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Over the past decade, Norwegian and Danish social science research on natural resources management in the Sahel has been considerable. In part, this research grew out of the Norwegian and Danish commitment to support the poorest region in the poorest continent in the world. After the great Sahelian drought in the mid-1980s both Norway and Denmark increased their development assistance to the Sahelian countries, and while Denmark primarily supported Burkina Faso, Niger and Senegal, Norway concentrated its efforts in Mali. This geographical focus has been reflected in the research which the assistance entailed and is also noticeable in this book.

The research collaboration between and among Norwegian and Danish scholars in this field has been extensive, and most of us have met and exchanged ideas quite frequently in various forums in Norway and Denmark. Seven out of the fifteen chapters are authored by researchers previously enrolled at the Graduate School of International Development Studies at Roskilde University, but also occasions such as the annual Danish Sahel Workshop, and other seminars in Norway, Denmark and elsewhere have offered good opportunities for us to discuss our ideas and experiences. On many occasions, international scholars have stimulated our thinking and research with their writing and comments. Among these are Brigitte Thébaud, Paul Mathieu and Michael Mortimore, who have generously contributed to our research community, and we are extremely happy to have convinced them to be part of this book project. We hope the result will both inform practitioners and decision makers, and stimulate continued research in this fascinating part of the world.

We are grateful to the great number of people in Norway, Denmark and the Sahel who have provided comments on the individual chapters along the way. We are also very thankful for the financial support for this book project offered by the Danish Council for Development Research, as we are to the Graduate School of International Development Studies at Roskilde University which bore the cost of the language correction meticulously executed by Maribel Blasco. Finally, we thank Lars Øimoen for the help with scanning and cleaning up some of the maps presented.

Tor A. Benjaminsen and Christian Lund
Ås and Roskilde
A Political Ecology of the Sahel

“Natural resources management” is a well-established concept within development theory and policy despite the fact that it only entered onto the scene some 15 years ago. The emergence of the concept was a result of increasing international interest in environmental issues and the rise of “environment and development” as a new research and policy field. Understanding natural resources management requires an interdisciplinary approach combining the analysis of a number of interrelated and complex processes: First, it is essential to study ecological conditions and how resources behave following natural variations and human impacts. The nature of the resources (e.g. their density, amount, variability) as well as how they are valued (by users, policy makers or markets) determines their use, management and the tenure relations which accompany them. Second, these tenure relations or property rights are in fact dynamic objects of intricate struggles between various stakeholders, since they often involve a combination of different groups of local users (pastoralists, farmers, “original” inhabitants, migrants, the political and economic elite, etc.) and State agencies and officials. Third, these struggles feed into and are a product of local and national political processes which, again, are informed by global discourses of “decentralisation”, “disengaging the State”, “democratisation” or “environmental degradation”. Hence, in addition to these three spheres of natural resources management (production, property, politics), and with the main focus still on the local level where the day-to-day management is practised, the approach also integrates aspects from the national and the global level.

With a focus on the West African Sahel, this book tries to link these three spheres of natural resources management, as well as the three geographical levels where appropriate. A broad and empirically-based political ecology approach is employed, emphasising the importance of focusing on power relations (Bryant and Bailey, 1997; Bryant, 1998; Stott and Sullivan, 2000) in studies of access and control over resources. Power struggles are played out in both struggles over meaning and practice (Peters, 1984, 1994, 2000; Fortmann, 1995). However, “putting politics first” does not necessarily imply excluding other possible explanatory or determining factors. Even though we believe that the political sphere and power
relations in particular frame the action space of rural people, we agree with some critics of political ecology who claim that this approach easily leads to _a priori_ judgements and explanations (Vayda and Walters, 1999). That is why we stress the need for an empirically-based approach as opposed to some of the work produced within the prevailing poststructural trend in political ecology. Recent works within this trend tend to be essentialistic and populist without being grounded in the complex micro-politics of environmental management or in the actual environmental impacts of human action.

Despite this critique, discourse analysis introduced through the influence of poststructuralism has made an important contribution to "environment and development". It has led to an increasing questioning of hegemonic global discourses\textsuperscript{1} and their related narratives\textsuperscript{2} (Ferguson, 1990; Roe, 1991, 1995; Hoben, 1995; Stott and Sullivan, 2000; Adger et al., 2001). This questioning of dominating discourses using evidence from empirical case studies has, in Africa, occurred particularly in relation to land degradation and people-environment linkages (Tiffen et al., 1994; Leach and Mearns, 1996; Fairhead and Leach, 1996, 1998; Benjaminsen, 1998). This type of work also paves the way for historical analysis linked to people-land interactions and for the combination of political ecology with environmental history.

The major theme of this book is the important role of politics, power, and tenure, often seen from a historical perspective, in understanding the evolution of production systems and their local environments. The dynamics and development of the various production systems in the Sahel (farming, pastoralism, fishing, and their combinations) and the respective ways in which they use the environment depend on the nature of political institutions, power relations,

\textsuperscript{1} Discourses are broadly defined as truth regimes and are related to specific social phenomena or practices. In the environmental arena, discourse analyses have been used to characterise pervading and received wisdoms, the evolution of environmental crises and their social construction (see Adger et al., 2001; and Svarstad, forthcoming).

\textsuperscript{2} There are three aspects of narratives relevant here. First, a narrative is a story with a chronological order (beginning, middle and end). Roe, for example, defines the concept of 'development narrative' in which chronology is emphasised (Roe, 1991, 1995). He stresses that a development narrative is not necessarily displaced by negative findings that seems to refute it. Roe therefore proposes creating 'counter-narratives' that tell a better story. He further proposes that, when appropriate, researchers should 'denarrativise' by insisting that 'there is no story to tell until the facts are in' (Roe, 1991, 1995). Second, a narrative constitutes a particular structure with respect to an involved 'cast' of actors. This aspect is derived from narratology and social semiotics in which patterns of casts and other features in expressions have been used to analyse social phenomena. Thirdly, a narrative is applied or used as an abstraction and in this sense constitutes a 'model'. In this way, the term narrative can also be applied to a set of structurally similar stories within a particular discourse. The narrative is therefore a generalised abstraction rather than a specific case or story (see Adger et al., 2001 and Svarstad, forthcoming).
Figure 1. The Sudano-Sahelian zone of West Africa defined according to average annual rainfall.

and the different actors’ access to land and resources. What is produced and how is to a large extent a materialisation of the different political processes and property relations. This book consists of three parts reflecting these three spheres: Politics, Property and Production. The different contributions each have a primary focus within one of these dimensions but they also demonstrate that none of these dimensions of social life in the Sahel can be understood in isolation. The precariousness of politics and policies, of property relations and of production systems in the Sahel means that each impinges upon the other to an extent where none can be sensibly studied in isolation.

Most Sahelians’ livelihood and fortune depend on their access to natural resources and on their own production. Hence, production systems and questions of property rights directly and indirectly impinge upon the political agenda. Even issues which are seemingly unrelated to questions of property and production may become so in the course of politicisation. Competitions over political office or other sources of rent may relate indirectly to land in particular, and to conditions of production in general. There is, of course, a certain dialectic in this because once questions of property and production are politicised they become part of processes where several competing, often conflicting, and irreconcilable logics are at play. Production systems thus often change or stagnate due to logics and interests external to production itself. Similarly, land tenure arrangements are conditioned by
myriad relationships, processes and interests which may not seem to have an immediate bearing on questions of property.

We do not in this book use a scientific definition of “the Sahel”, but rather a wider and more vernacular one. Hence, “the Sahel” is interpreted as “the drylands of West Africa” which also include the Sudanian zone further south. West Africa is often divided into agro-ecological zones following rainfall patterns, with increasingly wetter conditions from the desert in the north to the coast in the south-west (figure 1). According to this agro-ecological definition, the Sahel is the border zone south of the Sahara with 100–600 mm of long-term annual rainfall. South of the Sahel, the Sudanian zone extends from the 600 to the 1000 mm isohyets and continues into the Sudano-Guinean zone (1000–1400 mm) (Le Houérou, 1989).

The Sahel has long been portrayed as an area of heavy human over-exploitation of the environment leading to desertification and dryland degradation. This idea was first “established” during the European colonisation of Africa. During the French occupations of West Africa, colonial foresters and administrators perceived clear signs of indigenous environmental mismanagement and subsequent desert advance. In 1907, a forestry mission lead by J. Vuillet, chief of the Service de l’Agriculture in the colony Haut-Sénégal et Niger, stated: “It is indeed true. The Sahara progresses toward the south; and that because of Man’s action”.¹

This idea was later regularly supported by colonial administrative reports, research reports² (e.g. Stebbing, 1938; Aubreville, 1949) and travel accounts (e.g. Bovill, 1921). While the idea received less attention during the decade of exceptionally high rainfall in the 1950s, the droughts of the mid-1970s and 80s as well as rising international environmental awareness increasingly trained the world’s attention on the Sahel and its environmental “crisis”. This led to a proliferation of development projects in the region focusing on the rehabilitation of what were perceived as degraded lands. However, these projects soon turned out to be costly, and suffered from lack of local interest and participation. The point of these projects was also later questioned by research which concluded that ecosystems in West African drylands are basically non-equilibrial where rainfall is the determinant variable. But, while the image of the Sahel as a

¹ Translated from the original: ‘Il est donc bien vrai: Le Sahara progresse vers le Sud; cela du fait des hommes’. Centre des Archives d’Outre-Mer, Aix-en-Provence, Affaires économiques, R24 (14 MI 1566), Mission forestière, 1907. It should be pointed out that there were some discussions among French scientists early in the 20th Century concerning whether the problem of desert advance was caused by desiccation or by human action (see van Beusekom, 1999). However, from the 1920s, the proponents of desiccation lost ground to those believing in human-induced degradation.

