is a positive or negative force for development has all too often seemed to devolve into opposing viewpoints based on ideological assumptions (Chapman and Prothero, 1983; Kearney, 1986). Modernisation theorists, beginning with Lewis in the 1950s, have viewed migration as a result of rational economic decisions made by individual migrants and their households to leave rural areas of low productivity and move to areas where they have greater opportunities to increase their levels of income and consumption, or at least where the opportunities are *perceived* to be greater (Todaro, 1985: 253–61). Others have stressed that current patterns of migration are the natural extension of indigenous patterns (Chapman and Prothero, 1983), or that remittances are ‘a major benefit of migration’ (Eicher and Baker, 1982: 233).

On the other hand, dependency and world system theorists have seen migration as resulting from macro-economic forces of the Western-dominated world system, beginning with colonialism (Amin, 1974; Cordell *et al.*, 1987; Meillassoux, 1981). The goal has been the extraction of profit from African labour, with detrimental results for Africa, particularly its rural communities. Individual choices are seen to be constrained by the larger system of exploitation so that underdevelopment results.

One of the most important aspects of this controversy is the effect of migration on the rural sending communities. Hill, for example, believes that long-term migration in West Africa for ‘lineage-organized’ societies like the Tallensi (of the north-east Ghana savanna) is positive because ‘population density is so high that a considerable proportion of the adult male population must be absent at any one time, if standards of living are not to fall drastically’ (1986: 126). In contrast, Plange states that as a result of migration in northern Ghana ‘many young able-bodied men were siphoned out of the Region. Thus, gradually, communities were depopulated, leading to diminishing returns in production’ (1979: 671). To address the question of the direct effect of migration on rural West African savanna communities, and its implications for long-term development, requires not only data on who leaves, for how long, and what they take from and

return to the village, but also an understanding of the historical development of migration in a broad geographical perspective.

Many commentators on migration have deplored the lack of relevant data that would allow analytical progress beyond ideologically determined conclusions, and they advocate the integration of micro- and macro-level approaches (Chapman and Prothero, 1983; Eicher and Baker, 1982: 234; Hammel and Howell, 1987; Kearney, 1986). My purpose in this article is to follow this approach by providing detailed data on the magnitude, nature and impact of migration in the Kusasi village of Zorse, within the historical and geographical context of north-east Ghana and the West African savanna, and to stimulate questions about the significance of migration for Kusasi, African and world development. While these data do not allow strong conclusions about the long-term effects of migration, when combined with other information on Zorse and the savanna region, they do support some reasonable suggestions.

#### THE KUSASI OF THE WEST AFRICAN SAVANNA

The Kusasi call their home Kusaok, which includes Bawku District, Upper Region, in north-east Ghana (Fig. 1),<sup>1</sup> and small areas of neighbouring Togo and Burkina Faso. The Kusasi have developed an intensive production system which manages soil fertility (e.g. fallowing, adding organic matter, growing nitrogen-fixing crops), water (e.g. contour bunding to control run-off) and crops (e.g. planting many different crops and crop varieties, interplanting, transplanting) (Netting *et al.*, 1980: 255–323). This has allowed the development and maintenance of a coherent socio-cultural organisation and a slowly growing population until European intervention.

Kusasi households, with an average of seven members and three to four hectares of cultivated land, are the units of production and consumption (Cleveland, 1980: 123–4). Sorghum and millet are the main crops, intermixed with sesame, okra, roselle, cowpeas and other minor crops. Groundnuts, Bambara groundnuts, cotton and rice are minor crops grown in separate fields and often marketed. Those with access to valley land with a high water table have dry-season gardens watered from shallow, hand-dug wells. Households usually keep a few chickens, guinea fowl and goats, and perhaps one or more cows or bullocks.

Kusasi houses, consisting of clusters of round, earthen rooms topped with conical grass roofs, are dispersed over the savanna, with each one adjacent to a continuously cultivated field (*saman*) which is fertilised each year with animal manure, household trash, ashes from burning crop residues and weeds turned under as green manure. The *saman* is the centre of Kusasi agriculture. Households usually have several more distant fields which are periodically fallowed, but the production on the *saman* is the most reliable and supplies the major portion of the household's annual food supply.

The majority of farmers use only short-handled hoes, knives, baskets and fire as their tools, though there are a few bullock ploughs in the villages. Food is prepared by the women, using wooden flails, stone grinding tools, clay pots and open fires. Women and men share planting and

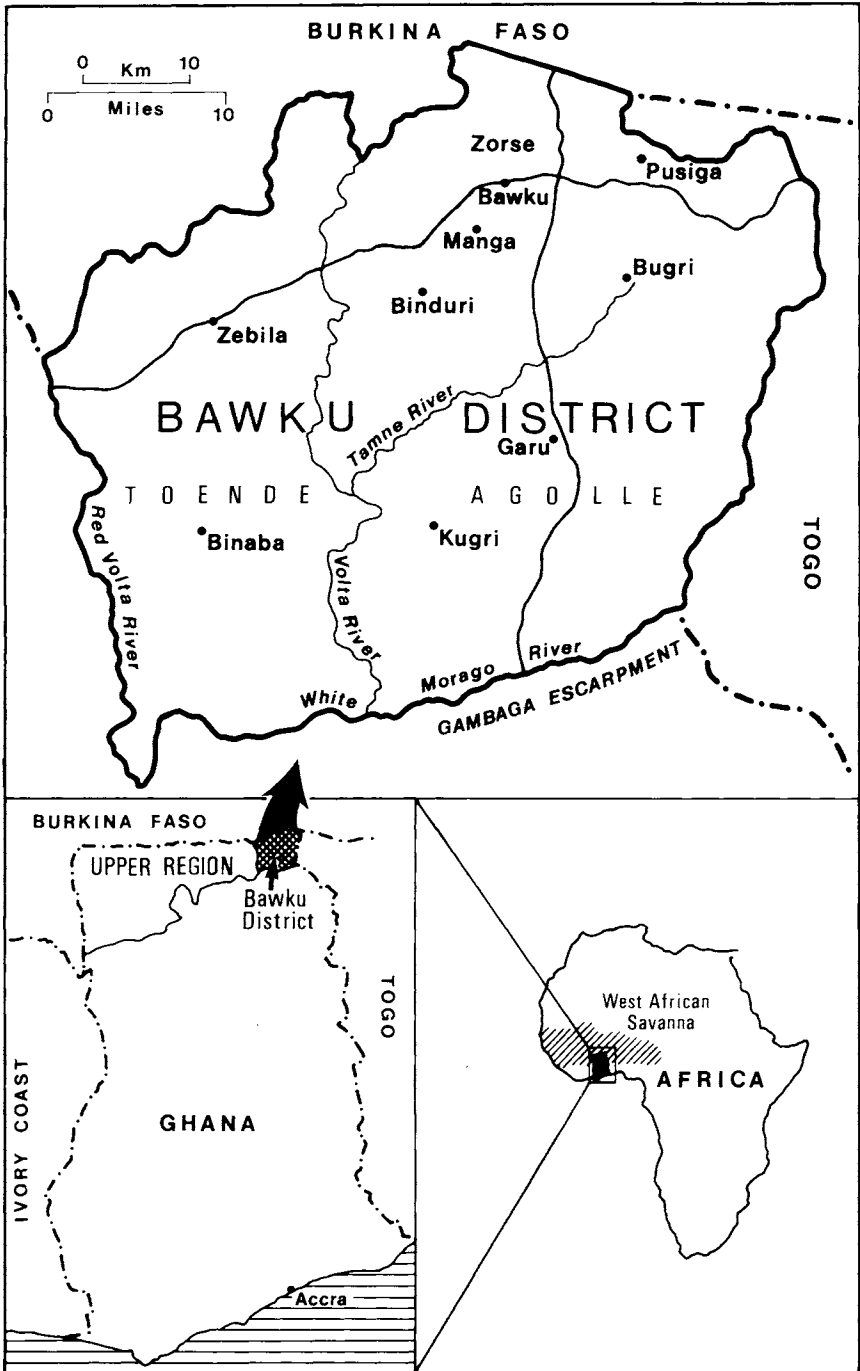


FIG 1 Location of the study area

harvesting, but men are primarily responsible for field preparation and weeding. Women haul water and fuel for cooking. Children make important contributions to the household labour force. Younger children perform less demanding tasks, releasing adults for more arduous work, while by the age of fifteen they have assumed adult work loads (Cleveland, 1989).

