

NO SPACE FOR PARTICIPATION: PASTORALIST NARRATIVES AND THE ETIOLOGY OF PARK-HERDER CONFLICT IN SOUTHEASTERN NIGER

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ABSTRACT

State-sponsored programs for protecting natural areas in Africa have increasingly adopted 'participatory' approaches. While a welcome change from the more coercive approaches of the past, a major impediment to the effectiveness of such programs is how conservationists conceptualize the logics, constraints, and spatial scales associated with the production practices of rural inhabitants that may cross protected perimeters. This paper examines the growing conflict between Fulbe herders and managers of National Park 'W' in southeastern Niger. Rationales for conservationist reactions to herder incursions in the coercive past and 'participatory' present are supported by 'development narratives' that surround Fulbe livestock husbandry in West Africa. It will be shown that these narratives are constructed by sequentially conflating linguistic group, ethnic identity, production practice, production logic, and environmental trajectories in an ahistorical fashion. The Fulbe people of West Africa are often characterized by the development/conservation community as 'pastoralists' and as such are viewed as being highly mobile, tradition-bound, politically unorganized, and managers of an unsustainable (ecological or social) form of livestock husbandry. Oral histories and the examination of historical documents demonstrate that herd management by the Say Fulbe has historically been governed by a two-tiered political structure and displayed highly circumscribed patterns of mobility with close integration with agricultural production. Increased incursions of herders into the park are traced, not to a rigid adherence to livestock mobility, but to the growing shortage of pastures in the home territory near Say. Both draconian enforcements by park guards and 'participatory' programs to educate local herders about the merits of sedentary livestock husbandry provide little space for herder-park constructive engagement and in fact have reduced its potential by eroding indigenous political control over livestock movements. Copyright © 1999 John Wiley & Sons, Ltd.

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INTRODUCTION

The protection of natural areas has a particularly coercive history in many parts of Africa (Anderson and Grove, 1987; Ranger, 1989; Neumann, 1992; Peluso, 1993). Over the past decade there has been an expanding interest in participatory approaches for the management of protected areas (Zube and Busch, 1990; International Institute for Environment and Development, 1994; Gibson and Marks, 1995; Price, 1996). Within the present climate of neoliberal reform, many of these 'participatory' programs attempt to provide financial incentives to local people to cooperate with park management prescriptions. Incentives include upfront provision of community projects (dispensary, garden, school, well, etc.) by the government or sponsoring non-governmental organization (NGO); jobs to locals within the protected area; a portion of trophy hunting permits and tourist revenues; and opportunities to market cultural artifacts (crafts, staged dances, etc.). In areas of high tourist traffic, revenues to the community can be substantial and may lead not only to reduced incursions into the gazetted area by locals but to their active involvement in perimeter

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protection (Lewis and Alpert, 1997). Unfortunately, in areas where tourist traffic is low and/or where these revenues are captured by government officials and local elites, these incentives are meager compared to the overall material needs of local peoples (Barrett and Arcese, 1995). Compared to a couple bags of infant formula or even a child's schooling, a rural household's annual grain budget indeed looms large. Outside of key tourist destinations in East and Southern Africa, poor transportation infrastructure, climate, sparse and patchily distributed wildlife populations, and limited availability of the amenities demanded by western tourists severely reduces prospects for wildlife-related tourist revenue. Therefore, the conservation benefits of such incentive programs will most likely prove illusionary for much of the continent in the foreseeable future.

This calls for a rethinking of the form which local participation takes. If tourist dollars are insufficient for transforming local economies, conservationists must learn more about the material constraints facing people using gazetted areas before they will be able to develop successful programs. This is certainly the case for National Park 'W' in southwestern Niger, the protected area of concern in this study. The 2200 km² park supplies much needed habitat for important remnant wildlife populations of regional importance.¹ It has recently been designated as an international biosphere reserve and park's management is presently undergoing a process of conforming the geography of its protected area to the standard biosphere design (Délégation du Niger (UNESCO), n.d.; le Berre and Messan, 1995). Still, it is a park with limited revenue-generating potential. The local economy will not be transformed into a tourist service economy. Unless large subsidies are forthcoming from the international community, local peoples will necessarily continue to depend on crop and animal husbandry to meet their subsistence needs. Therefore, successful conservation cannot rely on revenue-sharing and environmental education as its 'participatory' vehicles but must engage more directly with the incentives and constraints affecting local people's use of resources within and outside the park. Such engagements may lead to deviations from a pure preservationist approach as well as from the standard concentric-ring form of protected areas (e.g. biospheres). The configuration of protected areas may instead reflect a region's human geography as much as its biogeography. Still, there are significant barriers to the development of such 'landscape' approaches to protected areas. These barriers are as much ideological, conceptual, and political as they are technical in nature.

This paper focuses on the conflict between indigenous livestock husbandry and the management of the National Park 'W'. Fulbe (also known as Fulani, Fula, Peul, etc.) herders have increasingly moved into and passed through the park since the 1960s. Research was conducted on changes in the political organization and geography of livestock movements managed by one of the Fulbe groups that has increasingly depended on passage through the park.² By comparing this history to park management's response to these incursions and its recent biosphere-driven proposals for local participation, it will be shown that spheres of participation have been narrowed by park advocates' assumptions about the social organization and environmental consequences of Fulbe livestock husbandry. These assumptions are influenced by a set of poorly documented but widely accepted causal claims linking pastoralism and environment within the broader development community. Once local Fulbe are labeled as 'pastoralists', these development narratives (Roe, 1991; Ferguson, 1994; Leach and Mearns, 1996) tend to characterize them as politically unstructured, tradition-bound, and having an ecologically-destructive system of livestock management (to vegetation and wildlife). It will be shown that both the 'pastoralist' designation as well as the narrative's characterization of pastoralist-environment relations are overly simplified. Despite the popularity of 'local participation' in wildlife preservation approaches, the persistence of such ideas within the conservation community

¹The National Park 'W' of Niger is named for the shape that the course of the Niger River takes in forming the park's northeastern boundary. This paper focuses on this park along with the adjacent Tamou Faunal Reserve to the northwest (760 km²). It shares its name with two contiguous national parks located in Benin (5020 km²) to the southeast and Burkina Faso to the west (1900 km²).

²This research was conducted in 1994. It involved a combination of group interviews with Fulbe and non-Fulbe groups within the Say villages on issues of land-use change, conflict, and conflict resolution; individual interviews with Fulbe leaders (e.g. *garsos*) about changing leadership responsibilities, herd management, relations with park wardens; *ad hoc* interviews of park wardens encountered in the bush; and the collection of encampment site histories through on-site interviews of Fulbe leaders at encampment sites inside and outside of the park (locations collected with differentially-corrected GPS) presently or formerly used by the Say Fulbe.

significantly narrows the space for negotiation with, and effective participation of local peoples. As a result, new participatory conservation programs remain ineffectively coercive despite their participatory veneer.