² However, de Gironcourt (1912), after a mission to the northern parts of today’s Mali in 1908-09, argued against the idea of desertification caused by local natural resources use. In a public lecture given in 1913 he said: ‘Deforestation has been more active during our ten years of occupation than during several centuries of indigenous nomadism. The use of wooden frameworks for the construction of our stations leads to the felling of innumerable palms and the heating of our steam engines consumes an amount of wood which is not in proportion to the woody production of the banks of the Niger’ (our translation). Reported in Journal Officiel de la République Française, 3 February 1913.
place of perpetual natural disaster must be tempered, it should not be ignored that the Sahel as the poorest region in the poorest continent of the world is the home of people who face tremendous challenges to their livelihoods.

Research has, over the years, pointed towards the central role of social, political and institutional factors in the exploitation of natural resources. Uncertainty is a key feature when people engage in efforts to organise power and authority, when they negotiate property and when they invest labour, skills and capital in production. The concern for what has, for want of a better word, been termed “institutional factors”, has been increasing over the past ten years within development. The focus on institutional causes of environmental and economic problems has been translated into policy reforms targeted at institutions such as property and land tenure, markets and public administration. In short, policies sought to “put institutions right”.

The general idea is currently that in order to arrest environmental degradation, it is necessary to improve local management by giving people more exclusive control over land. This policy advice reflects mainstream common property theory represented by, for instance, Ostrom’s design principles (Ostrom, 1990) focusing on the importance of clear social and physical boundaries for sustainable natural resources management. Land tenure reforms have been introduced in several countries, and decentralised natural resources management seems to have become an, often conveniently unspecified, mantra among development agencies. In the West African Sahel, this trend has recently been translated into decentralisation reforms in most countries and an increase in projects labelled “gestion de terroir”. Such projects seek to delimit village land and give village authorities control over the land in order to improve environmental management. This policy coincided with structural adjustment policies promoting the disengagement of the state and decentralisation reforms. However, many of the policies pursued have been simple and unsophisticated and badly adapted to the local circumstances (Toulmin and Quan, 2000). Taking control over land and resources away from the State and giving it back to people in order to improve environmental sustainability is a reasonable notion. However, the main problem with this approach is that it evades the issue of bundles of rights and overlapping use which characterise most Sahelian and African tenure systems.

The research which underpins this book has, in many ways, focused on these very same institutional issues of politics, property and production but with less conviction about swift and easy ways of “putting institutions right”.

Politics

While the perceptions and responses by governments and donor agencies to desertification were, from the outset, technical in nature, natural resources management is profoundly political. Seen from above, natural resources management has increasingly been the object of planning efforts. Thus, one “master-plan” has followed another, each sponsored by one of the major international donors (e.g. National Plans to Combat Desertification (UNDP/UNSO), National Conservation Strategies (IUCN), National Environmental Action Plans (World Bank)) often leading more to competition and confusion than to rational, coherent actions (Marcussen and Speirs 1998).

These plans resulted, once again, from desertification discourses emerging on the global agenda during the past few decades (Adger et al., 2001). The United Nations Environment Programme (UNEP), created after the Stockholm Conference on the Human Environment in 1972, subsequently decided that “desertification” was one of the main justifications for its existence. The organisation convened the UN Conference on Desertification in Nairobi in 1978 and commissioned several studies to document the extent of desertification (e.g. Lamprey, 1975; Mabbutt, 1984). At the Earth Summit in Rio de Janeiro in 1992 (the UN Conference on Environment and Development, UNCED), desertification, together with biodiversity and climate change, acquired the status of a new topic meriting an international environmental convention. Agenda 21 devoted its chapter 12 to desertification and the Convention to Combat Desertification entered into force in December 1996. While earlier approaches to fighting drylands degradation had focused on the physical rehabilitation of the environment (tree planting, sand dune stabilisation, etc.), the language of the new Convention (not much actual implementation has been seen as yet) focuses primarily on the decentralisation of natural resources management.

Influenced by current international and donor policy trends, national legislation on decentralisation and land tenure has been drawn up. This legislation has changed the conditions under which natural resources are accessed and controlled; but it has often done so in ways not anticipated by legislators and reformers, often with quite conflictual results (Lund, 1998; Mathieu, 1997; Chauveau and Mathieu, 1998; Lavigne Delville, 1998). This can partly be attributed to processes taking place at the local level. Seen from below, natural resources management is always the object of power struggles and politicisation. No planned intervention, no development project and no change in resource utilisation constitutes a discrete and neutral event (Bierschenk, 1988). On the contrary, such interventions enter into a larger configuration of negotiation, bargaining and struggle which does not merely

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1 ‘Desertification ... is probably the greatest single environmental threat to the future well-being of the Earth’, Peter Shaw Thacher, Deputy Executive Director of UNEP in Desertification Control Bulletin, vol 2, no 1, 1979.
involve negotiation within the limits of a set of generally accepted and stable rules, but extends to negotiation over the rules themselves. As Metha et al. (1999) put it:

This complex, historically emergent layering of institutional domains that results from attempts at environmental governance over time renders even more complex the institutional arrangements for natural resource management and livelihood sustainability in the contemporary world. And the multiplication of institutional forms and sites for environmental governance and natural resource management itself generates greater uncertainty as individuals, social groups, and organisations jostle for control over resources and their futures. The result is both that conventional theoretical divides between local and global, formal and informal have been made redundant, and that ambiguity, complexity and uncertainty increasingly characterise the conditions under which resources are governed and managed. (Metha et al., 1999: 10)

The political landscape in most Sahelian societies as well as in much of Africa is characterised by a multiplicity of institutions, some representing the State, some bolstered by state-sanctioned recognition and others which, while ostensibly apolitical, exercise de facto political authority. Hence, power is often fragmented and at stake. This imparts a certain relative autonomy to local political arenas vis-à-vis national policies and politics. The latter obviously condition local politics and infuse local political arenas with certain agendas, various forms of power brokerage and political imperatives. Nonetheless, these impulses are generally received, reappropriated and to a certain degree transformed, and they rarely materialise in local settings unscathed by local circumstances. Thus, the point is not to see politicisation and negotiation as malignant or benign for natural resources management, but to understand this as its fundamental condition.

The plurality of sites, rules and modes of governance not only challenges rural people’s mastery of their livelihoods, it also challenges the analysis of natural resources management. It would appear that we will have to conduct analyses of simultaneous social processes in various institutional settings, and that we must pay the keenest attention to what people do – how they enact social institutions through practices. These may often differ from the practices that formal institutions and rules presuppose (Juul and Lund, forthcoming).

Such multi-institutional negotiation takes place over the formalisation of land rights, as Paul Mathieu describes. He analyses how local indigenous practices of formalisation of land tenure transactions generate political struggles among various institutions. Mathieu describes how certain institutions are called upon by land holders to formalise claims despite the fact that these institutions are not formally entitled to do so. Hence, the divergence between meaning (norms) and practice lies at the heart of the political negotiation of land tenure. Mathieu discusses these issues on the basis of observations and data from Burkina Faso, Côte d’Ivoire and Rwanda.

Land issues are also fundamentally at stake in Christian Lund’s article. Lund focuses on the processes and practices by which political power in a Sahelian town, Dori, in Burkina Faso, is asserted and legitimised through the political elite’s ca-
pacity to control aspects of the land tenure system. This is ultimately done by the elite's capacity to control political processes which connect various zones of public authority. Lund argues that an important element in linking these different zones is brokerage performed by various actors with privileged access to several institutions simultaneously.

The contribution by Kristine Juul focuses on the processes through which newcomers access resources, and the ways in which the firstcomer population try to limit this. The chapter is based on a case study of micro-politics from southern Ferlo in Senegal where a large group of herders – victims of the large droughts of the 1970s and 1980s – have settled. Juul shows how institutions initially designed as simple service provision organisations tend to become politicised as they become part of larger political struggles, and hence, unintendedly, are transformed into key institutions in the decentralisation process. As a consequence, a contradictory, incoherent and chaotic picture of the interests lying behind local resource management practices is revealed.

A slightly different aspect is taken up by Lars Engberg-Pedersen in his contribution. Engberg-Pedersen argues that the political landscape in rural areas of Burkina Faso is made up of “three worlds”, each equally inhospitable to ordinary people’s participation. The study describes how the distinction between leaders/subjects, politics/development and donors/receivers configures a complex hierarchical political space where political power struggles tend to exclude the rural population. Through an analysis of the processes which structure these dichotomies, the author outlines why evasion seems to be the strategy favoured by ordinary rural people.

Tove Degnbol discusses the often-proclaimed “fact” of the breakdown of the African State by examining four extension agencies in the Sikasso region in Mali. She argues that it is a simplification to reduce explanations for the poor functioning of government agencies to the issue of self-serving civil servants. It is also a simplification to discuss “government agencies” as if they were all similar and all characterised by the same type of problems. The author compares the organisational characteristics of four different extension agencies, all involved in aspects of natural resources management in the same geographical area and all attached to the same government ministry, and she demonstrates how markedly different the various parts of the same state may function. Degnbol shows how differently the four agencies perform, and concludes that the much-discussed “breakdown of the African state” is only partial: while some parts of the state have virtually stopped functioning, varying levels of good performance may well characterise other parts.

Based on an historical account of institutional transformation during the 19th and 20th centuries, Trond Vede compares political processes in two Fulani village societies of the Inland Niger Delta in Mali. The chapter explores continuity and change in key institutions that condition co-ordinated action in the management of common-pool resources. The author argues that social actors with a stake in these resources have changed status and organisation, and that political processes between groups and levels of society have transformed concomitantly. Significant
change in institutions and practices has therefore taken place, and new property rights institutions have emerged. Hence, Vedeld argues that the creation of the central state administration has wrested the power to manage resources from Fulani society. Moreover, at community level the gradual breakdown of patron-client relations and labour-tying institutions between noble Fulani families and cultivators of slave descent has affected the political economy underpinning management and protection of common pool resources. It is argued that the differences in social patterns and caste relationships between the two villages, including the capability for leadership, were largely historically determined, and the importance of historical events and context for governance and for directions of political and institutional change are highlighted.