Marriage can be viewed as an exchange by the lineage of the productive and reproductive powers of daughters for those of wives. A man must pay bridewealth, the most important part of which, in terms of resources, is four cows, to the lineage of his wife. Young men traditionally obtained bridewealth only with the support of their father and other lineage elders.

Mortality rates in Kusaok have decreased, especially since World War II. Because there is unlimited demand by parents for children as household economic assets, decreased infant and child mortality rates have led to increased fertility rates through decreasing postpartum abstinence (Cleveland, 1986). Another factor contributing to increased fertility has been the decreased age of women at marriage. The population in Kusaok is now doubling about every thirty years, with population densities in the cultivated areas of Bawku District reaching 270 km<sup>2</sup> by 1970 (Cleveland, 1980: 174, 197-8).

Increased population density has led to smaller farm sizes, increasing cultivation of marginal land, decreased fallow periods and less organic matter in the soil. These effects were already visible to outside observers by the 1930s (Lynn, 1937: 5-6). Sheet and gully erosion have become widespread (Adu, 1969), as has the deterioration of range vegetation and tree resources (Rose Innes, 1977: 20). The severity of food shortages appears to have been increasing.

Efforts by outsiders to address these agricultural, population and environmental problems date back to the 1930s and continue today. They have included the introduction of improved farming techniques (especially mixed farming, using ox ploughs) and inputs, water and soil conservation measures, forest reserves and anti-grass-burning measures, imported water supplies, the promotion of birth control, and resettlement to less densely populated areas.

The Kusasi themselves have responded to changing cultural, social, economic and environmental factors, attempting to maintain an acceptable level of food supply. Their responses have included the intensification of agriculture by decreasing fallows and growing dry-season gardens, experimenting with crops and cropping patterns, adopting new crops like groundnuts, tomatoes and mangoes, adopting new varieties of existing crops, decreasing birth intervals to augment the household labour supply, widening the resource base by participation in the wage-labour and market economy, and emigrating from Kusaok for opportunities elsewhere.

#### METHODS

The field data discussed in this article were collected in the Kusasi village of Zorse between October 1976 and March 1978. In January 1977 Zorse consisted of 260 earth and thatch compounds (houses) dispersed over an area of 18 km<sup>2</sup>, and lying between 5 km and 11 km from the district capital of Bawku town. I collected data by participant observation, informal and

formal interviews, and several surveys in a 50 per cent random sample of Kusasi houses. (The seven Fulani houses in the village were not included in the base population.) The resulting sample included 123 houses containing 140 households and 1,031 residents in January 1977. By December 1977 there were 126 houses, 145 households and 989 residents. *De jure* residents in the sample census for the calendar year 1977 numbered 1,134. The data on Zorse migration presented here are from four sets of data, which I will describe briefly.

1. The *de jure* population of Zorse in 1977 is from the sample census which I conducted by visiting each house in the sample and interviewing the household head. It included questions on developmental stage, events at time of birth, and relationship to the head of the household. Beginning in April 1977, four household surveys were conducted every three months to assess changes in household composition and individual characteristics. People living in the village for six months or more during the year were considered *de jure* residents. I developed a 100-year calendar of locally recognisable events which I used in conjunction with data collected in surveys and interviews to estimate the ages of those in the census. By cross-checking information on the ages of individuals within families and lineages, conducting numerous follow-up interviews, and by increasing the awareness and interest of the villagers in numerical ages, I feel that quite accurate ages were obtained.

2. In addition to *de jure* residents for 1977, I enumerated long-term male emigrants who had left the village before 1977 by asking all household heads in the sample whether they had any sons, brothers or brothers' sons not living in Zorse. This included classificatory sons and brothers: half-brothers, half-brothers' sons, fathers' brothers' sons, fathers' brothers' sons' sons, fathers' fathers' brothers' sons, and fathers' fathers' brothers' sons' sons. The same information was gathered as for *de jure* residents, but it was not extensively rechecked.

3. All adult women ( $n = 334$ ) from the sample census were included in a pregnancy history survey, and I completed interviews for 275 of those women which included the dates of birth of all children and a question about the current residence of all living children ( $n = 705$ ) (Cleveland, 1986).

4. I also obtained genealogical data by interviewing eight members of a major Zorse lineage, all elders, with the exception of my senior field assistant, John A. Mbod, whom I interviewed on a number of occasions. The characteristics for which fairly accurate and reliable information could be gathered were limited for most lineage members by the long period since their death or departure from Zorse. They included generation, migrant status, migrant status of any brothers, residence while a migrant, whether an adult or adolescent at the time of migration, and whether currently absent migrants intended to remain permanent migrants. For most migrants, informants were unable to provide information on the reason for migrating and occupation while absent from Zorse.

#### THE HISTORICAL CONTEXT OF MIGRATION

Current migration patterns can be understood only in their historical and geographical contexts. The break-up of the indigenous social, political and

economic structures of northern Ghana by the British colonial administrations was both a part of, as well as a result of, a policy whose aim was to capture the labour of the north for work in the south. These social changes, coupled with increasing demographic pressure resulting from increasing population (itself in part a result of social changes) and government acquisition of farmland, have led to the current high rates of seasonal and long-term migration.

There were contradictions in British colonial agricultural policy in Africa, since it included both the preservation of local agriculture and economic 'modernisation' to increase production (Levi and Havinden, 1982: 124-33), and northern Ghana was no exception. For example, there was some resistance among administrators in the north to the enthusiastic support of administrators in the south for labour migration. In the 1930s there were attempts to improve agriculture (Cleveland, 1980: 42-7; Lynn, 1937). In practice, however, colonial goals of temporary labour migration to the south seem consistent with the policy of encouraging permanent local migration within the savanna and improvements in indigenous agriculture, in order to relieve local population pressure and maintain adequate food production in the migrants' home communities.

#### *The pre-colonial period*

Statements made by people in Zorse support those recorded earlier (Fortes, 1945: 238-9; 1949: 83; Syme, 1932: ii), that the movement of individuals in north-east Ghana was restricted by the state of animosity between neighbouring villages and tribes, usually resulting from disputes over brides and bridewealth cattle. Yet there is also evidence of extensive migration during that time. The 'ethnographic picture' of northern Ghana and southern Burkina Faso in the 1930s suggested to Fortes that in the past the population was 'constantly being redistributed by migration of small groups' (Fortes, 1945: 7). The Kusasi and related groups have legends about origins to the east and north which agree with what is known from historical studies (Hilton, 1962; Syme, 1932).

Migration from kingdoms to acephalous areas caused by disputes about office seems to be common in northern Ghana (Goody, 1977: 537). Localised shortages of arable land caused by increasing population, cycles of infestation by the black fly (the vector of onchocerciasis, see Hunter, 1966) or encroachment by neighbouring tribes may have led to pressure on resources, motivating men to migrate to find more or better land, or alternative sources of support.

Throughout the savanna there were military movements by the various states and kingdoms, movement along trading routes, and slave raiding and trading, first across the Sahara and then increasing to the south with the advent of the European international trade in African slaves in the sixteenth century. The Kusasi people today appear to be the result of a complex intermingling of peoples through migration due to enslavement, military conquest, political pressure, trade and the search for new fields and grazing areas.