The paper is divided into three sections. First the more complex reality of Fulbe society and livestock husbandry will be compared with common environmental narratives of 'pastoralists'. It will be shown how poorly matched popular notions of the pastoralist (nomad) are to Fulbe society. This mismatch will be further demonstrated by a description of the history of livestock management in the Say region of southwestern Niger. It will be shown that historically the Say Fulbe displayed very little mobility in rearing their livestock and that livestock movements were most likely governed by a hierarchical management structure. With increased cultivation pressure in the home region, herd movements increased in the distance and duration away from the family homestead, eventually reaching and crossing Park 'W' to the south. Park management response to these incursions have been to increase policing of park boundaries and to impose severe fines on the small fraction of transgressors that are captured. Fulbe response to these tactics have included the dispersal of herds, leading to the individualization of livestock mobility management with lowered control of herd movements by elders. In the third section of the paper, this history is compared to contemporary problem statements and public proposals for 'participatory' management of the new biosphere reserve. By ignoring this history and relying on the development narratives surrounding the Fulbe, conservationists have misdiagnosed the reasons for park incursions, relied on simplistic characteristics of livestock-wildlife competition, and underestimated the ability of Fulbe herders to govern themselves and institute change. This has unnecessarily narrowed the space for negotiation and compromise.

DEVELOPMENT NARRATIVES AND LIVESTOCK HUSBANDRY OF THE WEST AFRICAN FULBE

When confronted with the complexity of foreign cultures and environments, expatriate developers and conservationists necessarily order this reality through the categorization of societies, production systems, and environments. Certain combinations of social, production, and environmental categories will invoke causal statements about development or environmental trajectories (Taylor, 1992). These causal sequences are linked to generate a broader explanation, diagnosis of 'development narrative' of the present environment-and-development predicament, which is in turn used (explicitly or implicitly) to guide conservation and development interventions (Roe, 1991; Leach and Mearns, 1996). These diagnoses are formed in an iterative fashion with the political programs of institutional actors playing as important a role in their formation as local realities (Ferguson, 1994). They are often accepted as common knowledge and left unstated with their influence best revealed by what is not considered, asked, or presented in development reports.

In Sahelian West Africa, current development strategies are best seen as programs of ecological stabilization. As a result, development narratives are very much environmental narratives as well (Leach and Mearns, 1996). Both population (Neomalthusian and Boserupian) and common property theory have played influential roles in broader meta-narratives concerning environment and development in the Sahel (Van Keulen and Breman, 1990; Bourn and Wint, 1994; Turner, 1995). What is of particular interest here is how these meta-narratives will in turn work to structure characterizations of particular livelihood strategies pursued by rural producers. In the present development climate, characterizing a particular people as 'tradition-bound', politically unstructured, and managers of unsustainable land uses can easily lead to development strategies that work to undermine their way of life. This is true whether the developers/conservationists take a 'participatory' approach or not, for such characterizations leave little space for negotiation or compromise with local groups. Therefore it is important that one critically evaluates existing 'development narratives' and common knowledges held by the development community to better understand conflicts between conservation and rural production strategies.

For the Fulbe of West Africa, the construction of development narratives has generally taken the following steps. First a Fulfulbe-speaking group is assigned a Fulbe ethnic label which is used in turn to

categorize the group as 'agropastoralists;', 'pastoralists', or 'nomads'. A number of studies have pointed to the fluidity and complexity of Fulbe ethnic identity (Grayzel, 1977; Reisman, 1977; Guichard, 1990; Bierschenk, 1992). More important for this study is the unproblematic mapping of Fulbe identity to one of a number of pastoralisms. Except for a few well-studied exceptions, most pre-colonial Fulbe cultures were very much integrated into state systems with the majority of Fulfulbe speakers being sedentary and not involved directly in livestock husbandry (Ba and Daget, 1984; Schmitz, 1986; Bonfiglioli, 1988). Herding Fulbe ('bush' or 'red' Fulbe) were more often than not best viewed as clients of Fulbe or non-Fulbe patrons within the precolonial state apparatus.³

In addition, pastoralism is often wrongly conflated with human mobility. Even the livestock-rearing Fulbe show a tremendous variety in both human and livestock mobility – dependent in part on livestock wealth, labor availability, local land-use pressures, dependence on agriculture, and political demands of the state (Benoit, 1979; Bonfiglioli, 1990; Mace, 1993). Livestock and human mobility are not tightly coupled. Movement of the whole Fulbe family with the livestock herd is certainly rare today and less prevalent in the 19th century than is often assumed (Gallais, 1975; Beauvilain, 1977; Bellot, 1980; Ba and Daget, 1984). High livestock mobility can be maintained by a 'sedentary' family through herd stratification (milk and satellite herd) and sending only one or two herders with the satellite herd.

The second step in narrative construction is the assignment of cultural characteristics to the Fulbe that derive from the pastoral label (and high human mobility). For early anthropologists, high human mobility was associated with a number of cultural attributes such as poor development of land tenure institutions, limited development of hierarchical political systems (Burnham, 1979; Dahl, 1979) as well as a number of common psychological attributes such as independent and aggressive natures (Goldschmidt, 1979). Even though developers may concede that many Fulbe today live somewhat sedentary agropastoral lives, they still tend to think of this as a new phenomena driven by recent drought with Fulbe cultures retaining pastoral derivatives (Pouillon, 1990).⁴ There is no denying that the loss of livestock and labor resources has led to reduced human and livestock mobility in many areas of the Sahel. While the last quarter century of recurrent drought is unprecedented in recorded history, climatic fluctuations are but one of a number of factors affecting livestock and human mobility. As has been previously noted (Horowitz and Little, 1987; Watts, 1987; Bonfiglioli, 1990), human and livestock mobility of Fulbe livestock production systems are best viewed as highly variable, not only responsive to changing household resources but to external factors such as land-use and market pressures and actions by the state. Despite the considerable erosion of pre-colonial indigenous political structures, Fulbe management of transhumance movements soften retains a two-tiered hierarchical structure with the first-tier positions responsible for negotiations with the state and other supra-village indigenous leaders while second-tier officials are responsible for leading groups of family herds and resolving internal and external local conflicts that may arise (Turner, n.d.-b).

The third step in narrative construction uses the Fulbe cultural characteristics derived from their pastoralist label to envision environmental trajectories associated with Fulbe livestock husbandry. In the dryland savannas and steppes of Africa, the contribution of grazing to environmental change is difficult to determine. The species composition and productivity of herbaceous vegetation are most influenced by year-to-year fluctuations in rainfall. Finding a grazing signal within all the 'natural noise' has proven to be very difficult (Penning de Vries and Djitéye, 1982; Grouzis, 1988; Behnke, *et al.*, 1993; Hiernaux, 1996). The shortage of data is even more acute with respect to understanding livestock impacts on wildlife populations.

Due to the lack of biophysical process data, environmental analysts tend to rely heavily on social characteristics of livestock managers to support their diagnoses. The typical environmental analysis of

³In the 19th century, a large fraction of Fulbe livestock managers resided within the sphere of influence if not integrally tied into structures of precolonial states such as Fouta Toro, Fouta Djallon, Segou-Bambara, Macina, and Sokoto.