Property

Property may be one of the most comprehensive yet at the same time most elusive concepts in the natural resources management debate. “Property is not about things, but about relationships between and among persons with regard to things. In short, to say that someone has a right to land is to summarise in one word a complex and highly conditional state of affairs that depends on the social, political and economic context. The place, the setting, the history and the moment, all matter” (Moore, 1998: 33). Property is thus a rubric which provides a focus on how access to, use of, and control over “things” or resources are organised in society. Thus, when property is referred to, it is a shorthand for a series of questions and queries: who gets to use what, in what way and under what circumstances?

Property rights concern access to, use of and control over “things”. They constitute processes of regularisation and situational adjustment in the ongoing reconstruction and transformation of these social relations. African and Sahelian land tenure is a field where property relations are multifarious, overlapping and competing. Moreover, most African and Sahelian tenure systems are characterised by the existence of multiple tenures, i.e. several users holding different rights to resources on the land. One may farm, another may gather fuelwood, a herder may use it for dry season grazing and so on. Terms of tenure therefore not only depend on the specific use of a given resource, but they are also contingent upon the “surrounding tenures” which are themselves also recreated and transformed through peoples actions. As Berry argues, “People interact, within and across various social boundaries, in multiple ways and relations among them are constituted less through the uniform application of written or unwritten rules, as through multiple processes of negotiation and contest which may occur simultaneously, or in close succession, but need not be synchronised or even mutually consistent” (Berry, 1997: 1228). Consequently, when we are dealing with the ways in which people manoeuvre to secure land claims, we are looking at processes that range from the application of rules to their assertion in terms of situational adjustment with possi-
ble reference to embryonic rules, to myths and half-baked principles which may prove ephemeral but do the job in the moment of assertion.

The complex, contingent and ambiguous character of land tenure regimes in the Sahel and in Africa in general has made land tenure the object of reform in many countries over the years. The motivations behind reform vary and have changed over time, but productivity increase, investment increase, protection of the environment, and socially just access to land have been among the most prominent issues. However, the ambition to clarify and order land tenure systems has largely been in vain. As Downs and Reyna point out, “colonial and post-colonial attempts to reform customary land tenure systems with the intention of promoting agricultural monetarization and raising productivity have created a complex, antagonistic situation, in which old and new coexist, the old system having been modified, and there are no clear guidelines on the enforcement of each system and no authorities competent enough to manage them” (Downs and Reyna, 1988: 11). The various efforts at reform have thus often increased uncertainty about rules of tenure as well as about the “rules of the game” in general. Some countries have even experienced several reforms, which have sometimes dramatically contradicted each other. The result is often an institutional terrain that simultaneously conditions and constrains people’s negotiation over land rights. But conditions and constraints are rarely evenly distributed. Hence, in addition to the rules themselves, the process of having some rules applied and not others is vital, and the variety of resources people command and deploy should be at the centre of our attention.

The article by Christian Lund takes up some of the most pervasive and long-prevailing assumptions about African and Sahelian land tenure. The author argues that assumptions about certain causal relationships engender types of reasoning which are subsequently used to justify certain interventions, privilege certain institutions, or favour certain groups and are therefore often peddled by specific stakeholders. Two assumptions are investigated in the article: namely, that private property is inherently un-African, and that private property is a prerequisite for investment and development. In questioning the two lines of reasoning concerning land tenure the author is not suggesting that they should simply be reversed. Rather, he argues that processes of privatisation occur and have a long history in many places with, and indeed also without, government initiative. And in a significant number of cases this causes increased tenure insecurity, uncertainty and conflict. Any effort to influence rural development should take account of these eventualities. Lund argues that the linkage between security of tenure and private property is often circumstantial and in many cases not as simple as suggested by the theoretical assumptions. Indeed, the process of privatisation seems often to hamper rather than enhance land tenure security. While theories may direct our attention to interesting hypotheses, this still remains a largely empirical challenge.

Brigitte Thébaud discusses the use of pastoral resources in the Sahel and how this is based on a complex mix of use rights, access rights and reciprocity. Following an analysis of the legal basis of “common property”, the author examines
whether the Sahelian states have accommodated this particular form of land tenure in their legislation. Drawing on examples from the land tenure reforms of Niger and Burkina Faso, the author points to the countries’ difficult choices in terms of legislation and in particular in terms of the mediating role of the state. Thébaud suggests that a careful analysis of the character of “common property” is the key to understanding the profound changes witnessed by the pastoral societies of West Africa since the 1950s.

The character of “common property” is further elaborated by Gunnvor Berge. She analyses pastoral Tuareg perceptions of space and place in northern Mali and shows how Western concepts of territoriality, ownership and property rights do not manage to capture the relationship between Tuaregs and land. People’s attachment to place is expressed in a feeling of familiarity, in health and thriving, not in territorial exclusivity or material manifestations of identity. However, in times of unrest, resource use is less fluid and flexible than in times of peace. This was demonstrated during the Tuareg rebellion (1990–1996) when camping patterns changed and a stronger relationship between social groups and geographical areas was demonstrated. The different rebel groups not only fought the Malian state, but also experienced violent confrontations among themselves. This led kin to stay closer together for the sake of security than was usual in times of peace.

Eyolf Jul-Larsen and Bréhima Kassibo address the issue of work migration within fishing communities in Niger’s Central Delta in Mali. They investigate to what extent this migration influences the ways people struggle and compete for access to fishing grounds in the Delta. The chapter focuses on the role of local political leadership in this struggle. The various local leaders seem to have shared and direct interests in maintaining unclear and contradictory rules regarding access to resources. Work migration and its potential in bringing about institutional change has not led to greater institutional clarity, since it does not challenge the basic local power relations.

Production

The image often given of Sahelian production systems is one of food insecurity and stagnation with few prospects for agricultural intensification without environmental destruction. Population growth and inadequate tenure and policy frameworks are seen as the main culprits behind this situation (Cleave and Scriber, 1994; World Bank, 1996). However, recently some empirically based local-level studies from dryland Africa have offered a different and more optimistic picture of dryland production systems.

The Machakos study (Tiffen et al., 1994) renewed an old debate on the population-agriculture-environment nexus in Africa opposing Malthusians and scholars inspired by the Boserupian model (Boserup, 1965). The study of agricultural and environmental change in the Machakos District in Kenya in the period 1930–1990
found what was termed “sustainable intensification” (agricultural growth per capita and environmental “improvement”) as a result of increased population pressure and a beneficial agricultural policy after independence. The former was found to be a necessary condition, albeit not sufficient without the latter. The question now is whether Machakos can be said to be a unique case in drylands agriculture or whether other similar successful cases exist and, if so, are any such cases found in the drylands of West Africa? Furthermore, under what conditions can such cases of sustainable intensification be found? And, likewise, what characterises areas of agricultural stagnation and environmental “degradation”? These questions are discussed in the first two chapters of this section.

Based on long-term data from the Kano Close-Settled Zone in northern Nigeria and his own participation in the Machakos study, Michael Mortimore discusses what smallholders in African drylands do to overcome variability and productivity constraints. The constraints are: low and erratic rainfall, generally low bioproduction (except in certain lowlands where irrigation is possible), shortages of labour during critical periods of the year, and the risky nature of investments on account of the variability in rainfall. The author shows that adaptive capacities exist to deal with these constraints. Such capacities offer much scope for further development, with the right policy environments, as they are internal assets of the production systems. Furthermore, Mortimore describes how top-down policies and interventions based on mainstream narratives about people and the environment have been ill-adjusted to the priorities and environments of Sahelian farmers. However, he concludes that the experiences from northern Nigeria and Machakos in Kenya suggest that a convergence of internal and external forces of change may optimise the opportunities for poor households in drylands.

Such a convergence seems to have taken place in the cotton zone in southern Mali, the case presented by Tor A. Benjaminsen. This area is frequently referred to as a success story with rapid growth both in cotton cash crops and in food crops. By tracing the history of agricultural development in the cotton zone, Benjaminsen shows how the policy environment has boosted the process and how policy fluctuations have led to alternating periods of intensification and extensification. The result of these developments has been the on-going creation of a man-made landscape, where some important natural resources, such as certain useful farm trees as well as the soil, are conserved and even enhanced by land use practices, while forested land and some biodiversity has been lost locally due to agricultural expansion. Whether this transformation is called “degradation” or “improvement” is largely a normative question depending on the environmental perceptions of individual actors.

The last two chapters of this book discuss different social implications associated with agricultural development. Simon Bolwig explores how labour as a constraint in Sahelian agriculture is linked to agricultural productivity, off-farm diversification, and food security. By studying the livelihood strategies and practices of Fulani farmers in northern Burkina Faso, Bolwig focuses on how inequality is produced locally. He argues that adaptive capability is unequally distributed be-
tween households with differing endowments of human resources. Great inequality in access to human resources was found among the households studied. Food security was not necessarily associated with high agricultural productivity, due to extensive off-farm work. This local reality contrasts with development interventions assuming Sahelian farmers to be a homogenous group of subsistence millet producers. The smallholders studied had largely been able to cope with drought, population growth and other pressures on their livelihoods, albeit without much economic development as shown by their life histories.

In the last chapter, Peter Oksen discusses the role of livestock husbandry in areas of agricultural expansion. The dominant models of agricultural intensification acknowledge the central role of livestock as a supplier of nutrients and traction power. However, through the presentation of a case from south eastern Burkina Faso, Oksen argues that the integration of livestock in the intensification process is far from straightforward. In fact, agricultural expansion may have a negative impact on animal husbandry, due to the fact that farmers and pastoralists belong to different ethnic groups. Hence, one group’s field expansion may mean another group’s loss of grazing areas. Instead of integration, this situation may increase tenure conflicts.