*Local migration in the colonial and national period*

Localised food shortages were a growing problem during the colonial period, and coincided with a rapidly increasing population (Hilton, 1962; Syme, 1932: 3). The more densely populated area around Bolgatanga east of Kusaok was the first to feel the effects of sustained food shortages in the 1930s (Fortes, 1945: 156; GNA, 1930). The Kusasi were relatively well-off during this period, supplying neighbouring areas with food (GNA 1930: 10). Some Frafras from Bolgatanga even came to buy food in Bawku (Lynn, 1937: 34). However, population density in Bawku District was also increasing, from 19 km<sup>2</sup> in 1921 to 71 km<sup>2</sup> in 1970, with two major famines after World War II, and food shortages becoming widespread (Cleveland, 1980: 197–8). Local population pressure increased as Kusasi were summarily evicted by the authorities from farmland in order to establish forest reserves and other projects which provided little local benefit; 'Families lost their most fertile agricultural lands without any compensation' (Der, 1975: 140). Zorse has three forest reserves on its borders and people still complain of being evicted from their farms in the 1940s, which they physically resisted, and they have shown me former house sites and graves in one reserve.

Colonial officers considered the residents of north-east Ghana to be conservative, tied to the land, and resistant to their advice to migrate to less densely settled areas (GNA, 1930; Lynn, 1937: 36). However, Tallensi attributed their moves to peripheral settlements to a lack of cultivable land (Fortes, 1945: 156), and there was significant movement in north-east Ghana, though probably not enough to counter increasing pressure in the densely settled areas (GNA, 1930; Hunter, 1967a; Smith, 1945: 9–11). In the 1930s the British government resorted to large-scale movement of people to planned agricultural settlements, although this too failed (Cleveland, 1980: 148–50). There is evidence that between 1948 and 1960 northerners continued to move from more to less densely populated areas (Caldwell, 1968: 141).

Despite a long history of permanent local migration, such movement is not undertaken lightly, as there is a strong attachment to the ancestral land. People in Zorse explain that when a man's family is frequently sick he will seek advice from a *ba'bugut* (pl. *ba'bugdib*, indigenous religious practitioner) who may advise him that the place is not healthy for his family, that there are spirits who cannot be appeased. So, to safeguard his family's health, the man must leave Zorse to find land elsewhere, often within Kusaok, where a man may have maternal relatives. During the first several generations the migrants return to their ancestor shrines in their home village for worship, but eventually younger men have ancestors in the new area, and so ties are gradually diminished. Such culturally sanctioned emigration may function to reduce locally high population densities when food shortages lead to increased morbidity.

*Long-distance labour migration*

European colonialism has had a major impact on patterns of long-distance migration, beginning with the greatly increased demand for slaves created by the trade to the New World in the sixteenth century. While the Kusasis

appear to have escaped the worst ravages of the slavers operating in northern Ghana, they were frequently raided for slaves (Syme, 1932).

Current patterns of migration developed after the turn of the century as a direct result of the British determination to exploit northern labour, and are characterised by high rates of both seasonal and long-term male migration. Following treaties with the French and Germans in 1898 and 1899 respectively, the British established the protectorate of the Northern Territories and proceeded to enforce their authority (Anafu, 1973; Fortes, 1945: 12). The first British station was established in Bawku in 1909 (Syme, 1932: ii-iii). Northerners were not, however, altogether agreeable to colonial plans to rule them, and coercion was used, first by the military, then indirectly through pressure on local chiefs. There was armed resistance among the Tallensi (Anafu, 1973). As part of their strategy to establish control of the north, the British introduced a new currency, shut down the traditional trading centre of Salaga, and opened a new trading centre at Tamale under the control of Europeans (Plange, 1979).

Because southern Ghanaians were considered unwilling to perform unskilled labour and were already growing cash crops which produced revenue for the state, the colonial government saw northern Ghana as a 'labour reserve' for southern Ghana (Benning, 1975a; Fortes, 1945: 13; Plange, 1979: 662; see also Thomas, 1973). Colonial educational and development policy in general was designed to provide a pool of cheap, unskilled labour (Benning, 1975b).

Beginning in 1880, the colonial military obtained labour for local use by direct force, but this gave way to recruitment through chiefs, who often received 'head money' for the recruits they provided (Plange, 1979: 665). Recruitment of men in northern Ghana (then the Northern Territories) for labour in the south began in 1906, with the first groups gathered from the north-east in 1909 (Thomas, 1973). This recruitment was carried out both by private companies, mostly the mines, and by the government, mostly for railways, harbour facilities and motor roads. Recruitment of underground labour by the private mining companies was virtually forced labour from 1920 to 1924, for the companies were assisted by government political officers who gave local chiefs quotas, and 'chiefs felt themselves *obliged* to meet the orders of political officers for mine labour' (Thomas, 1973: 101, emphasis in the original). Working conditions in the mines were extremely poor, and, with the forced recruitment which resulted in the weakest being sent south, there was a high mortality rate. There was heavy military conscription in northern Ghana in the 1930s and early 1940s, and one Zorse resident claimed that a major famine was caused by men running into the bush to escape being conscripted.

The system of recruitment of labour by government and private business ended in the late 1920s, and direct taxation (beginning in 1936) and Native Treasuries under the new policy of 'indirect rule' were to 'replace forced labour' (Thomas, 1973: 103; see Fortes, 1945: 13). At the same time the development of roads in northern Ghana in the late 1920s not only greatly reduced the need for porters (Thomas, 1973) but made long-distance migration in response to rising demand for labour easier. For example, labour in southern mines, primarily from northern Ghana, increased 330 per cent during the 1930s (Greenstreet, 1972). Northerners in the south



got the dirtiest, lowest-paying jobs (Greenstreet, 1972). The mines were insanitary and unsafe, and mortality and morbidity rates were quite high, with mining companies leaving disabled workers to fend for themselves, and the government making only weak attempts at improvement (Greenstreet, 1972; Thomas, 1973; Plange, 1979).

The pattern of long-distance labour migration, once established through coercion, was reinforced by continuing land pressure (Fortes, 1945: 156; Hunter, 1967a; Prothero, 1957) and by an increasing desire on the part of young men to 'see a bit of the world' before marrying (GNA, 1931a: 8). Migration in turn affected society and culture. There has been a tendency for migrants from northern Ghana to stay away longer than just for the dry season, that is, for periods of time long enough to affect agricultural production in their home communities adversely (Hart, 1974; Nabilla, 1975; Plange, 1979; Thomas, 1973), a situation not uncommon in Zorse. It also helped to create a group of young men who, on their return 'do not take readily to farming again, and represent a floating population which is the source of considerable concern to their elders' (Lynn, 1937: 11).

Colonialism was a major force weakening the authority of the elders in the kinship-dominated social organisation of northern Ghana, and in weakening also the ties of the agricultural and demographic systems to the local environment. The introduction of currency made possible the accumulation of wealth in a form that did not require the management that fields or cows did, and which could also be concealed (Fortes, 1949: 208). This new form of wealth, along with freedom of movement, undermined parental authority and led to young men 'resisting the authority of their elders' (*ibid.*: 206, 73), and in Kusaok is associated with young men earning their own bridewealth,<sup>3</sup> and with a decreasing age at marriage of women (Cleveland, 1986).

#### GENEALOGICAL EVIDENCE

Genealogical data on men in one Zorse lineage suggests that over the last four generations the proportion of men leaving the village has increased and that they leave at an earlier age, but that most return to Zorse. Forced labour recruitment had ceased some fifty years before my survey, and it was personal decisions that lineage members, without prompting, gave as reasons for migration.