⁴Academic research has worked to reinforce this tendency in two major ways. First, the anglophone literature on pastoralism is dominated by studies of East African 'pastoralists' who have a history and social structure that more closely approaches these cultural characterizations. Moreover, early anthropologists in West Africa tended to choose the more 'isolated', small-scale, and mobile of the Fulbe societies for study, with the Wodaabe being the most popular (e.g. Hopen, 1958; Stenning, 1959; Dupire, 1970).

livestock husbandry in French West Africa has consisted of synchronic descriptions of vegetation, relating patterns of vegetation parameters to contemporary livestock presence, and inferring past and future livestock pressures by invoking plausible social mechanisms related to livestock management (e.g. Peyre de Fabrègues, 1971; Boudet, 1972; Boudet, 1975; Barry, *et al.*, 1983). The social content of technical analyses is revealed in the divergence seen between characterizations of the sustainability of sedentary versus more mobile forms of livestock husbandry in Sudano-Sahelian West Africa. While recent research argues that pasture-based sedentary management more negatively affects pastures than mobile forms of management (Behnke, *et al.*, 1993; Hiernaux and Turner, 1996; Turner, 1998), there has been a strong tendency to diagnose sedentary management as modern, rationally-responsive and environmentally benign and mobile forms of livestock husbandry as archaic, unresponsive, and unsustainable. Such diagnoses result less from ecological data but from the researchers' or their informants' perceptions of the sociocultural characteristics of the managers, as informed by existing development narratives. Livestock mobility is often equated with full human mobility of 'pastoralism'. Sedentary-mobile contrasts often imbedded in technical analyses include:

- (1) As 'pastoralists', managers of more mobile forms of livestock husbandry are seen as having few ties to the land and therefore less likely to conserve it (Baker, 1984). This is reinforced by the common distinction made by villagers between proper management by residents and improper management by outsiders.
- (2) Mobile forms of livestock husbandry are more likely to be associated with common rangelands while sedentary management is associated with more individualized agricultural tenure systems (although still depending on common grazing lands). Thus the tragedy of the commons narrative is more likely to be invoked when more mobile forms of livestock husbandry are being studied (Taylor, 1992).
- (3) Because of higher labor demands, more mobile forms of livestock husbandry often require some form of specialization in animal husbandry. Specialists are seen as being prone to follow an embellishment of the original cattle complex thesis (Herskovits, 1926). This popularized version sees livestock specialists as being interested in accumulating livestock beyond rational economic or ecological limits (Turner, 1993). Livestock managers are seen as wealthy elites forcing poor farmers to bear the external costs of overgrazing. These ideas run counter to widespread accounts that livestock specialists are increasingly hired hands for livestock-owning agriculturalists, merchants, and government officials (Bonfiglioli, 1985; Grayzel, 1990; Habou and Danguioua, 1991; Bassett, 1994).
- (4) Increased land scarcity in many agropastoral areas is seen as inducing the intensification of agricultural production (Boserup, 1965; Netting, 1993; Turner, *et al.*, 1993), a process to which livestock are seen as important contributors (traction, manure). Crop-livestock integration is most often seen as occurring at the level of the household with sedentarization of *livestock* a necessary result (McIntire, *et al.*, 1992; Turner, 1995). From such an evolutionary perspective, a decline in livestock mobility is seen as 'natural' occurrence in areas of high population pressure.

Since the 1970s, such contrasts between sedentary and more mobile livestock production systems, as simply stated above, have been seriously questioned by social scientists. The degree of livestock mobility maintained by agriculturalists and pastoralists alike is now seen as resulting from their responses to constraints and opportunities imposed by the broader ecology and political economy, as conditioned by their access to productive resources (Toulmin, 1983; Bonfiglioli, 1990; Mace, 1993; Wilson, 1995). In the 1990s there has been a growing appreciation about the ecological and economic rationality of more mobile livestock production systems (Ellis and Swift, 1988; Niamir, 1990; Behnke, *et al.*, 1993; Scoones, 1994; Swallow, 1994). This has led to a significant rethinking of the first three contrasts listed above. Livestock investment decisions by pastoralists are now seen as economically rational (Sandford, 1982; Toulmin, 1985; Scoones, 1994). High livestock mobility is increasingly seen as ecologically beneficial, often to overextended extremes (Turner, n.d.-a). Still there remains significant concern about the viability of more mobile production systems.

In Sudano-Sahelian West Africa, mobile livestock production systems are increasingly characterized as ecologically rational but socially doomed because of demographic and political forces. More specifically,

population growth and growing land scarcity in the region are seen as leading to the eventual sedentarization of livestock management (contrast point 4 above). Moreover, systems of transhumance are viewed as either lacking internal political organization or not flexible enough to respond to changes in land use or politics. Mobile management is therefore seen as resulting less from productive imperatives and more from an ecological land ethic of another time.

As a result of these changing ideas, we have two narrative poles emerging within dryland development discourse: new proponents and old detractors of the sustainability of pastoral production. Unfortunately, both characterizations of 'pastoral production' when applied to the West African situation, mischaracterize the underlying rationales and organization of the mobility patterns of Fulbe herds. Whether viewed as ecological villains or political victims, the Fulbe tend to be treated as tradition-bound, politically unorganized, and managers of an unsustainable (ecological or social) form of livestock husbandry.

Such characterizations are best evaluated through historical analysis. A brief history of changing prevalence and organization of the Fulbe transhumance system in the Say District (Arrondissement) of southwestern Niger will be presented in the next section of this paper. Over the past 25 years, livestock managers have been pushed, less by tradition and more by cultivation pressure and lack of fodder, to increase their level of herd mobility. Local geography has worked to funnel this mobility toward or through National Park 'W' of Niger, established as a biosphere reserve in 1996. It will be argued that spatially-myopic attempts to totally exclude herders from the park's central and buffer zones without considering temporally defined passage rights or pasture protection to the north has increased conflict and magnified constraints to agricultural production in the region.

CHANGING LIVESTOCK MOBILITY IN THE SAY DISTRICT OF WESTERN NIGER

The Say District of Niger (Figure 1) spans the 500 to 800 mm long-term isohyets with natural vegetation varying from Sahelian scrub in the north to mixed Sudanian woodland in the south. The area has historically been a sparsely-populated region and, prior to the 19th century, a political hinterland falling just within or outside the spheres of control of a succession of political/military power centers including the Songhay empire to the northwest; Zarmaganda to the north; the Gourmantché to the southwest; the Borgu to the south; and the Kebbi to the east. Its political isolation along with its sparse population of animist Gourmantché swidden cultivators made the area attractive to Fulbe immigrants from the west as a refuge (especially during the 19th century from the Maasina via Liptako). At the turn of the century, there were five major principalities within the area (Figure 1) including: Lamordé-Bittinkodji for the *Bittinkooji*; Lamordé-Torodi for the *Toroße*; Ouro-Gueladjo (Kunari) for the *Fereße*, Lamordé Tammou for the *Fetoße Foulmangaani* as well as the more cosmopolitan religious town of Say (Laya, 1991). Fulbe nobles were the politically dominant group in each.