Individually, and in particular collectively, the contributions to this book provide a number of thought-provoking reference points for research on natural resources management in the Sahel. First of all, the contributions argue against the idea of permanent and aggravating crisis, but without denying the precarity of the situation in the Sahel. The chapters all attempt to situate the current predicament in a historical perspective – some a longer perspective, others a shorter one. The studies demonstrate that while the region is not on the brink of disaster, the mutual contingency of political processes, property regimes and the performance and development of production systems imbues peoples’ lives with a good measure of uncertainty. The chapters contribute to a “normalisation” of the research on the Sahel, in the sense that they are neither alarmist and sensational nor belittling the problems at hand. Instead, they advocate thorough empirical research with keen attention paid to the interconnectedness of several spheres, and with historical awareness. The chapters situate questions of natural resources management in a broader framework of political, economic and socio-cultural processes. Thus “natural resources management” is “put in its place”. It is not seen as the one and only valid preoccupation of the population, their politicians and researchers, rather, it is seen as one important aspect among many others in social life in contemporary Sahel.

Second, the contributors all employ a dynamic and processual perspective. They investigate processes of reproduction and change and question the evolutionary narratives and the blank acceptance of the irreversibility of natural and social processes. By focusing on details, elements of a larger picture emerge, a picture which may not satisfy demands for simplicity and obvious policy choices. Nonetheless, the picture that emerges does offer some hints and advice to policy makers in the guise of developers, bureaucrats and politicians alike. The chapters confirm
that the capacity for change is, indeed, present but also that it is difficult for the state to harness it. While people take state policies and development projects into account, they also weigh up other factors when they take decisions about production and access to resources. People take account of politics but do not necessarily await policies – or indeed abide by them.

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Informal transactions and emerging land markets in Africa

In rural West Africa, farmers and other actors of land transactions increasingly seem to demand written registrations of their tenure rights. Durable land rights are also increasingly sold. These practices are part of ambiguous, complex and contradictory social processes which the expression “imperfect commoditisation” only grasps in a simplified and ... imperfect manner. Local endogenous practices of formalisation of transactions express a new and meaningful social demand to secure in written form, in more detail and in unequivocal conventions what so far has been the domain of oral convention.

In social and agrarian systems of rapid transformation and legal and institutional uncertainty, buyers of land seek to secure their rights against future counter-claims. Furthermore, there is a gap between a public discourse on land transactions (which denies or plays down the existence of monetary exchanges) and the real practices. The gap between private practices and public principles seems to be the rule rather than the exception in these current African land tenure practices. This chapter tries to systematise the meaning of “informal formalisation” of transactions, in this period of transition, uncertainty and plurality of norms. These questions are discussed using observations and secondary data from Burkina Faso, Ivory Coast and Rwanda.

Transformations foncières, détails et ambigüités

“Dans les questions foncières, il faut faire attention aux détails” disait récemment John Bruce. Il racontait ensuite comment il y a dix ans, en Ethiopie, une même personne lui avait dit le matin “ici, nous ne vendons jamais la terre”, pour lui proposer ensuite, l’après-midi du même jour, de l’aider à acquérir une parcelle si cela l’intéressait. Ce décalage entre un discours social public sur les transactions foncières et les pratiques réelles qu’il recouvre est loin d’être exceptionnel ou acciden-


tel. L’écart entre les pratiques privées et les principes publics est sans doute une caractéristique très fréquente et comme une règle non dite du jeu foncier contemporain en Afrique – mais une règle qui ne s’affiche habituellement pas, devant rester non dite pour être efficace. Ce n’est donc que dans les “détails” de la communication et des comportements des acteurs que l’on peut tenter de déceler une logique des décalages (‘gaps’ ou ‘slacks’ en anglais) entre pratiques et discours dans les situations actuelles de transition ou “d’entre-deux” des normes et des rapports sociaux autour de l’accès à la terre dans de nombreuses régions rurales africaines. Cette question a été déjà évoquée dans divers contextes (Hesseling et Mathieu, 1986; Mathieu, 1987; Le Roy, 1987; Shipton, 1988; Mathieu et Kazadi, 1990; McKenzie, 1993). Le présent texte tente d’approfondir et de systématiser le sens de ces décalages entre d’une part la façade sociale et les discours publics sur les transactions foncières et d’autre part, les pratiques multiformes réelles (en partie cachées) de ces mêmes transactions.

A l’image de l’interlocuteur éthiopien de John Bruce, de nombreux auteurs considèrent que la circulation marchande des terres est encore inexistante dans bon nombre de régions rurales d’Afrique de l’ouest (en particulier dans les pays sahéliens). Ainsi par exemple, une recherche récente signale que dans l’ouest du Burkina Faso (a) “les ventes de terres ne semblent pas exister” et (b) “elles sont considérées comme non légitimes” (Brasselle et al., 1998: 10; voir aussi Stamm, 1998, qui présente la même position). Si la proposition b reflète bien le discours social habituel et légitime (la “théorie” que formulent les sociétés locales quant à leurs propres pratiques), la première remarque ne reflète plus guère la réalité de ces pratiques dans de nombreuses régions et notamment dans le sud-ouest du Burkina Faso (voir plus loin). En effet, ces ventes existent bel et bien: elles ne sont pas rares (mais leur fréquence est difficile à estimer, car elles sont le plus souvent cachées ou discrètes) et elles sont croissantes. Des droits sur les terres (droit de culture ou de “propriété”) circulent et sont transmis d’une personne à une autre en contrepartie de sommes d’argent, et ces transferts de droits fonciers sont de plus en plus souvent définitifs, quoique donnant lieu à de nombreux litiges et désaccords.

Il y a circulation de la possession d’un bien et circulation en sens contraire, et en compensation, de sommes d’argent. Cela peut évoquer un mécanisme de marché: les uns ‘achètent’, les autres cèdent une terre en échange d’argent (et parfois aussi de cadeaux, de services etc.). Et pourtant ces “pseudo-marchés” restent officieux et peu visibles. Les acteurs des transactions évitent eux-mêmes soigneusement les termes de “vente” et “achat”. Alors, s’agit-il de marchés cachés et la terre est-elle devenue une “marchandise innommable”?1 Il s’agit en tout cas de pratiques qui ne relèvent pas de la coutume, qui ne sont pas régulées et structurées par un marché officiel, apparent et ouvert à tous, et qui ne sont pas non plus

1 Je reprends l’expression de “marchandise innommable” à Niurka Pérez Rojas qui l’utilisait dans une discussion à propos des coopératives à Cuba (Mexico, mars 1999). Quoique les contextes soient très différents entre Cuba et l’Afrique de l’ouest, la tension fondamentale entre l’existence d’échanges fondés sur l’argent et l’impossibilité sociale de nommer comme telles les “marchandises” en question est sans doute présente dans les deux cas.
conformes à la loi. Si elles ne se situent dans aucun de ces registres en particulier, c'est qu'il y a sans doute ici une “invention sociale”, une fabrication de pratiques nouvelles composites et complexes. Ces pratiques seraient alors dans un espace indéterminé, un entre-deux transitionnel (mais vers quoi?), incertain et peu visible: ni dans la coutume, ni dans le marché, ni dans la loi moderne, mais un peu dans les trois à la fois. Nous verrons ainsi plus loin qu'un grand nombre de pratiques relatives aux transactions foncières ne sont ni vraiment formelles (conformes aux procédures du droit positif), ni totalement informelles (sans formes, non structurées), mais qu’elles tentent bien de formaliser (systématiser, fixer, clarifier) l’échange, d’une façon qui reste cependant encore en grande partie fluctuante, non fixée par des règles ou des “formes” admises et bien définies. Nous proposons (à titre d’hypothèse) de considérer que ces pratiques sont vécues et structurées par des références, des bribes et morceaux combinés et empruntés à ces trois sphères à la fois, malgré leur hétérogénéité.

On sait depuis longtemps que les législations foncières africaines modernes restent dans une grande mesure mal connues des populations rurales (et parfois aussi d’une partie du personnel administratif), et appliquées de façon très imparfaite et partielle. Il y a des décalages importants entre le Droit et les pratiques, et le droit effectif ou droit des pratiques se situe en grande partie dans ces décalages, ou “à l’ombre du droit”, mais très rarement dans l’application directe et entière de celui-ci (Hesseling et Le Roy, 1990; Hesseling, 1992). Concernant les échanges de terre, on parle de “marchandisation imparfaite”, de “marchés cachés ou imparfaits, marchés émergents, occultes, ou informels”. Tout cela est sans doute en grande partie exact, mais il importe surtout aujourd’hui de savoir ce qui se passe dans les détails et dans “l’entre-deux” entre le formel et l’informel, entre le communautaire et le marché (ou autre chose), cette zone floue où des pratiques cachées et stratégiques – importantes pour l’avenir des systèmes fonciers ruraux – se réalisent aujourd’hui.

Les pratiques locales: invention institutionnelle et recherche de la sécurisation

Transactions foncières et recherche de la sécurité des droits

Un grand nombre de pratiques foncières contemporaines ne sont ni purement “traditionnelles”, ni purement “modernes” et légales: parfois qualifiées “d’intermédiaires”, ces pratiques sont métissées (E. Le Roy, 1987) et elles s’épanouissent “à l’ombre du droit moderne” (Hesseling, 1992), ou encore à la marge des lois de l’État. Ne se conformant pas aux procédures formelles du droit positif, ces pratiques qui semblent ignorer les lois sont cependant tolérées et même légitimées par l’administration (Hesseling et Mathieu, 1986; Mathieu, 1996), et cela de

manières très diverses, comme on le verra plus loin. Souvent en effet, l'intervention d’un acteur de l'administration locale (Commune au Rwanda, Conseil rural au Sénégal) vient valider ou confirmer – sécuriser – une transaction qui s'est réalisée juste auparavant dans le registre des relations privées entre les acteurs locaux d’une société locale, dans les registres des modes de communications spécifiques choisis par eux.