These genealogical data must be interpreted with caution because of the likelihood of (a) some memory loss leading to under-enumeration and missing or inaccurate information on migrants which is probably greater for older lineages and older migrants, (b) the smaller numbers of men in older generations, (c) possible ignorance and bias on the part of interviewees, and (d) the large numbers of young men and children in the two youngest generations who may become migrants in the future. There does, however, appear to be very good recall of male ancestors among the older men of Zorse. This judgement is based on the large proportion of men who were named in the interviews even though they were dead, left no male descendants or were permanent emigrants.<sup>4</sup>

Like most lineages in Zorse, the one that I studied is a member of the Zogban clan, whose founder is said to have migrated from Zua, in present-day Burkina Faso, some ten generations<sup>5</sup> ago. The first mention of migration from Zorse occurred five generations ago, when two brothers left the village because of 'land shortage' to settle in another part of Kusaok about 20 km away. One brother returned to Zorse when he was an old man because he was told that he would have misfortune if he did not. He was given land to farm when he returned, but it was later confiscated by the colonial administration for a forest reserve.

For quantitative analysis I eliminated the six oldest generations, since they contained only one to five members each. Table 1 shows the distribution of the 162 men (including both adolescents and adults) in the four remaining generations from oldest (I) to youngest (IV), by migrant status and whether they were alive in 1977.<sup>6</sup> Ninety-four (58 per cent) of the men in these generations, spanning a period of time from about 1880 to 1977, had been migrants by 1977. Precise information on length of time spent outside the village was difficult to obtain, but for most migrants it was one to several years, with a range from less than one to thirty years.

While for 52 per cent of the migrants no reason for leaving was given, the reasons given for the others can be grouped into four categories: 22 per cent for reasons related to earning money in southern Ghana; 13 per cent to enrol as residential students, mostly in Bawku District; 6 per cent because of land shortage; and 5 per cent to join relatives. These data must be interpreted with caution, since such simple responses surely do not do justice to the complex reasons for migration.

In further analysis, generation IV was eliminated, since most of its members (forty, or 85 per cent) were still children, with only seven adults. From generation I to generation III there is a significant increase in the proportion of migrants (Table 2), rising from 37 per cent to 46 per cent to 76 per cent. Yet, while the relationship is highly significant, generation accounts for only 11 per cent of the variation in migrant status. There are obviously other factors involved, one being an increased probability that a man was a migrant if he had a brother who was also a migrant.<sup>7</sup>

The proportion of migrants who were *buribis* (adolescents) at the time of first migration increased from 10 per cent to 21 per cent to 33 per cent from generation I to generation III. However, the relationship was not significant when generations I and II were combined to create adequate cell sizes ( $\chi^2 = 2.46$ ,  $p < 0.20$ ). Residence of migrants when absent from Zorse has changed between generation I, when only 33 per cent of migrants

TABLE 1 *Genealogical analysis of adults in a Zorse patrilineage*

Gener- ation	Non-migrant			Former migrant			Current migrant			Total
	Alive	Dead	Total	Alive	Dead	Total	Alive	Dead	Total	
I	1	16	17	3	1	4	2	4	6	27
II	20	13	33	13	2	15	13	0	13	61
III	16	0	16	22	0	22	28	1	29	67
IV	2	0	2	2	0	2	3	0	3	7
Total	39	29	68	40	3	43	46	5	51	162

TABLE 2 *The effect of generation on migration*

<i>Migrant status</i>	<i>Generation</i>			<i>Total</i>
	<i>I</i>	<i>II</i>	<i>III</i>	
Non-migrant	17 (11.5)	33 (26.0)	16 (28.5)	66
Migrant	10 (15.5)	28 (35.0)	51 (38.5)	89
Total	27	61	67	155

$\chi^2 = 17.5$ ,  $p < 0.001$ ,  $\tau = 0.11$ .

went to southern Ghana, and generations II and III, when 82 per cent and 72 per cent respectively migrated to the south.<sup>8</sup> This change through generations from predominantly local to long-distance migration to southern Ghana can best be understood in the light of the historical analysis presented above, being the result of an increase in population pressure, the need for cash and the attraction and ease of travelling to the south, and also of the weakening of traditional society and culture. It may also be correlated with a shift in reasons for migrants leaving Zorse given by interviewees. In generation I five of seven men for whom reasons were given left because of land shortage. In generations III and II only one out of thirty-three reasons given involved land shortage as a reason, while eighteen involved work or getting to know southern Ghana.

While I was not able to determine the marital status of most lineage members, life histories of some returned migrants living in Zorse supported my general observation of a strong relationship between migration and marriage. As migration became physically easier, and the personal economic rewards increased, the control of lineages over the marriages of young men through the control of bridewealth cattle decreased, as discussed above. A typical pattern is to emigrate to the south at the time of marriage to earn money to purchase cows for bridewealth, to repay debts incurred to lineage members in accumulating bridewealth, or to flee from demands by the wife's lineage for payment. As early as 1922 one man I interviewed went to Tamale for an extended period to escape his wife's family, which was trying to collect bridewealth cows.

In spite of the changing nature of migration one important characteristic has not changed: the proportion of migrants returning to Zorse. Almost half of all men in generations I to IV (46 per cent, or 43/(43+51) who had migrated returned to Zorse before 1977. In fact the proportion of returned migrants in generations I to III is almost identical ( $\chi^2 = 0.95$ ,  $p < 0.98$ ). The reason for returning to Zorse is not just 'to die', although this is true in some cases. It also suggests that the proportion who return will rise, since most are still alive. Of six current migrants in generation I only two were alive in 1977, and they were both described as permanent migrants. In generation II, six of the thirteen current migrants (all living) were permanent, but in generation III, of twenty-nine current migrants, only three were said to be permanent, and one was dead.

Even the children of such 'permanent' migrants may return, as did an elderly brother and sister in the autumn of 1977 to Zorse. Their father,

who had migrated from Zorse as a young man, had urged them on his deathbed to return to Zorse, since they had never been there, and he wished that they might learn their true identity. His wish was ignored until persistent illness led them to seek advice from indigenous medical practitioners, and they were told that they should honour their father's wish. His children spoke only Twi, the Ashanti language, and when they went to meet the elders the current chief, who had been a migrant in Ashanti for many years, had to translate. It was determined that they were indeed the descendants of a Zorse man from the crowded central area of the village, and therefore entitled to land there, and a parcel was allocated.

#### THE PRESENT MAGNITUDE OF LONG-TERM MIGRATION

Ghanaian national census data for the Upper Region show a large proportion of the working-age population absent at the time of the census but provide no way of determining the length of absences. Data from Zorse show that the proportions of migrants are similar, suggesting that, like migrants from Zorse, migrants from the Upper Region of Ghana are long-term also.

#### *Long-term migrants in the Zorse sample census*

During the census interview I asked all household heads whether they had any sons, brothers or brothers' sons who had left Zorse in 1976 or earlier. A total of 144 long-term (non-seasonal) migrants were enumerated, which equals 56 per cent of all men 15–64 years old who were *de jure* residents of Zorse in 1977. Figure 2 shows the age distributions of these migrants.<sup>9</sup> These men had been absent (except for brief visits) between one and fifty-five years: 78 per cent left before the drought began in 1976, 68 per cent had been gone more than two years and 23 per cent more than ten years. Of the 144 migrants, twenty six (18 per cent) were living in the north (Upper and Northern Regions), while 115 (80 per cent) were living in the regions of southern Ghana.<sup>10</sup> This is probably mostly rural–rural migration, since the majority of the migrants (77 per cent) were working in agriculture (69 per cent of those in the north and 81 per cent of those in the south). In the south 71 per cent of those in agriculture were working on cocoa farms.