Little is known about herd management as it was practiced by the area's herding Fulbe during the 19th and early 20th centuries. One of the first published accounts is that of Dupire (1972) who, based on observations made during the 1950s, described the Fulbe in the area as 'sedentarized'. Even today, one of the numerous contrasts made between the Fulbe of the rive gourma and rive haoussa (right and left banks) of the Niger is that of the more sedentary roots of the former. There are a number of reasons to believe that these characterizations are to a certain extent valid for describing the early herd management style of the major Fulbe groups immigrating to the region in the 19th century. The first is that these groups arrived with strong interests in agriculture. The evidence for this is not only their choice to settle within the Sudanian Zone, which has disadvantages for livestock husbandry, but also because most came from the agropastoral Maasina, centered in the Inland Niger Delta of present-day Mali (Gallais, 1967; Ma and Daget, 1984), with some actually bringing their agricultural slaves with them (Bellot, 1980; Wilson, 1984). This interest required a family member's presence in settled communities to either survey the work of agricultural slaves or to perform agricultural tasks themselves.

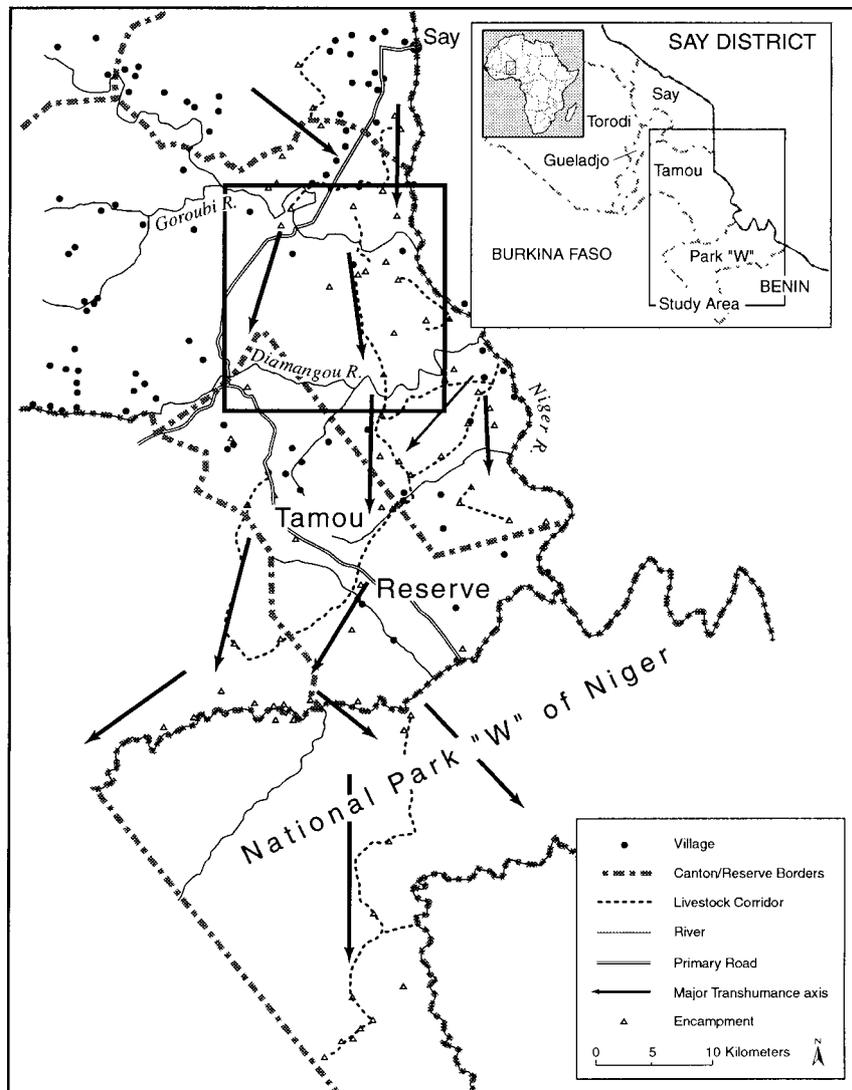


Figure 1. Study area located within the Say District (Arrondissement) of southwestern Niger. Locations of eighty encampments used historically by Say Fulbe are mapped in relation to villages, National Park 'W' and Tamou Reserve boundaries. Major axes of north-south transhumance for Say herds are also presented. Boundaries separating the Torodi, Gueladjo, Say, Tamou Cantons of the Say District are shown in the map inset. The area covered by Figure 2 is highlighted by box

As described by Dupire (1972), transhumance movements were restricted in the Say area during the 1950s. While there is little detailed documentation on herd management prior to the 1950s, the factors working to reduce mobility were equal or more important during the immediate pre-colonial and early colonial periods. Geographical features tended to inhibit movements out of the area and adequate rainy-season and dry-season pastures (uncultivated floodplain) limited the appeal of such. In many ways, herders were blocked from moving freely along a north-south axis due to political/military insecurity prevalent in the area; easterly-flowing rivers which discouraged easy movements at least during rainy season (most notably the Niger forming a boundary to the northeast); and the high prevalence of tsetse fly infestation to

the south.⁵ Up until the 1970s, cultivation pressure was low so that while the quality of fodder offered to livestock would have improved with longer-range movements, there was no shortage of fodder within the area itself.

While these barriers reduced the prevalence of herd movements out of the area, shorter distance transhumance movements within the area however were common. Dupire (1972) observed a wide variety of seasonal movements during the 1950s. The simplest were short movements (5–20 km) away from cultivated fields near the home village during the rainy season (variable direction) and toward less-labor-demanding watering points (permanent ponds or rivers) during the late dry season. Annual or semiannual trips to local salt licks were common (at the beginning or end of rainy season). Floodplain pastures were often utilized after post-harvest grazing of fields such as those along Goroubi River by the *Fetoße* of Gueladjo, the Niger River by the *Bittinkooji* (Bellot, 1980: 48–50); and along the Bella River by the *Silluße* (Dupire, 1972: 58).