En Côte d’Ivoire, les ventes para légales des terrains ruraux non immatriculés sont faites sous la supervision des techniciens de l’agriculture (agissant comme témoins). Dans les zones de plantations, elles sont présentées comme “ventes de plantations” (c'est-à-dire vente des arbres, et non de la terre), et elles sont enregistrées à la Préfecture (P.J. Laurent, communication personnelle, Koné et Chauveau, 1998). Dans le même pays, depuis des années, les opérations du Plan Foncier Rural enregistrent et cartographient des droits fonciers locaux, même si la portée juridique exacte de cet enregistrement des droits n'est pas entièrement claire.

Au Rwanda et au Sénégal, les institutions administratives de base (Commune, Conseil rural) confirment et valident de façon formelle (par un acte de notoriété au Rwanda, une affectation de terrain au Sénégal) les transactions ‘informelles’ de vente et d'achat préalablement conclues en privé. Au Rwanda – avant le génocide d’avril 1994 – les ventes directes de terres entre paysans, illégales suivant la lettre de la loi, étaient cependant vérifiées, enregistrées, et ainsi reconnues de façon ‘formellement informelle’ par une ‘attestation de notoriété’ délivrée par l'administration communale. Toutes ces pratiques de transactions foncières marchandes fonctionnent de façon pragmatique et relativement efficace, malgré qu’elles soient en décalage par rapport à la loi (ou en avance sur celle-ci). Ces pratiques informelles sont produites et inventées par des bricolages institutionnels locaux à partir des éléments de base disponibles sur place. Ce sont des pratiques composites ou syncrétiques: elles combinent avec plus ou moins d’ambiguïté ou de clarté des opérations qui relèvent du registre du contrat, du “papier” (de l’écrit) et de l'échange marchand avec d’autres qui appartiennent à l’ordre de la “coutume” et des rapports sociaux fortement personnalisés.

Les transactions foncières locales semi-formalisées: quelques exemples

(a) En Côte d’Ivoire

Dans ce pays, le code domanial voté par l’Assemblée Nationale en 1963 n’a jamais été promulgué suite au veto du Président de la République. Le code foncier promulgué par décret en 1971 déclare l’Etat propriétaire de toutes les terres non immatriculées, et définit les droits coutumiers comme des droits d’usage viagers, interdisant en principe toutes ventes et cessions de ces droits. Une intervention Présidentielle à haute visibilité sociale (discours radiodiffusé) a affirmé peu après que la terre appartient à celui qui la met en valeur. Dans les zones cacaoyères la cession marchande des terres des autochtones aux migrants, puis de ces migrants entre eux, est devenue une réalité courante depuis les années septante. Les déclassements de forêts classées par l’administration, simple officialisation du fait accompli légitimant l’occupation par des notables ou par les paysans, étaient
fréquents jusqu’au début des années nonante. Les ventes informelles de terres entre les paysans sont aujourd’hui enregistrées de façon de plus en plus “formalisée” (mais non officielle et non légale) par un papier attestant la transaction, et par un relevé du terrain objet de la vente. Ces opérations sont fréquemment réalisées par les agents techniques locaux de l’agriculture, ou avec l’aide de ceux-ci, et contre rétribution. Ces agents servent aussi de témoins des transactions. Celles-ci sont enregistrées sur un papier conservé par l’acheteur et qui sert de “titre foncier” officieux, semi-formel, non reconnu légalement, mais bien “reconnu” (de façon floue) par l’autorité administrative locale.

En règle générale, à moins de mettre en cause un projet jugé prioritaire, l’Etat fait montre de mansuétude et légalise les occupations illégales... En milieu rural ivoirien, à l’encontre des énonciations précises de la législation qui prohibe les actes sous seing privé et sanctionne de nullité absolue le défaillance de la forme notariée (...), l’administration locale, en clair les préfets et sous-préfets, se montrent compréhensifs, voire complaisants à l’égard des pratiques populaires contraires à la légalité; ce sont eux qui président ou apportent le poids de leur autorité aux transactions immobilières entre particuliers.

(...) Tout se passe comme si les autorités étatiques, craignant les troubles de tous ordres que risquerait d’engendrer l’application stricte de la légalité foncière, avaient choisi de prendre quelque distance avec cette dernière pour rechercher plutôt des accommodements. La paix sociale le conseille. Après tout, l’Etat et ses agents sont mal placés pour donner des leçons de légalité... (Kobo, 1988).

(b) Au Rwanda

Une situation analogue est observée au Rwanda. Le décret-loi n° 09/76 de 1976 y affirme que “Toutes les terres non appropriées en vertu de la législation de droit écrit appartiennent à l’Etat. (...) En ce qui concerne les terres grevées de droits coutumiers ou de droits d’occupation du sol accordés régulièrement, nul ne peut céder ses droits par la vente, si ce n’est par une autorisation préalable et écrite du Ministre ayant les terres dans ses attributions”. En fait, de façon contradictoire avec ces textes, un véritable marché foncier officieux et semi-formel existe dans toutes les régions les plus densément peuplées du pays, avec cadastrage sommaire des parcelles par les paysans eux-mêmes, et enregistrement écrit – supervisé par les communes – des ventes et des montants payés (document conservé par l’acheteur). Les enquêtes de Catherine André en 1988 dans la commune de Kanama, dans la région très densément peuplée de Gisenyi ont montré que 27 per cent des parcelles y avaient été, à l’encontre de la loi, obtenues par achat, que 5 per cent étaient en location, et qu’un nombre croissant de terres étaient mises en gage, pratique qui est également en décalage avec la loi (André, 1994). L’intervention de l’administration communale donne à ces ventes un caractère “semi-formel” qui sécurise de façon réelle, quoique dans une forme non-légale, les droits réels de maîtrise ou d’appropriation foncière qui en dérivent. Les communes font réaliser (par le conseiller de secteur ou l’encadreur agricole) une enquête préalable avant la vente pour vérifier que celle-ci est acceptée par la
famille et les voisins. La proposition d’achat–vente est ensuite examinée par le Comité Communal de Développement, puis sanctionnée par un “Certificat de notoriété” émis par la Commune. Celui-ci est une simple déclaration enregistrée à la commune en présence de témoins, avec cachet de la commune et signature du bourgmestre, attestant que telle personne est maintenant propriétaire du champ situé à tel endroit. Ce document est une simple déclaration de particuliers enregistrée par l’autorité administrative, et qui a le statut juridique d’un “acte de notoriété” sous seing privé. Il ne constitue pas un acte de propriété selon la loi, mais il fonctionne en fait comme tel, c’est-dire qu’il a l’efficacité sociale d’un acte de propriété au sens du droit positif occidental. L’enregistrement par une autorité administrative donne au “papier semi-formel” de la vente une signification non prévue par la loi mais acceptée par les acteurs locaux, y compris par la commune qui incarne au niveau local l’autorité de l’État. La fonction de ce système est claire: superviser des transferts fonciers marchands qui se généralisent, garantir les droits fonciers des acheteurs, et sécuriser ces droits fonciers nouveaux grâce à une forme d’enregistrement organisé des droits. Celle-ci est contrôlée par l’autorité administrative locale.

Il est remarquable que cette entreprise organisée de détournement de la lettre de la loi soit réalisée sous la direction des communes. D’après le juriste Ephrem Gasasira, celles-ci se sont arrogés cette compétence dès 1960, remplaçant pour ainsi dire “naturellement” les anciennes autorités foncières coutumières du système Hutu, et mettant en place une “coutume administrative” nouvelle, par “délégation tacite du gouvernement” (Gasasira, 1993: 58). Ici comme dans d’autres pratiques foncières informelles, cette coutume administrative fonctionne cependant suivant des formes précises. Ces formes sont pour l’essentiel celles qui ont été définies dans une circulaire ministérielle de 1961 (n°661/ORG) définissant les conditions de la distribution des terres par les communes. Cette circulaire ne parle cependant pas de ventes de terres, elle n’a jamais été publiée au Journal Officiel, et, en tant que simple circulaire, elle s’adresse uniquement aux agents de l’administration et “ne peut pas engendrer des droits et obligations vis-à-vis de tiers à qui elle n’est pas destinée” (Gasasira, 1993:58). L’apparente contradiction ou confusion entre cette circulaire et la loi de 1976 ci-dessus n’est visiblement pas problématique pour les acteurs locaux concernés. Plutôt qu’une contradiction, l’indétermination qui affecte l’articulation et la hiérarchie de ces deux textes constitue une opportunité: elle ouvre la possibilité de concilier les besoins et les ‘demandes’ des individus (achat, vente, sécurisation) avec un contexte social marqué par des tensions et contradictions que le pouvoir politique préfère sans doute ne pas exacerber ou rendre trop visibles, comme par exemple le fait que l’appauvrissement d’une partie des paysans est une cause importante des ventes de terres (André et Platteau, 1998).

(c) Dans le sud-ouest du Burkina Faso: la terre devient-elle une “marchandise innommable”?

- Diminution et, par endroits, disparition du prêt ou “don” coutumier par lequel un “logeur” autochtone autorisait un migrant à s’installer et lui donnait des terres à cultiver pour une période non définie et virtuellement illimitée. Sans rentrer dans les détails, disons que ce prêt ou don coutumier donnait normalement au bénéficiaire une sécurité foncière élevée, mais conditionnelle: certitude de pouvoir conserver la terre et la transmettre à ses descendants, à condition de respecter la relation sociale de reconnaissance/ dépendance constitutive de l’accès des migrants à la terre, et de reconnaître de façon régulièrement renouvelée que le “cédé” re-stait fondamentalement le propriétaire des terres. L’accès des migrants à la terre, dans ce paradigme foncier coutumier, est donc – pour résumer – un accès sécurisé, mais aussi conditionnel, personnalisé (ou relationnel, fondé sur une relation sociale contingente et personnelle) et dépendant, ce qui s’oppose radicalement à la notion de propriété foncière dans le paradigme moderne et juridique, où la propriété de la terre est définie comme durable de façon inconditionnelle (dans le respect des règles de droit) et dépersonnalisée.