The population of long-term long-distance migrants in 1977 among male and female offspring who were enumerated in the pregnancy history survey and who were alive in December 1977 is also shown in Fig. 2,<sup>11</sup> and reveals the same general age distribution. A total of ninety-four out of 301 (31 per cent) productive adults (aged 15–64) were resident outside the Upper Region (45 per cent of males and 11 per cent of females).

#### *Bawku District and the Upper Region*

The extent of migration from Bawku District is suggested by the fall in sex ratios (males per 100 females) for the 15–44 age group, which has decreased from over 90 in the four censuses taken between 1911 to 1948<sup>12</sup> to less than 75 in 1960 and 1970 (Cleveland, 1980: 211–13). Sex ratios for the Upper Region in 1960 and 1970 are similar. In 1931 the Bawku district commissioner estimated that 5 per cent of young Kusasi men were migrants,

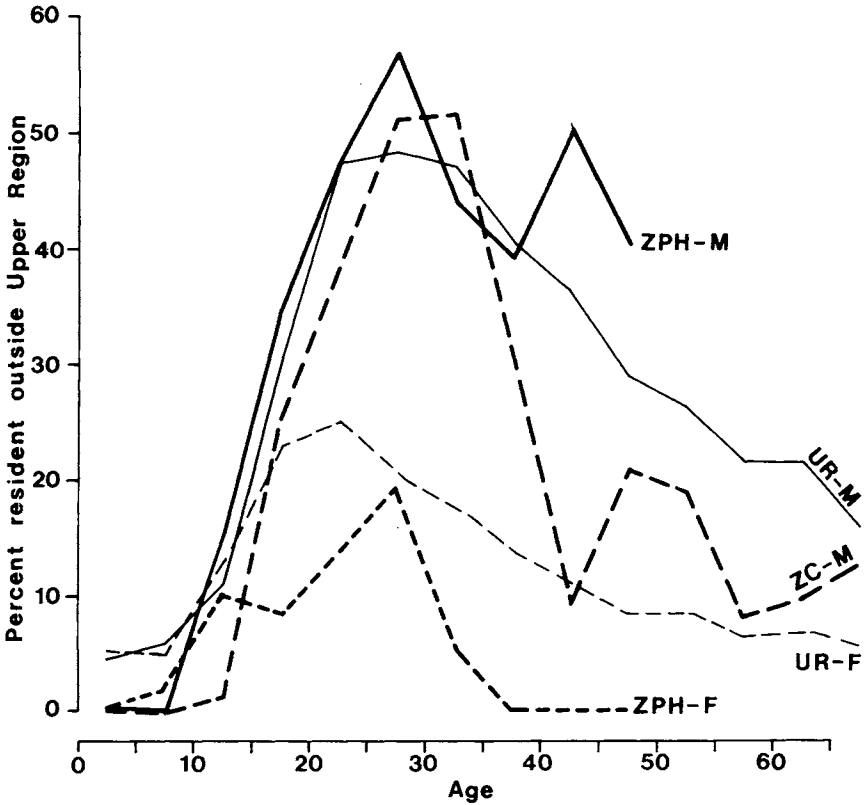


FIG 2 Percentage of population who are migrants outside the Upper Region, by five-year age groups. ZPH-M: Male children enumerated in the Zorse pregnancy history survey residing outside of the Upper Region in 1977, as a percentage of all males in the Zorse pregnancy history survey (regardless of birthplace). UR-M: Males born in the Upper Region and enumerated outside the Upper Region in 1970, as a percentage of all males born in the Upper Region (calculated from GCO, 1975). ZC-M: Long-term male migrants from the Zorse sample census residing outside the Upper Region in 1977, as a percentage of 1977 de jure male residents of Zorse plus all long-term male migrants from Zorse residing outside Zorse (regardless of birthplace). UR-F: Females born in the Upper Region and enumerated outside the Upper Region in 1970, as a percentage of all females born in the Upper Region (calculated from GCO, 1975). ZPH-F: Female children enumerated in the Zorse pregnancy history survey residing outside the Upper Region in 1977, as a percentage of all females in the Zorse pregnancy history survey (regardless of birthplace).

one-third for the dry season, one-third for fifteen months to two years and one-third for two to six years (GNA, 1931b). He estimated that, at most, 10 per cent of the young men would be migrants at any one time, and noted that they did not go with their wives, and did not settle down away from their own area.

In addition, census data at the regional level permit an analysis of the age distribution of migration (Fig. 2). Among working-age adults (15-64

years old), a total of 38 per cent of males and 18 per cent of females born in the Upper Region were migrants, most of them (90 per cent) in southern Ghana.<sup>13</sup> The age distribution of migration shows that 30–48 per cent of males aged 15–44 were migrants while the figure for females in this age group was 11–25 per cent (Fig. 2). Ghana census data show an increase from 15.6 to 16.9 per cent between 1960 and 1970 in people residing in southern Ghana who were born in northern Ghana (Northern and Upper Regions), with 63 and 71 per cent respectively residing in the major cocoa-growing area (Ashanti and Brong Ahafo Regions) and Greater Accra (calculated from Zachariah and Nair, 1980: Gh. 35, 39, 40, 41, 51).

The situation is similar in other parts of the savanna, and was also preceded by a colonial policy of forced labour extraction (see, for example, Cordell and Gregory, 1982). For example, current migrants among the Mossi of Burkina Faso (the ethnic group contributing the largest number of migrants in that country) increased from 24 to 41 per cent for age 15–29, and from 8 per cent to 30 per cent for ages 30–44 between 1961 and 1973 (Condé, 1980; U.V. 33). The proportion of migrants staying away for long periods (six years or more) has increased from 8 per cent to 43 per cent between 1960–61 and 1973 (Condé, 1980: U.V. 35). In one Mossi village of 4,464, 43 per cent of the male population 20–60 years old was absent in 1974, while 47 per cent of migrants were absent for one or more years (Ouédraogo, 1977: 8, 35).

The distribution by age and sex of long-term migrants in both the Zorse sample census and the pregnancy history survey is very similar to that for residents outside the Upper Region in the Ghana census data.<sup>14</sup> It supports the conclusion that migrants enumerated in the national census are absent from agricultural production in the northern savanna for one or more years. Thus the effects of this mass exodus of working-age men and women from Zorse may be similar to those in the many other areas of the West African savanna where censuses show similarly high proportions of working-age adults residing outside their rural home districts.

#### THE IMPACT OF LONG-TERM MIGRATION ON THE VILLAGE

While I was living in Zorse people often told me of the hardship caused by the absence of a son, brother or husband. The net effect of migration on the home community is difficult to assess, because exchanges between the migrant and the village can be numerous and spread over many years, and because some effects, such as the social stress of having a household member absent, or the new ideas a migrant returns with, are difficult to measure. Here I make a preliminary assessment of the impact of migration by comparing remittances from the long-term migrants enumerated in the census with the effect of their absence on the production and consumption of food in Zorse.

#### *Remittances*

Data on remittances, much less net transfers, are rare for the West African savanna, especially for rural–rural migrants, who make up a large proportion of Zorse migrants. One study of rural–urban migration in western Nigeria showed that remittances to rural areas by migrants were small,

primarily owing to low-paying jobs, and that transfers from rural to urban areas were twice as large (Essang and Mabawonku, 1974). If educational expenses per year per migrant are included, rural to urban transfers are nine times as large as remittances. However, most data on remittances do not calculate net income flows (Eicher and Baker, 1982: 230–1). For migrants in industrial towns in southern Ghana in 1974 working mostly as artisans, technicians, mechanics and traders, the situation may have been somewhat better, since 52 per cent of them remitted an average of 53 Ghanaian cedis per year (calculated from Brown, 1976: tables 10 and 11). Some areas in the West African savanna, however, have been characterised by large remittances from international migrants which are used to improve the home communities, as in Senegal (Cleveland and Harkin, 1981).