In addition to these seasonal movements to and from key pastoral resources within a circumscribed area, Dupire describes movements over longer distances along a north–south–north itinerary. Most of the examples presented were of herds leaving at or before the first rains (May–June), moving a variable distance to the south (20–50 km), remaining there for a period ranging from one month to the whole rainy season (3–4 months), before returning to the home territory. The impetus for these movements were two-fold. First, contrary to most situations in the Sudano–Sahelian zone, it is to the south, not the north, where uncultivated pastures existed. Along the eastern edge of the district, the whole area lying south of the Goroubi River remained only sparsely settled – it was to these areas (including what is now the Tamou Reserve and parts of the National Park ‘W’) that herders in the immediate Say area brought their livestock during the rainy season. Second, the longer of these movements (40–50 km) allow herds to benefit from the earlier sprouting of grasses to the south resulting from earlier rains at the onset of the rainy season.⁶

The pattern of herd mobility in the area therefore has historically (before 1970) been very diverse varying between three poles: (1) truly sedentary management (herds within 5 km of the village year-round); (2) local circuits between key pastoral resources found within a 20 km radius of the village; (3) more pronounced north-to-south transhumance movements during the early rainy season. Dominant strategies varied within and between Fulbe clans and villages. This variability reflects not only the diversity of different circumstances which herd managers were under, but also the narrow benefit–cost calculus of pursuing transhumance in this area and the lack of a regional pre-colonial power stipulating uniform herd management. It is important to note, however, that all of these mobility patterns allowed for a high fraction of manure captured on agricultural fields in the area. In fact, outside observers have often noted the high level of ‘crop–livestock integration’ that has existed historically in the area (Dupire, 1972; Gavian, 1993; Wilson, 1995).

Those managers pursuing longer distance transhumance did so after leaving a milk herd in their home territory. Transhumance movements were conducted in group herds (referred to locally as *eggirbi*) along transhumance paths (*burti* or *gurti*) linking encampment points (*bille*, singular: *winde*) located near surface water points (Figure 1). Most longer transhumance movements were politically organized with each corporate herd led by a *garso*, who worked under a more regional transhumance authority called the *rugga*. Historically, access to encampment points already used by local livestock or located near agricultural settlements was gained by outsiders in an *ad hoc* fashion through the development of friendship ties and marriage alliances with host (resident) groups (Wilson, 1984). Informants of the Say and Tamou Cantons describe conventions giving particular *eggirbi* rights of first passage (with or without a specified delay) to particular *bille*. These ‘first passage’ rights were most likely to be enjoyed by those outside transhumance groups who were the first to start visiting these encampment points.

⁵During the early colonial period, tsetse fly challenge was reported to have limited the prevalence of livestock husbandry and permanent settlement in the area encompassing what is now Park ‘W’ and the Tamou Reserve – described as no man’s land in 1929 (Urvoy, 1929).

⁶Even the Fulfulbe term for the direction south, *hoore hußo* meaning literally the ‘head of the grass’, refers to the earlier sprouting of grass to the south (Laya, 1984: 10).

Land-use Squeeze: 1970–Present

A number of changes have occurred during the colonial and post-colonial periods that have increasingly strained local pastoral resources. The first has been the erosion of control over agricultural usufruct by local elites. This erosion began during the colonial period with the gradual economic emancipation of slaves from Fulbe nobles and very much accelerated after 1974 with the initiation of then President Kountché's 'land to the tiller' program that granted land-use rights to those farming the land (including former slaves). In the Say area, this not only directly shifted the political environment in favor of agricultural forms of land use but also, by multiplying the number of possible authorities granting agricultural usufruct (Terraciano, 1994; Ngaïdo, 1996), facilitated the rapid expansion of land farmed by immigrants in the area. Pushed by the droughts of 1931, 1973, and 1984, immigrant farmers from Tera and Ouallam looked to the Say District for arable land (Institute de Recherche en Sciences Humaines, 1977: 54). They, along with merchants and government officials in Niamey, were able to circumvent village-based authorities and gain access to land in the Torodi, Say, and Tamou cantons by working through the Canton Chiefs or the Sub-Prefect. Some of the areas that have been seen as having prime agricultural potential were Fulbe encampment points (*bille*) due to their higher soil fertility resulting from long-term manure deposition. Those with ties to the national government often were the pioneer cultivators of these points.

One of the most dramatic cases of encampment conversion is that of the *Booyga* encampment located just west of the town of Bokki. In 1976, the Minister of Justice (former village chief of Bokki) placed one of his own fields at the center of the encampment to ensure that no herders would visit there and in so doing opening it up for cultivation by Bokki residents (Figure 2). The area experiencing the most dramatic land-use changes in the 1970s and 1980s is that between the Goroubi and Diamangou Rivers in the Tamou Canton. From the 1950s onward, the area (east of the Say–Tamou road and west of the Niger River), which historically was rarely cultivated and a major pastoral zone for transhumance herders from the Say Canton, began to be cultivated by farmers who, because of a low water-table, only settled there during the rainy season in cultivation hamlets. Since the 1970s, cultivation pressure has increased and more permanent agricultural hamlets have proliferated. Historic aerial photography shows that while this area was only sparsely uncultivated in 1958–59 (2.5 percent cultivated) and 1975 (7.7 percent cultivated), by 1992 it was 33 percent cultivated (Ngaïdo, 1994: 44–46). South of the village of Diabou, a vast sandy plain extending 10 km to the south was carved-up into large mechanized farms (as large as 50 ha in area) controlled by merchants and government officials from Niamey. This agricultural expansion led to the decline of a number of key encampment points such as Bingel Safi, nGonga, and Feto Nomaari (see Figure 2).

Key wetlands in the area, which in the past provided valuable dry-season forage, have increasingly been converted to rice or counter-season vegetable production (Bellot, 1980). This has eliminated the dry season pastures of some resident herders as well as increased the influx of pastoralists into the area. Bellot (1980) describes the conversion of *borgou* pastures in the late 1960s to farming schemes controlled by government officials as a major reason for the large influx of Bitinkooji Fulbe from the Lamordé Canton (of the Kollo District to the immediate north) to the Torodi and Tamou Cantons (Figure 1). As a result of the 1972–73 drought, many pastoralists from the Tera region to the northwest, like their agricultural neighbors, moved south and settled in the Say District. Influx by these outside pastoralists not only increased the resident livestock population, but also put strain on the Fulbe ethic of hospitality with respect to pastoral resources. In addition, the local livestock population grew as a result of the growth in per capita livestock ownership among long-term residents who were able to accumulate livestock sold cheap by northerners during recurrent droughts. Livestock service estimates of livestock population in the Say District increased over the 1967–77 period by approximately three times for cattle, two times for sheep, and four times for goats (Bellot, 1980: 80). During the same time period, livestock populations were either maintained or declined in the Sahelian region as a whole due to the drought of 1972–73 (Le Houérou, 1989: 126).