- Apparition et accroissement rapide des retraits de terre par les propriétaires qui ont “cédé” ou prêté celles-ci suivant les pratiques coutumières. Dans ce cas, le propriétaire autochtone ou ses descendants retirent le droit de culture au migrant installé souvent depuis 20 à 30 ans. Ceci se fait souvent à l’occasion du décès de l’un ou l’autre des deux partenaires de la transaction initiale: soit le propriétaire autochtone, soit le migrant. Lors du décès de l’un ou l’autre, la cession, qui est en principe tacitement transmissible suivant la coutume, doit en effet être renouvelée pour une génération, et elle risque d’acquérir par la même occasion une durée infinie. Si le cédeur ou son fils souhaite récupérer la terre, soit pour la ré-intégrer effectivement dans le patrimoine familial, soit pour la vendre ou pour la louer, il la retire alors au migrant bénéficiaire du prêt ou “don” initial. Il n’est d’ailleurs pas rare que le propriétaire autochtone qui retire la terre cédée 20 ou 30 ans plus tôt propose en même temps au migrant de continuer à cultiver cette même terre, mais sous la forme d’une location monétaire à court terme.

- Accroissement des pratiques de location “marchande” des terres: la terre est cédée pour quelques années contre un loyer annuel payé en monnaie chaque année, avant la période de culture.
• Apparition et accroissement rapide de ventes de terres contre un paiement en argent, avec la possibilité pour l’acheteur de borner le terrain, d’y planter des arbres, et d’obtenir un titre de propriété moderne. Il s’agit ici de cession de terres reconnues de part et d’autre (en tout cas par l’acheteur) comme un transfert définitif et inconditionnel, donc comme une “vente” au sens moderne et marchand.

Ces transactions sont presque toujours conclues devant témoins. Elles sont aussi de plus en plus souvent “formalisées de façon informelle” (ou semi-formelle) par divers types de papiers. Ceux-ci sont intitulés “certificat de cession” ou “procès-verbal de palabre” et parfois constitués d’un simple papier en deux exemplaires, manuscrit ou dactylographié. Dans les zones d’anciennes migration, presque toutes les transactions du type “vente” (cession définitive contre argent) sont consacrées par un document de ce type. Soit il s’agit d’un simple papier manuscrit en deux exemplaires, rédigé devant témoins (qui sont mentionnés dans le “papier”), soit le document a un style plus administratif et est ensuite présenté pour être contre-signé par le Préfet. Dans ce dernier cas, le papier prend souvent le titre de “Procès-verbal de palabre”. Celui-ci est une forme de reconnaissance d’un accord oral entre acteurs locaux. L’usage du procès-verbal de palabre est prévu dans un texte de loi de 1960. Cette disposition fut supprimée ensuite par la première Réorganisation Agraire et Foncière (RAF) de 1984, puis reconnue à nouveau dans les textes de la RAF “relus” en 1996. Cette formule était prévue à l’origine pour reconnaître clairement des cessions de droits d’usage, mais en aucun cas des ventes, ce qui devient le cas aujourd’hui. Le procès-verbal de palabre est rédigé en privé, mais il adopte un style et une forme qui s’inspirent des documents administratifs. Le document est souvent rédigé, en dehors de ses heures de fonction, par un “lettré”, proche de l’administration et bien au courant des habitudes de celle-ci: instituteur ou membre du personnel de la préfecture par exemple. Le plus souvent, le procès-verbal est présenté à la Préfecture pour y être enregistré et “reconnu” par un cachet de l’administration. Il n’y a pas de règle administrative fixe à ce sujet: les Préfets concernés agissent chacun de la façon qu’ils estiment la plus adéquate par rapport à la loi et au contexte local. Quand l’acheteur est un investisseur non-paysan qui réside en ville (c’est-à-dire un “nouvel acteur” du développement agricole suivant la nouvelle terminologie en vogue depuis 1998), l’achat est toujours validé par un papier (procès-verbal de palabre ou “certificat de cession”), et celui-ci est ensuite utilisé pour initier une procédure légale d’obtention d’un titre foncier. Les acquéreurs paysans n’entamant généralement pas cette démarche (longue et coûteuse), mais veillent à réaliser rapidement des investissements visibles et durables sur la parcelle – plantation d’arbres ou creusement d’un puit – après la conclusion de la transaction, ce qui est une autre manière plus proche des perceptions coutumières de confirmer publiquement et ainsi sécuriser la transaction.

• Une caractéristique marquante de ces papiers est que les termes de vente et d’achat, ainsi que le montant des sommes payées en sont presque toujours absents. A propos des pratiques qu’il a observées en 1998 dans la province des Banwas (département de Kouka), M. Zongo note ainsi:
Le document mentionne la date, l’identité du vendeur, celle de l’acquéreur, la superficie de la place, sa localisation et parfois une sommaire définition des limites. Il porte enfin la signature des deux contractants, de celle d’un ou deux témoin et enfin les références de leur pièce d’identité.

Les termes utilisés pour désigner les contractants varient d’un document à l’autre, l’acheteur est tantôt désigné par le terme bénéficiaire tantôt par celui d’acheteur, le vendeur par cedeur ou propriétaire foncier.

Les sommes impliquées ne sont pas mentionnées sur le document, il est simplement dit que la place a été cédée.

Le document est établi en deux exemplaires qui sont légalisés au commissariat de police généralement et très rarement à la préfecture. Chaque contractant garde un exemplaire.


Ces “ventes” ou “cessions foncières définitives contre paiement en argent” sont cependant de plus en plus souvent problématiques, sources de malentendus et de litiges parfois violents.

Transactions foncières et recherche de la sécurisation des droits fonciers

*Sécurisation, légitimité, autorité, inclusion, exclusion: deux logiques sociales antagoniques*

La sécurité foncière, dans les sociétés traditionnelles, est le produit de “l’adéquation entre les pratiques de l’acteur et les attentes de son groupe social (...). Comme la marche se prouve en marchant, la sécurité foncière se prouve par le sentiment qu’expriment les acteurs en matière de sécurisation. C’est ce sentiment qui détermine leurs attitudes en matière d’investissements” (Le Roy, 1992). Ainsi, “les droits fonciers sont assurés aussi longtemps qu’ils sont reconnus par les autres membres de la communauté” (Riddell, 1992). Cette forme de sécurisation foncière est celle qui garantit les droits des membres des communautés rurales traditionnelles.

L’accès à la terre suivant les traditions des zones rurales africaines se fait – pour résumer de façon très schématique – de façon conditionnelle, temporaire (même pour le transfert de droits de longue durée) et relationnelle, suivant des relations personnalisées, dans lesquelles les deux parties s’accordent à reconnaître, d’une façon régulièrement ré-affirmée, une relation réciproque et continue de patronage (de l’autochtone qui accueille et loge le migrant) et de dépendance/ reconnaissance de ce dernier. Par contre, dans l’accès moderne et marchand à la terre, les droits obte-
nus par l’acquéreur sont durables de façon *inconditionnelle* et en principe suivant des règles générales, *non personnalisées* (moyennant le seul respect de la loi, instance abstraite). Le droit de propriété dans sa forme la plus simple est fondé sur l’*exclusion* des non-propriétaires que justifie la loi, elle-même garantie par l’autorité de l’État, alors que l’accès des ‘nouveaux venus’ à la terre suivant la coutume est d’abord une *inclusion* personnalisée dans un groupe social.

Les systèmes fonciers modernes de propriété privée sont fondés sur des lois définissant clairement les conditions d’accès et de transfert de la propriété. Ils nécessitent aussi des institutions complexes (cadastre, enregistrement des hypothèques, etc.) pour mettre en œuvre la circulation des droits, et une autorité qui garantit la surveillance et les sanctions ad hoc pour que le système fonctionne suivant les règles et sans (trop) de détournements opportunistes de celles-ci. Les logiques des deux systèmes sont assez radicalement opposées. Les conditions d’un système foncier marchand institutionnalisé ne sont pas actuellement présentes dans les régions rurales des pays d’Afrique de l’Ouest. D’autre part, les systèmes fonciers coutumiers sont souvent très affaiblis (et ne peuvent donc plus jouer le rôle d’autorité de régulation qu’ils remplissaient auparavant), mais la légitimité sociale de ces systèmes est toujours bien vivante, quoique affaiblie, et ceux-ci restent donc idéologiquement efficaces et incontournables. Dans les faits, on observe que la circulation des droits sur la terre en échange de sommes d’argent, y compris pour des cessions définitives des terres, existe et est en accroissement. Les tensions et contradictions inhérentes à cette situation sont énormes. Le miracle (ivoirien, burkinabé, malien, nigérien, sénégalais ...) est que, soumises à de telles tensions, les sociétés rurales n’éclatent pas jusqu’ici (ou pas plus souvent?) en conflits locaux violents.

On observe en effet que les législations foncières africaines récentes n’arrivent pas à créer les conditions d’une réelle sécurité foncière pour la majorité des ruraux. Et pourtant, des textes de loi existent, et ils devraient en principe servir de fondement légal de la sécurité foncière à laquelle aspirent les acteurs ruraux. Ceci résulte notamment de ce que, même lorsque la loi est claire, logique, et bien formulée, on ne peut pas en tirer la conclusion qu’elle est appliquée et qu’elle fonctionne comme prévu dans les textes: le fonctionnement social de la loi est souvent moins clair et plus complexe. L’application de la loi est souvent très limitée ou erratique (c’est-à-dire imprévisible, donc source d’incertitude), en raison de la faiblesse des moyens de l’État, de l’absence des institutions qui devraient traduire les textes dans la réalité, ou du décalage entre ces textes et la réalité des relations sociales sur le terrain. Autrement dit, la loi est une chose, sa mise en application institutionnelle et “en contexte” en est une autre, toujours plus complexe et souvent en partie imprévisible. Comme l’écrivit Sally Falk Moore,


*Transformations foncières, gouvernance, rôle des États*
Lorsqu’une ressource est rare et la demande pour cette ressource importante, la logique du marché peut, dans certains contextes et à certaines conditions, jouer un rôle de régulation de la rareté et de la concurrence, et cela à partir de principes et d’opérations simples: offre, demande, transaction, prix, transfert de propriété (‘vente/ achat’), et reconnaissance sociale de ce transfert, garanti par des institutions ad hoc. Mais cette logique – avec les réglementations, les institutions et les représentations nécessaires pour la mettre en œuvre – n’est pas légitime ni légalement en mesure de fonctionner dans les zones rurales d’Afrique de l’ouest (et dans de nombreuses autres régions en Afrique). La logique réglementaire et centralisée d’une régulation de la compétition par les textes de loi et par l’Etat ne fonctionne pas non plus, notamment pour les raisons évoquées plus haut.