The inferior educational opportunities for northern Ghanaians have no doubt contributed to the low pay which migrants receive. Data from the 1960 census shows that, though migrants from northern Ghana had slightly more formal education than the non-migrants they left behind, they also had far less than non-migrants living in the areas of the south to which they migrated (Zachariah and Nair, 1980: Gh. 81). Tallensi migrants in the 1930s did not send money home regularly and were not expected to, but their support was very much missed at home, and the occasional remittances that were sent home were 'regarded as windfalls' (Fortes, 1949: 218).

The main purpose of enumerating migrants in the Zorse census was to enquire about remittances. I asked household heads to estimate the frequency and the amount of cash and other items set home. The likelihood that they would know what the remittances were was increased by the fact that the most closely related household in Zorse for a great majority of migrants was that of the interviewee.<sup>15</sup> Of the 144 migrants sixty-one (42 per cent) had remitted something since they left Zorse, and forty-four of these remitted cash. Of those remitting cash, thirty-eight lived in southern Ghana and one outside Bawku District in the Northern Region. Of these thirty-nine migrants living outside Bawku District and remitting cash, nineteen remitted 10 cedis or less per year, and the average cash remittance was 27.93 cedis, or 8.65 cedis when spread over all migrants. For all migrants living outside Bawku District the average was 8.28 cedis. In addition, three of the migrants living outside Bawku remitted grain at least once, and three sent clothes.<sup>16</sup> Most Zorse migrants have low-paying agricultural jobs and send little back to the village, and only a few migrants appeared to be remitting at a rate that would begin to replace the production lost because of their absence. Furthermore, I did not collect data on the amount of resources which migrants take with them when they first leave, when they depart after a visit, or which they may be sent.

#### *Net resource flow*

One way of estimating the change in production and consumption in Zorse as a result of migration is to calculate the difference in dependency ratios for the resident population and for the resident population with migrants added back in. Dependency ratios are ratios of the total number of consumers to those consumers who are also producers. If we conservatively estimate the productive population as all men and women 15–64 years of age (making no allowances for reduction in productivity due to illness,

disability, pregnancy, lactation or temporary and seasonal absences), then the dependency ratio of the resident population for Zorse in 1977 is: total population/men and women aged 15–64 =  $1,133/565 = 2.01$ ; for the Upper Region in 1970 it is  $803,802/409,368 = 1.96$ .

To calculate what the dependency ratios would be without migration, it is necessary to add the migrants back into the resident population. Since I collected data in the sample census on Zorse migrants prior to 1977 for men only, I could not adjust the Zorse census using these data. However, by adjusting the *de jure* population of Zorse according to the age-specific migration rates for offspring of mothers in the pregnancy history survey, I was able to calculate a dependency ratio without migration for the village: total population/men and women aged 15–64 =  $1,357.4/779.3 = 1.74$ .

The dependency ratio for the Upper Region without migration, based on the total born in the Upper Region, was quite similar: total population/men and women aged 15–64 =  $990,751/565,789 = 1.75$ . In other words, without migration each adult man and woman would support him- or herself plus 0.75 other persons. With migration the remaining adults must support roughly 1.0 other person, or an increase of 14 per cent ( $0.25/1.75$ ) in the total number of persons each productive adult (15–64 years old) must support. Estimating the daily energy consumption of dependants (ages 0–14, 65+) at 1,900 kcal, and the caloric content of sorghum or millet grain at 3,500 kcal/kg, 0.25 person would consume 173,375 kcal/year, or the equivalent of 50 kg of grain.<sup>17</sup> During 1977–78 the average price of the least expensive grain in Bawku market was 3.40 cedis/kg.<sup>18</sup> At these prices migrants would have had to remit about 170 cedis per year each to replace their productive power and maintain pre-migration consumption levels in the village, yet they remit on average only 5 per cent of this amount.

A crucial question is whether the somewhat decreased ratio of persons per unit of land, as a result of migration, can raise production per remaining producer by the amount necessary to maintain the *per caput* consumption levels that would exist without long-term migration. Production per producer could rise as a result of a combination of changes in (a) labour input per producer, (b) labour productivity or (c) land productivity. African data on changes in labour input in response to changing dependency ratios is 'scanty and not unambiguous', although there is some indication of a direct relationship between labour input per producer and dependency ratio (Levi and Havinden, 1982: 68–9). While a decrease in land productivity and an increase in labour productivity are often assumed to accompany decreased population density, it is in fact a complex relationship, the nature of which will depend a great deal on the local social, ecological and historical situation (see, for example, Dommen, 1988: 98–102). Increases in labour input and labour productivity do not seem likely, since in north-east Ghana it is men who perform the majority of field labour. The high proportion of men amongst migrants probably suggests a negative effect on production greater than that implied by the dependency ratio alone (which lumps men and women together). As in much of African agriculture, if crucial farm tasks are not performed on schedule, the result is significant yield decreases, and there is a labour shortage in Zorse, especially during sowing and weeding. While to answer this question for



Zorse would require much more data, the evidence presented here does suggest a reduction in *per caput* consumption on the part of those remaining in the village.

If in fact loss of migrant labour results in decreasing consumption per person in Zorse, it means not simply less surplus food or less cash for non-essential consumer goods but, frequently, less than that required to maintain normal growth patterns in children or body weight in adults. There is a hungry season every year in which there is significant loss of muscle mass in children (Cleveland, n.d.) and of weight in adults (Hunter, 1967b), and morbidity and mortality are high (Cleveland, 1986).

Migration may worsen the population pressure by undermining traditional demographic controls, and this supports and even increases high fertility rates. To the extent that men can obtain money for purchasing bridewealth cattle through labour migration, it has freed them from dependence on their lineage and the local environment to produce the cattle. Thus migration may have contributed to the decrease in the age of women at marriage over the last several generations by making it easier for young men to marry (Cleveland, 1986). Fertility rates have also increased as a result of shortened periods of postpartum abstinence as parents respond to increased child survival rates in order to maximise the number of surviving children. Children are valuable assets because they begin making a significant contribution to household production at an early age, are net contributors by about the age of 15 and are relied on by parents for support in their old age. Migration also supports a high fertility rate by increasing the uncertainty that children will stay at home to help their parents. High fertility rates may increase household labour supply (at least until children grow old enough to migrate) but diminish *per caput* village resources, leading to high population densities which encourage environmental degradation and reduce land and labour productivity, thus further spurring migration.

#### CONCLUSION

Local migration in response to population pressure is part of the history of north-east Ghana. First by physical coercion, then by economic coercion, colonialism drastically changed the pattern of migration to one of long-distance movement from north-east Ghana and the northern savannas in general to southern Ghana. Migration in turn affected social organisation, agriculture and population dynamics in savanna communities. While colonial policy was not always consistent, one dominant and ultimately effective strategy seems evident: to break up locally self-sufficient economies and societies in order to stimulate the temporary migration of labour from largely subsistence agriculture to work in commercial agriculture, mining and public works in the south. These sectors were directly tied to the European economy for the benefit of Britain. Low wages and poor working conditions encouraged most migrants to return to their savanna villages when they were sick, injured or too old to work.

When Ghana gained its political independence from Britain this new pattern of migration had become firmly established and was maintained by changes in the social, economic and transport systems. Data from Zorse and the Upper Region show that migration at any one time takes about

50 per cent of working-age males and 15 per cent of working-age females to southern Ghana for periods of a year or more. Significantly increased dependency ratios mean that as a result of this migration each four remaining working-age adults must support themselves plus four dependants, instead of supporting only three dependants, as would be the case without migration. Since remittances by Zorse migrants are equal to only a small fraction of the value of their lost productive labour, the net effect of migration on the food consumption level of those remaining in the village will be determined by the balance between the increased output required of each remaining working-age adult and the decreased yield required of the total area of arable land. While I do not have all the quantitative data needed to resolve this question, statements by Zorse residents, evidence of chronic undernutrition, a long-term decrease in land productivity due to erosion and lack of organic matter, and serious labour shortages during periods of critical farm activity suggest that the net effect of migration on Zorse has been negative. That is, neither labour productivity nor land productivity is likely to compensate for the increased dependency ratio.