These trends led to a situation of growing scarcity of local pastures and growing numbers of resident livestock during the 1970s. Resident herders who had been experimenting since the late 1940s with

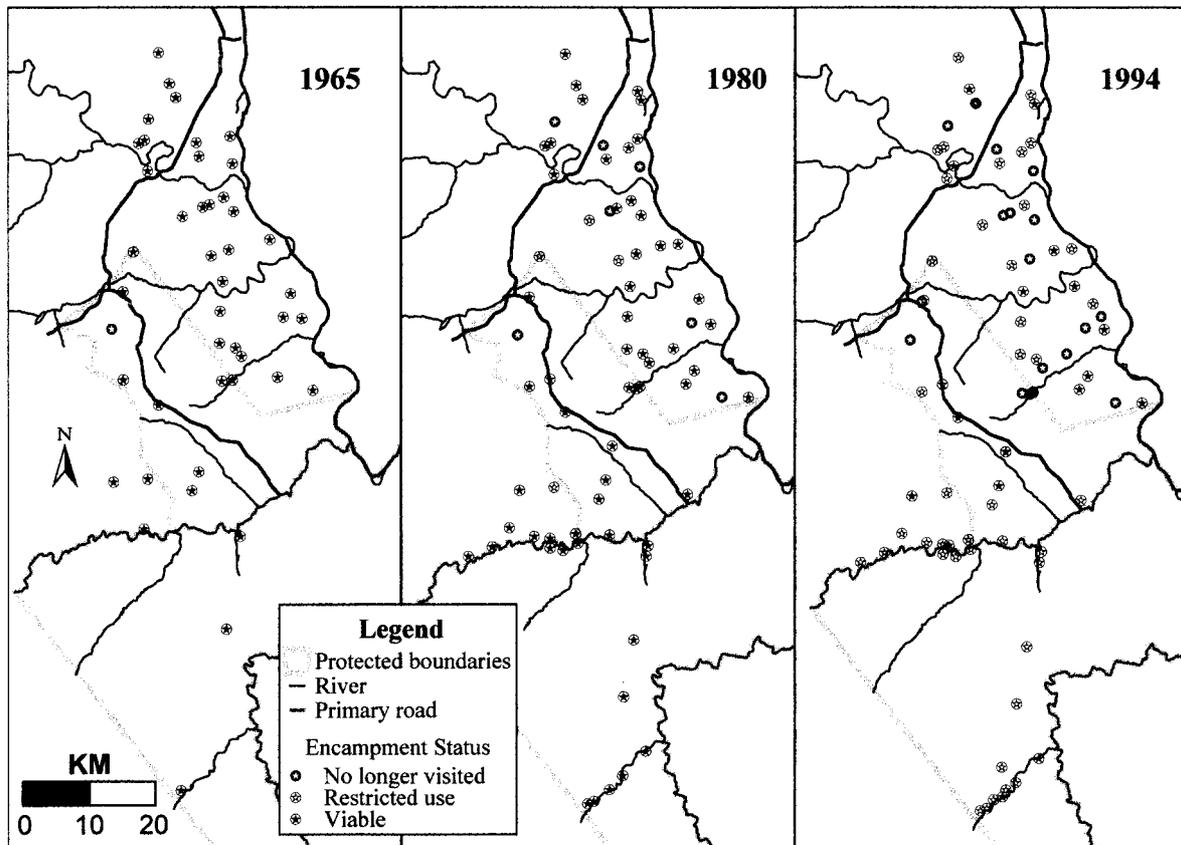


Figure 3. Locations and the status of Say Fulbe encampments during three periods: 1965, 1980, and 1994. Three categories of encampment status are distinguished: those that have been abandoned and no longer visited; those that are still used but on a restricted basis by smaller herd groupings due to either field encroachment and/or park guard surveillance (restricted use); and those that are still viable for larger herd groupings (viable)

Figure 3 shows the distribution of encampment points (*bille*) utilized by Say Fulbe in 1965. Adopting the Fulfulbe vernacular, the status of each encampment is coded by whether it is viable, available for restricted use, or no longer visited or 'dead'. This status is largely determined by cultivation pressures. Encampments were largely viable and located north of the Diamangou River in 1965. In 1980, an increasing number of encampments were only viable for restricted use and we see the establishment of new encampment points to the south – reflecting the growing importance of transhumance movements into Burkina Faso and Benin (Figure 3). In 1994, the situation is more severe with most of the encampment points to the north either 'dead' or only useful for a few herds at a time (Figure 3).

Like managers elsewhere in the region facing increasing agricultural pressure in home pasture areas (Lhoste, 1987; Bonfiglioli, 1990; De Haan, *et al.*, 1990; Lercollais and Faye, 1994), livestock managers in Say have increasingly *adopted* rather than discarded transhumance as a livestock production strategy. Throughout the 1970s, transhumance distances and times outside of the home territory increased. A significant fraction of these livestock are not owned by Fulbe livestock managers but entrusted to them by others within the Say region including farmers, government officials, and merchants (Habou and Danguioua, 1991). Increased herd mobility is consistent with the needs of agriculture. Unless nutrient supplements can be purchased (fertilizers or feed supplements), agricultural research has shown that transhumance is necessary to help maintain both livestock and agricultural production in heavily cultivated

areas (Van Keulen and Breman, 1990; Powell, *et al.*, 1995). Mobility reduced the numbers of animals present in the area during the growing season but not during the three-month post-harvest season (November–January) when most of the manuring of the fields takes place. Without seasonal movements out of area, declines in pasture, livestock, and cropland productivity would have been dramatic.

National Park 'W' and the Tamou Faunal Reserve

In 1954, the French Colonial Government established the National Park 'W' (Figure 1). Prior to that time, the 226 000 ha area had been classified as *parc de refuge* (1926) and *reserve total de faune* (1953). While these prior designations generally prohibited hunting, cultivation, and the establishment of new villages in the protected area, they did not restrict livestock movements through the protected area. By designating the area as a national park in 1954, grazing was outlawed although herders today describe enforcement as being lax through the 1960s. The faunal reserve of Tamou was established in 1962 and later modified in 1976 to its present dimensions of 76 000 ha (Figure 1). Hunting, the establishment of new settlements, and the clearing of lignaceous vegetation to establish fields or pastures were activities prohibited within the designated area.

In the 1970s, the government made greater investments into the park's infrastructure, most notably the building of roads, which were often built over pre-existing transhumance paths (*gurti*). In addition, in response to greater movements of domestic livestock through the park from the Say District to the northwest but more importantly from the Dallol Bosso to the northeast, the administration increasingly took measures to block movements of livestock through the park to Benin and Burkina Faso. Say herders state that policing vigilance and the nature of enforcement of the livestock prohibition within park boundaries varies from year to year. Despite this variability, the mid-1970s and late 1980s are most often mentioned as periods during which the enforcement of livestock prohibition in Park 'W' was progressively strengthened. While herders have typically been charged fines or imprisoned for trespassing park boundaries, reports of cattle being shot by park guards have been widely circulated among the Say Fulbe in the 1990s.

In the case of the Tamou Reserve, the implementing pieces of legislation present vague and conflicting statements about prohibited activities (Yacouba and Hassane, 1992). While grazing is never specifically prohibited (Price, 1990; Yacouba and Hassane, 1992; although see École Nationale du Genie Rural des Eaux et Forêts, 1992) there are certain activities that herders can easily be charged with such as lopping of trees or temporary settlement. As a result, herders moving through the Tamou Reserve are vulnerable to capture and fines by forest guards.⁸ Forest guards often choose to harass herders since they have good reason to believe that herders use encampments within the reserve as a base to make nightly incursions into the park proper.