Lorsque la terre devient de plus en plus rare et les règles sociales de sa gestion moins claires et moins stables, les situations foncières deviennent de plus en plus tendues et compétitives. Face à la rareté absolue de la terre, les mécanismes d’inclusion, de redistribution et d’accès conditionnel ne peuvent plus fonctionner: les intérêts et les aspirations foncières des acteurs sociaux en compétition deviennent fondamentalement contradictoires, même si cette concurrence se met en place de façon progressive. Si ces contradictions ne sont pas limitées et régulées par une autorité forte et des institutions foncières efficaces, la compétition foncière peut entraîner une déstabilisation (insécurisation) généralisée et croissante des systèmes de droits fonciers existants.

Au début des périodes de transition où les terres font l’objet d’offres et de demandes monétaires, les pratiques quasi-marchandes informelles restent officieuses, non institutionnalisées et largement dissimulées, même au niveau le plus local. Cette dissimulation joue aussi très souvent à l’égard des ayants-droits familiaux, lorsqu’il y a cession (‘vente’) par un membre de la famille d’une parcelle du patrimoine lignager dont il n’est en aucune façon, selon la tradition, le propriétaire au sens civiliste qui l’autoriserait à céder la dite propriété à une personne extérieure et sans l’accord du groupe familial.

Dissimulées, souvent opportunistes, non visibles, non institutionnalisées et donc non-régulées (non contrôlées) socialement, les pratiques quasi-marchandes officieuses rentrent souvent en contradiction avec l’intérêt du groupe lignager ou villageois. Si les nouvelles transactions foncières jouent un rôle croissant pour redistribuer le contrôle de la terre devenue (ou devenant) rare, il s’agit d’une “non-gestion” occulte et résultant de la somme de comportements individualistes, opportunistes et dissimulés, parce qu’ils ne sont “prise en charge”, régulés et légitimés ni dans l’ordre de la “coutume”, ni dans celui de la loi. Cette non-régulation et ces pratiques expriment des intérêts contradictoires et se réalisent dans un contexte de jeu à somme nulle: le gain des uns (profit monétaire, sécurisation foncière) se fait nécessairement aux dépends des autres (perte du foncier pour les jeunes autochtones ou pour les ayants-droits familiaux, par exemple, dans le cas des ventes à des migrants réalisées de façon occulte par un chef de terre ou un membre du lign-
L’issue des conflits dans ce contexte de jeu à somme nulle est le plus souvent déterminée par le droit des plus forts, des plus riches, des plus habilement opportunistes, et des mieux informés ou “relationnés”.

Ces contradictions et tensions foncières renvoient à des options et des responsabilités politiques concernant trois aspects liés des changements sociaux actuels des zones rurales: (a) la sécurisation de l’accès à la terre (enjeu et source d’inquiétudes pour les paysans), (b) la régulation des transactions et des diverses formes de circulation des droits sur la terre, et enfin (c) la gestion des conflits.

Les questions de gouvernance sous-jacentes à ces enjeux sont notamment les suivantes:

– Quelles autorités et quelles institutions garantissent la clarté, la visibilité et la stabilité (cohérence, régulation) des “règles du jeu” foncier ?
– Cette stabilité est-elle possible?
– Si elle ne l’est pas et si l’État central ne peut pas gérer et arbitrer tous les conflits locaux, comment maintenir une certaine “paix sociale” à l’échelle locale, notamment lorsque des groupes socio-ethniques différents ne reconnaissent pas les mêmes pouvoirs politiques locaux et doivent cohabiter dans un espace limité où ils sont en compétition pour la terre?

Dans de nombreux pays africains, du fait des transitions politiques et de la faiblesse du pouvoir de l’État, le lieu du pouvoir foncier réel est aujourd’hui de plus en plus souvent incertain, instable et fragmenté. Les mécanismes de la gestion foncière effective sont en effet tiraillés entre la prétention formelle du monopole foncier de l’État et les influences bien réelles, quoique limitées dans leur zone d’influence, des pouvoirs politiques locaux. Cette tension est l’arrière-plan, mais aussi le non-dit et l’enjeu des conflits fonciers. Elle est très souvent médiatisée et gérée par les administrations locales. Celles-ci travaillent dans l’interface entre le pouvoir de l’État central et les stratégies propres des populations et des pouvoirs politiques locaux. La gestion de cet interface – qui est sans doute la mission la plus délicate de ces administrations – est déterminante pour amortir les tensions, pour “adapter” l’application des lois foncières et pour gérer les modalités concrètes des transformations et compétitions foncières à l’échelle locale.

Pour assurer la sécurisation des droits fonciers – particulièrement pour les groupes les plus vulnérables, qui ne disposent que de droits fonciers coutumiers secondaires et donc dépendants – et la sécurisation globale des relations sociales locales, le rôle de l’État lui-même apparaît aujourd’hui comme crucial (et problématique) sous trois aspects:

(1) pour garantir la stabilité politique globale et la sécurité physique des personnes,

1 Voir à ce sujet notamment Laurent et Mathieu, 1994.
(2) pour répondre aux demandes de sécurisation des acteurs fonciers en appuyant ou en facilitant l’émergence des nouveaux “arrangements institutionnels” répondant à ces demandes,\(^1\) et enfin

(3) en arbitrant les conflits qui ne sont pas résolus par des mécanismes endogènes, et en garantissant des recours judiciaires accessibles et capables de produire des décisions de justice respectées.

Remplir ces fonctions est une tâche difficile et qui requiert des Etats stables, forts et légitimes. Ceci n’est souvent pas le cas actuellement et en conséquence, “les Etats africains sont souvent confrontés à des problèmes fonciers qu’ils ne peuvent pas ou ne veulent pas traiter” (Moore, 1998:45 – ma traduction). Et pourtant, la régulation sociale et politique des transactions foncières est une question à la fois vitale (pour les paysans) et dépendante de conditions légales, administratives et institutionnelles concrètes qui relèvent de l’action étatique. Comme le dit encore Sally Moore: “Sans une attention aux conditions institutionnelles pratiques, il n’y a pas de droits légaux à discuter” (Moore, 1998: 47). Une réponse possible aux besoins de stabilisation et de sécurisation foncière réside dans un processus d’adaptation progressive, plutôt que dans une fuite en avant dans de nouvelles législations toujours plus complexes, et d’une application intégrale problématique. La sécurisation progressive des droits par une formalisation progressive et pragmatique des transactions, plutôt que par l’enregistrement intégral des droits, est une voie possible d’une tel processus d’adaptation. Face aux besoins d’une sécurité foncière reposant sur un fondement juridique, une autre voie pragmatique et sans doute efficace serait d’utiliser l’outil de la jurisprudence pour produire un ordre foncier à la fois garanti par la loi et en phase avec les réalités sociales (Van Donge, 1999).

Quelques constats et hypothèses sur les transactions foncières “formellement informelles” et l’émergence d’une circulation marchande des terres rurales

(1) Les titres fonciers établis dans les formes du droit positif (concession, immatriculation etc.) ne concernent qu’une part infime des détenteurs de terres rurales. Dans la plupart des cas, ils sont inaccessibles ou ne répondent donc pas aux attentes de sécurité foncière, pas plus qu’ils n’arrivent à garantir la stabilité et l’équilibre de l’ensemble du système d’attribution et de circulation des terres (Bruce, Migot-Adholla et Atherton, 1994).

(2) Dans de nombreux zones rurales africaines, le “papier” qui sécurise une transaction foncière sécurise ou tente de sécuriser les acteurs de la transaction (même de façon imparfaite) parce qu’il est issu d’une décision sociale qu’il consacre et explicite. Très souvent, ce papier n’est pas un titre foncier issu d’une procédure

\(^1\) En d’autres termes, ce rôle serait d’appuyer “l’offre d’innovations institutionnelles” répondant à la demande, dans le langage des approches de la nouvelle économie institutionnelle. La difficulté de cette conceptualisation est sans doute qu’il n’y a pas une demande sociale, mais bien des demandes émanant d’acteurs dont les intérêts (à court et peut-être moyen terme) sont radicalement contradictoires: la clarification et la formalisation des transactions seraient ainsi source de sécurisation foncière accrue pour certains (les acquéreurs), mais sans doute au prix d’opportunités de profits diminuées pour d’autres.
d’acquisition, de concession ou d’immatriculation de droit positif. Dans de très nombreuses situations où les procédures foncières modernes de droit écrit sont inaccessibles pour la majorité des paysans (parce que trop lourdes et complexes, trop lentes, et/ou trop coûteuses), on constate en effet que les acteurs fonciers locaux ont innové de leur propre initiative et mis au point des méthodes simples et “informelles” de formalisation et d’enregistrement des transactions foncières.

(3) Les paysans eux-mêmes et l’ensemble des acteurs des marchés fonciers ruraux sont donc aujourd’hui à la fois demandeurs et producteurs de formes d’enregistrement écrit de leurs droits fonciers. Pas nécessairement un titre légal de propriété, mais un papier (si possible visé par l’administration ou un témoin crédible extérieur à la transaction) reconnaissant que “telle terre appartient bien à telle personne”.