Dependency theorists would call the situation described here for Zorse one of 'primitive accumulation' created by the world capitalist system, and say that it results in underdevelopment (Meillassoux, 1981: 91-119). For the Kusasi, and probably many other peoples of savanna West Africa, the individualisation of decision-making within the context of a market economy may improve a young man's fortunes but compromise those of his household and village. The long-term transfer of a large proportion of the most productive people in Zorse outside the savanna removes more resources than it returns. The circulating nature of this migration has meant that the migrants' home communities in the savanna continue to bear the cost of sickness, injury and old age. Yet, while dependency theory seems to make sense in interpreting the history and negative effects of migration, it offers little in terms of a specific positive alternative for rural communities and agriculture.

Modernisation theorists, on the other hand, do have a specific agenda for development, but the assumptions on which it is based must be questioned. While they may deplore the malnutrition and environmental degradation in the rural savannas, they still see the solution not as less integration with the world capitalist system but as more. The goal of the development establishment in the Third World is to replace self-sufficient, small-scale agriculture based on communal tenure by large-scale commercial agriculture linked with global markets and based on individual tenure (Todaro, 1985: 304-10). Modernisation theory is based on the assumptions that development means continual economic growth, that the material resources for this growth are unlimited,<sup>19</sup> and that individual entrepreneurship and private enterprise are the means to achieve it. Therefore, according to this perspective, the current high rate of migration from the savannas is not *inherently* bad for rural savanna communities. With a substantial increase in remittances resulting from improved employment opportunities and returns to labour available to migrants in commercial agriculture and industry, the direction of net resource flow could be reversed, and with the modernisation of savanna agriculture labour requirements would be reduced while labour and land productivity increased.

The assumptions of the modernisation approach, which is being aggressively promoted in Africa by the development establishment, may not, however, be valid (Cleveland, 1990, 1991). There is increasing evidence in the industrial world that 'modern' agriculture is too costly, economically, socially and environmentally, to be sustainable. Indigenous African agriculture and land tenure systems may provide a more adequate foundation for sustainable food production than does 'modern' agriculture. Modernisation theory assumes that economic growth will lead to reduced population growth, but, in the absence of this growth, population dynamics must again be linked to the local resource base. This does not mean a return to pre-colonial conditions, for the world has changed irrevocably, and those conditions were less than optimal in many ways. However, indigenous systems offer the basis on which to link demographic and agricultural processes in policy as they are linked in reality.

While it may be true that migrants vote with their feet, the choice of paths is often determined by forces in the larger system beyond their control, and may not be in the best interests of their household and communities, or, therefore, in their own long-term best interests. The good news is that indigenous agricultural and demographic knowledge and practices in Africa may provide the starting point for a sustainable future if the patterns established by colonialism and reinforced by 'modern' economic development can be changed. For studies of African demography and agriculture to be of use in the current struggle for 'development' in Africa it is necessary to discern the relationships between local paths and the larger system, that is, to 'combine theoretical principles that operate locally with understanding of global population and resources' (Hammel and Howell, 1987: 142).

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#### NOTES

<sup>1</sup> Owing to changes in administrative units, this is currently Tempene, Garu and Bawku Districts, eastern Upper Region.

<sup>2</sup> Compare the situation for the Konkomba, savanna dwellers to the south of the Kusasi (Tait, 1961: 124). The Konkomba 'do not move lightly from their native districts', and it is a source of grief to those remaining when they do. A man considers long and earnestly before leaving, and consults a 'diviner to make sure it is right for him to go. Yet the pressure of diminishing returns from exhausted soil is inexorable.'

<sup>3</sup> Fortes (1945: 208) described a similar situation in Taleland in the 1930s with regard to the effect of labour migration on father-son relations, particularly with regard to bridewealth, noting that 'The adjustment of father's rights and son's rights has a subtlety where cash is concerned'. If a son returned from southern Ghana with cash he would be likely to flaunt the 'letter of custom' that required him to give it all to his father or proxy father unless they were to use it to pay his wife's 'bride-price'. 'It is common knowledge that this is the regular

practice of young men returning from abroad [southern Ghana].<sup>7</sup> Fortes paraphrases the words of a young man who is angry with his proxy father for not helping with his bridewealth: 'Had he not stayed at home to help with the farming when he could easily have followed some of his contemporaries to Kumasi? Then he would have earned enough to pay the expenses of his marriage himself' (Fortes 1945: 210).

<sup>4</sup> Of the eight interviewees, one is from the generation before I, five are from generation II and two from generation III. Seven of the eight are elders. John Mbod, the eighth interviewee and my senior field assistant, also interviewed a number of older male lineage members independently and shared this information with me.

<sup>5</sup> Generations with regard to the genealogical analysis refer to structural generations, and so include men of different ages. However, men in different segments of the lineage down to the most recent generations do appear to fall roughly into the same age group.

<sup>6</sup> For this analysis I eliminated not only the twelve men in generations older than the four youngest generations but also three men with unknown migrant status, seventy-four children and twenty-four migrants' sons who were born outside Zorse (only one of whom ever lived in Zorse), leaving a total of 162 patrilineage members in generations I to IV (Table 1). I did not eliminate adolescents, equivalent to the Kusasi developmental stage of *buribing* (pl. *buribis*), because a significant number of them (as also found in the sample census and the pregnancy history survey) have migrated on their own, as opposed to children, who migrate only with their parents. Thus *buribis*, whose average age in the Zorse census was thirteen (Cleveland, 1989), are grouped with adults.

<sup>7</sup> For generation II,  $\chi^2 = 5.12$ ,  $p < 0.025$ , and for generation III,  $\chi^2 = 17.7$ ,  $p < 0.001$ ;  $\chi^2$  not significant for generation I.

<sup>8</sup> While the difference is significant ( $\chi^2 = 8.0$ ,  $p < 0.02$ ) it must be interpreted with caution, since one of the six cells had an expected frequency of less than five.

<sup>9</sup> For 125 of the 144 long-term migrants age was estimated from statements about events at time of birth, using the local calendar. The remaining nineteen men were assigned the mean age of their developmental stage based on ages of the *de jure* male residents (Cleveland, 1989). The proportion of long-term, long-distance migrants in each age group was calculated as follows: migrants living outside the Upper Region since at least 1976 as a percentage of these same migrants, plus migrants still living in the Upper Region, plus *de jure* male residents of Zorse in 1977.

<sup>10</sup> The residence of three of the migrants was unknown.

<sup>11</sup> The proportion of long-term, long-distance migrants was calculated as follows: male and female offspring of the mothers in the pregnancy history survey alive in 1977 and resident outside the Upper Region as a percentage of the total in each age group for each sex. The age distribution for the Zorse survey is truncated because of the smaller proportion of mothers over the age of 50 who were interviewed in the pregnancy history survey, because they either had died or were unavailable.

<sup>12</sup> To some extent the high sex ratios in the 1948 and prior censuses are probably due to the migration of men to northern Ghana from French-ruled territory of what is now Burkina Faso to the north (GNA, 1931a; Smith, 1945: 11) to escape the head tax and harsher conditions of forced labour. While the French imposed a direct head tax in 1896 (Skinner, 1965: 62) this did not happen in north-east Ghana until 1936 (Lynn, 1937: 9). The effect of immigration into Bawku on the sex ratios appears to be small compared with subsequent emigration out of Bawku.