Similar trends, heightened by a bias against foreign herders, have occurred in both gazetted and nongazetted areas in the destination pasture areas of Benin and Burkina Faso. These trends on both sides of the international boundaries have significantly increased the risk associated with longer transhumance to the south for herders from the Say area. As a result, the benefits of transhumance has declined, resulting in a rediversification of herd management strategies since the 1980s (Gavian, 1993: 48). The narrowed benefit–cost calculus associated with transhumance decisions is today much more onerous than that faced prior to the 1970s. Say residents must now decide between two less satisfactory choices: (1) remaining in the Say area to graze their animals on poor pastures found on unarable lands, roadsides, or in narrow fallows during the cropping season; *or* (2) conducting transhumance to the south with risks of trypanosomiasis and draconian enforcements by forest guards. Faced with such options, it is not surprising that a significant number of herds and herding families have permanently left the area to the Borgou area south of Park 'W' (De Haan, 1997).

These trends have also led to lower elite (*rugga* and *garso*) control and a reduction in the organization of transhumance. Agricultural pressure increasingly hampered the movement of large corporate herds (*eggirbi*)

⁸ Areas near the park boundary within the Tamou Reserve often resemble war zones. In the course of this study, our research team came across two situations in the bush where herders were tied to trees (one being whipped) by forest guards in an attempt to force the herder to provide information or money.

through the area. Encampment points became increasingly more circumscribed and numerous in heavily cultivated areas in the north. With increased enforcement of the livestock ban in Park 'W', herders soon found that only by moving through the park with smaller herds could they avoid detection. As a result of this land-use squeeze from the north and south, eggirbi movements remain possible only within a narrow strip of land lying north of the park and are no longer practiced (Figure 1). Fulbe elders now have much less control over livestock movements than in the past.

PARK 'W' AS AN INTERNATIONAL BIOSPHERE RESERVE

Two important lessons can be drawn from the history of the organization of transhumance in the Say District of Niger. First, herd mobility cannot be seen as a fixed cultural feature of Fulbe livestock husbandry, but instead its prevalence reflects the material opportunities and constraints facing individual herding families (Wilson, 1995). While transhumance through what is now Park 'W' began during the 1940s and 1950s as a response to the decline of the trypanosomiasis threat, by the 1970s, transhumance through the park was driven increasingly by a lack of fodder within the Say District. Therefore the increased prevalence of transhumance is shown to be a relatively new phenomena driven not by cultural attachment to nomadism but by changing material conditions near Say. Second, the organization of transhumance is shown to be responsive to changes in pasture resources, government administrative structure, cropped area, and herd movement restrictions. Coordination and control of transhumance herd movements by indigenous authorities have declined as pastoral spaces have shrunk and the need to avoid detection by park guards has increased. Park 'W' provides protection for important relic populations of elephant, giraffe, African buffalo, roan antelope, bushbuck, topi, lion, and olive baboon (Millington and Tiega, 1991; Le Berre and Messan, 1995). Reflecting its wildlife conservation importance for the West African Sudanian Zone, the Republic of Niger's request to UNESCO for the park and surrounding faunal reserves (Tamou to the northwest and Dosso to the northeast) to be designated as a biosphere reserve was approved in 1996. An influential 1992 study, which helped pave the way for the designation, identified two critical needs for the park: greater fiscal autonomy from the central treasury and more funds to increase enforcement of park boundaries (École National du Genie Rural des Eaux et Forêts, 1992). Illegal grazing in the park was characterized as a major threat in both this report and the biosphere proposal (Délégation du Niger (UNESCO), n.d.: 36, my translation):

The ecological consequences of illegal grazing are of great concern. The presence of large numbers of domestic livestock significantly diminishes the amount of primary production available to wild herbivores. The presence of these animals also represents an important disease vector. In fact, the introduction of zebu to Africa brought rinderpest to the continent.

Not only does this statement inaccurately assign blame for rinderpest to the introduction of *Bos indicus*,⁹ but more importantly presents a zero-sum competitive relationship between domestic and wild ungulates while providing little ecological evidence. While a major threat of domestic livestock is seen as resulting from competition over grazing resources, there has not been any scientific research on the grazing effects of domestic or wild ungulate populations within the park. In fact, the available information on the grazing preferences, migration patterns, and population sizes of major wildlife species is insufficient to be able even to speculate about the forage types of locations where domestic ungulate grazing would most heavily impact on certain wildlife species or bring about changes in wildlife population numbers. What can be said is that it does not seem likely that this competition results, as suggested, from competition over undifferentiated plant mass. Park management performs prescribed burns during the early dry season of each year. The stated reasons for these burns differ by source. Park personnel report that these burns are necessary to allow

⁹Archaeological evidence suggests that *Bos indicus* was introduced to the continent around 2000 bp (Smith, 1992: 97–98) – close to 1900 years prior to widespread rinderpest epidemics.

tourists to better see wildlife. Written reports state that these burns are necessary to lessen the impact of illegally set fires later in the season. In either case there does not seem to be a general lack of biomass for grazing ungulates in the park.

Domestic and wild ungulates may compete by preferentially grazing the same grass species. Unfortunately there has not been the necessary ecological work to answer this question. More plausibly, domestic livestock may be causing damage to riparian zones through grazing or trampling. In addition, the movements of domestic livestock may scare wildlife populations. Both of these problems are compounded by the need for Fulbe herds to move surreptitiously through the park. To remain hidden, individual herds move quickly into the park at night at unpatrolled river crossings. Moving as individual herds increases the chance of scaring wildlife and crossing quickly at unpatrolled crossings at night increases damage to river banks.

Consistent with the park management's inflexible approach with livestock herders in the past (Price, 1990; Loofboro, 1993), the biosphere proposal (Délégation du Niger (UNESCO), n.d.) takes a myopic view of the illegal grazing problem. Increased patrolling of the park along with 'participatory' outreach efforts in the buffer areas (e.g. Tamou Reserve) to promote the sedentarization of livestock husbandry are seen as solutions to the problem. Sedentarization would be facilitated through education; promotion of animal fattening; and game-ranching initiatives. Although excluded from the final proposal, the initial study proposed the establishment of *terroirs villageois* projects in the buffer zone. These projects were seen as beneficial in that residents in these village territories would have an interest in excluding outside pastoralists and therefore act as a first line of defense around the biosphere core – a virtual Maginot Line for wildlife preservation (École Nationale du Genie Rural des Eaux et Forêts, 1992).

These proposals display a considerable misunderstanding of the underlying logic driving transhumance to the south. Herders are not moving along or across park boundaries out of a stubborn cultural pride or an unreflective replaying of the past. They are choosing to do so because the alternatives are even less attractive. Nor are they ignorant of more sedentary forms of livestock management – they are just not viable in their home territory in Say due to cropland extension, facilitated by government policies. Without cash inflows or reductions in cultivation pressures, proposals for intensifying livestock production through sedentary management will fail. If one views livestock herders as tradition-bound, unresponsive to compromise or change, the proper management strategy is a combination of coercion and education. The strategy is to hit the nomads hard so that they will become more open to rationalize their production system. Unfortunately, responses by the Say Fulbe to such approaches by park management in the past have not been consistent with finding solutions. Herd movements have become more individualized and less controllable by Fulbe leaders and park management. The chaotic nature of herd movements today is less the cultural feature of the Say Fulbe and more a creation of park management. Viewed from this perspective, it is in the interests of the park to not weaken but strengthen the authority of Fulbe leaders over their herders.

If park managers were to accept the likely failure of the present form of 'participatory' conservation and relax a pure preservationist stance with respect to the park's boundary, space would be created to develop solutions with greater potential for reducing anthropogenic pressures on the park's plant and animal life. Such an approach would require that the government look beyond the park's 'buffer zone' and make a more concerted effort to protect key pastures in the source areas of trespassing herds. It also may require park management to formally allow regulated and seasonally-circumscribed movements of herds (2–3 week periods twice a year) along specific corridors within the park (as proposed by De Haan and Douma, 1997). These changes represent more meaningful concessions to bring to the negotiation table than the building of schools, wells, or gardening projects within a few villages. Such concessions would only be introduced in a staged manner and only to herding groups that demonstrate the political cohesiveness to police their members and report outside transgressors. If a proper incentive structure was instituted, such an arrangement holds promise for reducing the spatiotemporal dimensions of wildlife disruption caused by domestic livestock.

My informal discussions with the Say Fulbe suggest that many would be willing to accept the costs of such arrangements. Most herders stated that they would be willing to accept increased government regulation of

their movements, if they were allowed to pass as *eggirɓi* through the Park and Reserve within circumscribed corridors during the end of the dry and rainy seasons. A large fraction of these herders were also willing to pay for this privilege. Such an arrangement could utilize the weakened but still viable Fulɓe political structure (*rugga, garso*) to enforce compliance. Still the implementation of such co-management approaches will create new spheres of conflict. For example, a brokered arrangement such as that described above, would reinforce the elders' authority over herd movements, something that may be resisted by young herders who have enjoyed increased autonomy over the past twenty years.

To develop a workable solution, numerous areas of uncertainty would need to be clarified.¹⁰ Most notable are the significant gaps in present understanding of the park's wildlife populations, their movements and their interactions with domestic livestock. Such information is necessary to define allowable herd movements through the park, both spatially and temporally. In addition, such arrangements would involve international agreements and coordination since movements *through* the park result in movements into another nation's territory. Regulating such movements requires formal acknowledgment and tacit acceptance by Niger that such movements do in fact occur. Despite these difficulties, the important point to make here is that the range of possible solutions would become much wider if conservationists were to move beyond simple development narratives and look instead at the concrete historical, social, and biophysical reality of protected area and the region within which it is placed.

CONCLUSIONS

This paper began by tracing out the standard construction of 'development narratives' that surround Fulɓe livestock husbandry in the Sudano-Saharan region of West Africa. It was shown that the categorization of Fulɓe speakers as 'pastoralists' invokes a set of sociocultural characterizations of Fulɓe society, which in turn strongly influence the way in which conservationists and developers view the social and ecological sustainability of Fulɓe livestock husbandry. The influence of such narratives on the policy of Park 'W', both prior and following its designation as an international biosphere reserve, is strongly suggested by what factors were not mentioned or considered in supporting documents. Prior to its designation as a biosphere reserve, Say Fulɓe were seen as tradition-bound in their excessive accumulation of cattle and their rigid adherence to livestock mobility. The relationship between domestic and wild ungulate nutrition was seen as zero-sum conflict due to the degradative nature of mobile herds of cattle. Moreover, herd movements were viewed as chaotic, not controllable by indigenous authorities. Adoption of such a narrative, which is common in many parts of Africa (Collet, 1987; Enghoff, 1990; Homewood and Rogers, 1991; Peluso, 1993; Brockington and Homewood, 1996), supports the explicitly coercive policy pursued by park personnel during the 1980s. Since the park's designation as a biosphere reserve, park proponents have adopted the participatory framework as mandated by the biosphere model without significant changes in how they view the underlying rationales and effects of Fulɓe incursions into the park. As a result, participatory efforts are a combination of attempts to build park-sanctioned political hierarchy within buffer zones to better protect park borders and education programs directed at increasing wildlife appreciation and teaching sedentary animal husbandry to local inhabitants. By ignoring the underlying material forces behind park incursions, such participatory efforts will most likely be ineffective and simply provide a participatory veneer to the necessary continuation of the coercive preservation program.

Despite some conservationists' descriptions of Park 'W' as a transborder park that promotes international peace (Thorsell and Harrison, 1990), the local reality within Niger is that it is a center of conflict. Significant conflict began as herders increasingly depended on forage resources to the south during the 1970s and 80s, which required herd movements through Park 'W' or the Tamou Reserve. While ecological data are lacking,

¹⁰These areas of uncertainty include: the ecological impact of wild and domestic ungulate grazing; grazing–fire ecology relationships; the design of effective co-management institutions involving Fulɓe leaders, park personnel, and state officials to ensure compliance; and international political issues that would arise with state-sanctioned herd movements across international borders.

evidence suggests that conflict in this case cannot be seen as an unfortunate by-product of successful conservation evaluated by biological criteria. Park patrols have not greatly curtailed Fulbe movements through the park. The persistence of the conflict cannot be explained simply by intransigence on the part of Fulbe herders or the persistence of a militaristic wildlife protection policy. The persistent effect of pastoralist narratives on how park managers and conservation/development experts view the logic and effects of Fulbe herd movements has also contributed. The history of Fulbe livestock husbandry in the Say area demonstrates that: livestock movements have historically been organized under the leadership of indigenous authorities (*rugga* and *garso*), answerable to regional political leaders; Fulbe livestock husbandry near Say has historically displayed highly restricted mobility patterns; longer livestock movements to the south have *increased* since the mid-1970s due to land scarcity resulting from the state-sponsored expansion of cropped area in the Say area; livestock moving through the park is not owned solely by herders but by all groups within the Say region; and these movements are necessary for maintaining livestock *and* cropland productivity in the Say area.

This history reveals that the logic of livestock movements through the Park and Reserve is not governed by inflexible tradition nor by voluntaristic convergence on an undegraded island, but by growing material constraints in the home territory. Wildlife conservationists need to consider a human geography broader than that of the park's border or buffer zone. Simply labeling herders moving through the park as 'outside' pastoralists reveals little about why they are coming. Misleading characterizations about pastoralist logics necessarily fills the information void. Once the Fulbe are depicted as tradition-bound, politically unstructured, and ubiquitously environmentally degradative, little negotiation space remains for the park manager, whether or not he is pursuing a 'participatory' approach. Once 'pastoralists' do not embrace 'introductions' of sedentary livestock management principles, more coercive measures and Fulbe circumventions will ensue. Only by discarding these sociocultural characterizations and thereby widening the negotiation space between herders and park managers will longer-term solutions be found.

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