<sup>13</sup> Migrants were males and females reported as born in the Upper Region but enumerated outside the Upper Region in the 1970 census as a percentage of these same males and females plus those reported as both born and enumerated in the Upper Region (calculated from GCO, 1975: 106-10). While 90 per cent were enumerated in southern Ghana, 10 per cent were enumerated in the Northern Region. It is impossible to tell from the census data how long these migrants stay away. For the 1960 census the official reference night was 20 March, and the official enumeration period was 20 March to 30 April. For 1970 the official reference night was 1 March, but I have not been able to determine the official enumeration period. It is likely that the enumeration period lasted at least several months. This is the beginning of the rainy season, with field preparation beginning in March and planting in April, and it might be expected that short-term seasonal migrants would be returning to the Upper Region. This provides additional support for interpreting residence of persons born in the Upper Region and residing outside the Upper Region as long-term migrants.

<sup>14</sup> The geographical distribution of migrants to southern Ghana from the Upper Region

is also very similar to that of long-term migrants from Zorse enumerated in the sample census and residing in the south. (The figures for Zorse do not include seven migrants to the south whose region of residence was unknown.)

<i>Region of residence</i>	<i>Migrants from Upper Region, 1970 (%)</i>	<i>Migrants from Zorse, 1977 (%)</i>
Brong Ahafo	25.5	24.3
Ashanti	38.8	38.3
Volta	2.0	0
Eastern	7.7	4.7
Greater Accra	9.4	11.2
Central	4.6	6.5
Western	12.1	15.0

<sup>15</sup> The relation of migrants to the household head interviewed was 52 per cent sons, 19 per cent brothers, 13 per cent brothers' sons, 9 per cent half-brothers and 7 per cent more distant lineage relations.

<sup>16</sup> Non-cash remittances were enumerated by kind but not by amount. The small number of migrants remitting and the low frequency of remittances suggest that remittances were not substantial over the period of absence. Of the three remitting grain, two migrants who had been gone four and eight years remitted only once, and one who had been gone for five years remitted five times.

<sup>17</sup> Daily energy consumption is estimated from FAO (1973 28–35), weighted by age distribution in the Zorse sample census. Energy content of grain is from Leung (1968).

<sup>18</sup> Grain price data are based on four quarterly surveys of food prices which I and my field assistants carried out in Bawku market, the closest market to Zorse and the largest market in Bawku District, in July and October 1977 and in January and March 1978.

<sup>19</sup> Dependency theory shares with modernisation theory these assumptions about economic growth and the environment, and the belief that development involves the replacement of indigenous agriculture and economies by industrialisation, with little concern for the environmental limits to growth (Redclift, 1984).

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### Abstract

Local migration in response to population pressure is part of the history of north-east Ghana. First by physical coercion, then by economic coercion, colonialism drastically changed the pattern of migration to one of long-distance movement from north-east Ghana and the northern savannas in general to southern Ghana. Migration in turn affected social organisation, agriculture and population dynamics in savanna communities. While colonial policy was not always consistent, one dominant and ultimately effective strategy seems evident: to break up locally self-sufficient economies and societies in order to stimulate the temporary migration of labour from largely subsistence agriculture to work in commercial agriculture, mining and public works in the south. These sectors were directly tied to the European economy for the benefit of Britain. Low wages and poor working conditions encouraged most migrants to return to their savanna villages when they were sick, injured or too old to work.

When Ghana gained its political independence from Britain this new pattern of migration had become firmly established and was maintained by changes in the social, economic and transport systems. Data from Zorse and the Upper Region show that migration at any one time takes about 50 per cent of working-age males and 15 per cent of working-age females to southern Ghana for periods of a year or more. Significantly increased dependency ratios mean that as a result of this migration each four remaining working-age adults must support themselves plus four dependants, instead of supporting only three dependants, as would be the case without migration. Since remittances by Zorse migrants are equal to only a small fraction of the value of their lost productive labour, the net effect of migration on the food consumption level of those remaining in the village will be determined by the balance between the increased output required of each remaining working-age adult and the decreased yield required of the total area of arable land. While I do not have all the quantitative data needed to resolve this question, statements by Zorse residents, evidence of chronic undernutrition, a long-term decrease in land productivity due to erosion and lack of organic matter, and serious labour shortages during periods of critical farm activity, suggest that the net effect of migration on Zorse is negative. That is, neither labour productivity nor land productivity is likely to compensate for the higher dependency ratio.



While it may be true that migrants vote with their feet, the choice of paths is often determined by forces in the larger system beyond their control. The good news is that indigenous agricultural and demographic knowledge and practices in Africa may provide the starting point for a sustainable future if the patterns established by colonialism and reinforced by 'modern' economic development can be changed.

### *Résumé*

Devoir réagir sous la poussée démographique par migrations locales a toujours fait partie de l'histoire du Ghana du nord-est. Le colonialisme changea rigoureusement le type de ces migrations, d'abord par force, puis par contrainte économique, en un mouvement de longues distances du nord-est du Ghana et des savannes du nord en général vers le Ghana du sud. Les migrations à leur tour eurent pour effet de déstabiliser l'organisation sociale, l'agriculture et le caractère démographique des communautés de la savanne. Bien que la politique coloniale n'ait pas toujours été uniforme, il semblerait y avoir eu une stratégie dominante avec un effet irréversible: le demembrement des communautés locales économiquement indépendantes et de la société locale afin d'encourager les migrations de main d'oeuvre, provenant en grande partie de cultures à peine auto-suffisantes, pour travailler dans l'agriculture commerciale, les mines et les travaux publics du sud. Ces secteurs étaient directement liés à l'économie européenne au profit de la Grande Bretagne. Les salaires peu élevés ainsi que les mauvaises conditions de travail encourageaient la plupart des migrants à retourner dans leurs villages de savanne lorsqu'ils tombaient malades, se blessaient ou devenaient trop vieux pour travailler.

Lorsque le Ghana gagna son indépendance politique de la Grande Bretagne, cette nouvelle tendance des migrations était déjà fermement établie et maintenue par les changements présents dans le système social, système économique et celui des transports. Des observations zorses et de la région supérieure montrent qu'à n'importe quel moment donné les migrations emmènent environ 50 pourcent des hommes en âge de travailler vers le sud du Ghana pour une durée d'un an ou plus. Une augmentation marquée de la proportion des dépendants en conséquence de cette migration signifie que chaque quatre adultes qui restent au pays doivent non seulement gagner leur pain mais aussi maintenir quatre dépendants au lieu des trois sans migration. Vu que les envois de fonds des migrants zorses ne comptent que pour une petite part de la valeur représentée par leur travail perdu, le résultat net de la migration sur le niveau de la consommation de nourriture de ceux qui restent au village sera déterminé par l'équilibre entre l'augmentation de la productivité demandée de chacun des adultes travailleurs qui restent et le rendement diminué exigé du total des terres arables. Bien que je ne possède pas toutes les données vérifiables requises pour résoudre cette question, le témoignage des zorses non-migrants, la malnutrition chronique évidente, un décroissement à long terme de productivité des terres du à l'érosion et à l'insuffisance d'apports de matières organiques ainsi qu'à un sérieux manque de main d'oeuvre durant les périodes critiques d'activités paysannes, suggèrent que le net effet des migrations est négatif pour les zorses. C'est-à-dire que ni l'augmentation en travail ou en rendement des terres ne va vraisemblablement compenser le taux plus élevé des dépendants.

Bien qu'on puisse peut-être dire que les migrants choisissent librement de partir, les chemins qui leur sont ouverts sont souvent déterminés par les forces d'un système plus large en dehors de leur contrôle. Du côté positif, si un renversement des tendances établies par le colonialisme et renforcées par les développements économiques 'modernes' peut être effectué, les connaissances pratiques, connaissances agricoles indigènes et les connaissances démographiques en Afrique peuvent fournir le point de départ pour un avenir viable.