(4) Il existe souvent un accord implicite de tous les acteurs concernés, ou en d’autres termes, un consensus non-dit et efficace entre l’administration locale ou régionale (représentant l’État) et les autres acteurs locaux – paysans et autres – pour accepter une importante élasticité institutionnelle dans la mise en œuvre des textes de loi et dans les pratiques administratives réelles aux transactions et aux litiges fonciers (Hesseling et Mathieu, 1986; Mathieu et Kazadi, 1990). Ainsi, dans les pratiques des acteurs, le décalage entre les normes officielles et les pratiques réelles, ou encore l’indétermination juridique affectant certaines pratiques foncières (cfr l’exemple du Rwanda) sont loin d’être vécus comme des contradictions insurmontables. Ces situations de “jeu” (slack) sont celles où il y a un espace vide, indéterminé, mobile entre les pièces du puzzle social. C’est l’existence de cette case vide et mobile qui permet la circulation des pièces du puzzle. Les multiples combinaisons devenant ainsi possibles évitent de devoir montrer au grand jour que l’on joue en fait avec les règles elles-même, et que ces règles changent – ou au moins que leur transformation est proche et inévitable. L’inventivité de ce jeu avec les règles consiste notamment à changer celles-ci dans les faits mais sans le montrer de façon trop claire, en affichant au contraire et en maintenant stables certains signifiants idéologiques et symboliques des systèmes fonciers coutumiers. Cette subtile ambiguïté est socialement fonctionnelle et elle permet de répondre au cas par cas bon nombre de problèmes, et cela dans des formes temporairement stabilisées et acceptables pour une majorité d’acteurs.

(6) Les transferts de terres enregistrés de façon semi-formelle et les pratiques intermédiaires de sécurisation–formalisation des droits fonciers ainsi mis en circulation représentent aujourd'hui une part significative et croissante des transactions foncières dans de nombreuses zones rurales. C'est probablement à travers ce type de transactions que se réalise le début d'une mutation structurelle des systèmes fonciers. Il est donc important de mieux connaître ces pratiques pour améliorer la compréhension des transformations structurelles. Cette compréhension plus fine et plus empirique des transactions est sans doute indispensable pour mieux comprendre les pratiques et et accompagner les transitions foncières actuelles.

Conclusion: la terre, une marchandise (momentanément) innommable?

Le non-dit et l’ambiguïté comme opérateurs de communication et de changement social

Les pratiques locales endogènes de formalisation des transactions expriment une 'demande sociale' nouvelle et significative pour une sécurisation par l'écrit et par des conventions plus explicites, plus univoques et durables – parce que moins personnalisées et conditionnelles – que dans les registres de la coutume et de l’oralité. Dans des systèmes sociaux et agraires en transformation rapide et des contextes juridico-institutionnels mouvants (ou même confus et/ou corrompus), donc marqués par un niveau élevé d'incertitude, les acheteurs cherchent ainsi à sécuriser les droits acquis (par la transaction) contre les incertitudes et les risques de contestations futures. Les ambiguïtés de la communication (notamment au niveau du langage des transactions), les stratégies de manipulation (de l'incertitude, de l'ignorance de certains acteurs, de la variabilité dans l’attitude des agents de l’État), les contradictions entre intérêts et objectifs de sécurisation des uns et des autres débouchent cependant sur des tensions croissantes et – de plus en plus souvent – sur des conflits ouverts.

Dans les divers cas examinés plus haut, les ambiguïtés et les non-dits dans les transactions foncières entraînent bien sûr des manipulations, des comportements opportunistes et manipulateurs, des malentendus et des litiges. Mais les non-dits et les ambiguïtés sont aussi nécessaires, alors que la pression de la nécessité, l’avancée de nouvelles valeurs (l’individualisme) et de nouvelles pratiques (l’échange fondé sur l’argent) conduisent certains acteurs à des pratiques en contradiction radicale avec les valeurs coutumières “officielles”. C'est dans le décalage (et la tension) entre les principes légitimes et les nouvelles pratiques individualistes et monétarisées que réside le seul espace dans lequel ces acteurs peuvent répondre aux contradictions dans lesquelles ils sont pris. Dans ce même espace du décalage, du non-dit où la terre est momentanément une “marchandise innommable”, ils peuvent et doivent euphémiser la transaction, “dire bien” tout en agissant mal par rapport aux principes coutumiers. Dans un tel moment, les décalages sont inévitables (sinon
nécessaires), le non-dit est efficace, l’indétermination des règles est créative et ouvre des espaces invisibles (ou peu visibles) indispensables pour l’invention de pratiques foncières nouvelles. Dans l’espace du non-dit et de l’entre-deux, ces pratiques précèdent sans doute l’émergence – chaotique et contradictoire – de nouvelles normes et de nouveaux principes de régulation foncière.

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1 Cette proposition est discutée de façon plus concrète et détaillée dans Mathieu, 1987 (à propos de l’application de la Loi sur le domaine national dans la vallée du fleuve Sénégal), Mathieu 1996 (en liaison avec le caractère informel des pratiques foncières), Shipton 1988 (à propos du Kenya).
Politics in a Sahelian Town: Dori and the Art of Alliance

Christian Lund

Introduction

Situated some 260 km to the north-east of the national capital, Ouagadougou, in Burkina Faso, Dori was the capital of the Liptako Emirate and is now the chef lieu of the Seno province. Political control has been in the hands of the Fulbe since they conducted a victorious jihad against the Gourmantche in the early 19th century (Delmond, 1953; Irwin, 1981; Pillet-Swartz, 1993). Society in the Dori region is segmentary and hierarchical. People identify themselves as Fulbe, free men, or Rimaïbe, descendants of the slaves. A particular division of labour evolved between the two groups: the masters, the Fulbe, owned cattle and controlled the land, and while the Fulbe tended their cattle themselves, their slaves, the Rimaïbe cultivated the land. Although this division has gradually been effaced, ethnic identification is significant in social and political life. Furthermore, the Fulbe fall into a number of clans with different political and occupational histories. The Ferrobe, who are the descendants of the jihad warriors, constitute the uncontested aristocracy among the Fulbe, and it is always from their midst that the Amiirou (Emir) has been chosen, and around this group that ‘politics’ has gravitated. Historically, the Amiirou held a number of functions. He controlled the immigration of larger groups to the area and settled disputes which exceeded the competences of the village chief, the jooro (Kintrz, 1986).

This chapter is concerned with the process of politics at the local level in and around Dori, and the ways in which the micro political economy is configured in the present conjuncture of formal political democracy. The general argument that I wish to make is that in order to understand what is often termed ‘local politics’ it is necessary to move beyond ‘the local’. Or more radically: maybe ‘local’ does not make much sense because it suggests a spatial dimension in a range of phenomena which may not have a distinct spatial dimension at all. James Ferguson (1998) argues that the verticality of state and society is often treated as a ‘taken-for-granted-fact’, and we should explore how local, regional, national and even global ‘levels’ are reproduced – how that verticality is really a precarious and challengeable

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achievement. The focus of our analyses should instead be on the processes and practices through which power is asserted and legitimated. And in particular how such processes connect various zones of state or public authority. In their work on local powers and the state in the Central African Republic and Bénin, Bierschenk and Olivier de Sardan argue that the central state has a very limited capacity for institutionalised regulation at the local level in rural areas (Bierschenk and Olivier de Sardan, 1997: 462; 1998: 49). This provides local powers with significant room for manoeuvre. The argument I will pursue in this article is that the room for manoeuvre of political actors in a town like Dori and in the villages surrounding it depends not only on the relative absence or incapacity of the central state authority, but on the processes which connect these zones of authority. That is, village politics is, in part, conditioned by the way in which village powers connect with and invoke powers in Dori, and town politics in Dori is conditioned by the way in which political forces in the town connect with village politics and political processes in the national capital, Ouagadougou.¹

Background

An event which significantly influenced the structure of politics in the region and in particular within the aristocracy occurred as far back as the time of the arrival of the first French expedition to the area in 1891 headed by the French officer, Parfait Louis Monteil. The incumbent Amiirou, Amadou Isa, was dying and the competition for his succession had begun. The Amiirou’s son, Issa, was in line for the throne, and Monteil began to negotiate a treaty with his group of followers. However, the Amiirou’s nephew, Sori, managed to drum up support for his own candidature, and the royal family tree took an irreparable twist and left Issa’s line at the margins of royal status while Sori’s line thenceforth issued the Amiirou (Irwin, 1981; Merlet, 1995; and own interviews).

On the one hand, this meant that a chronic grudge was now borne by the members of Issa’s line against the members of Sori’s. And on the other hand, political jealousy within Sori’s line flared up because its different factions now saw the position of Amiirou within reach. The two houses of their descendants have been the nuclei of emirate-wide political competition ever since. With this rivalry between members of the elite, competition for village alliances has always been a sig-

¹ The fieldwork on which this study is based was carried out during two month-long visits in May 1997 and March 1998. Data on disputes was in part gathered through archival searches with the local préfecture and interviews with active and retired members of the civil service, as well as staff from various development projects in the region. Interviews were, moreover, carried out with local political notables and brokers, with each of whom several interviews and discussions were usually held. Finally, 12 concrete disputes were investigated. Both parties of these disputes were interviewed independently, as were all relevant persons mentioned during the interviews to the extent that it was possible to locate them. Most characters have been anonymised. Certain known figures of public life in Dori are referred to by their real names after mutual agreement. Fieldwork was facilitated by the agreeable and steadfast assistance of M. Saada Barry. Research was generously funded by SEREIN (Sahel-Sudan Environmental Research Initiative).
significant feature. In his work on the historical development of the Liptako polity and politics, Irwin (1981) keenly emphasises the relative volatility of such alliances. The Amiirou was rarely, if ever, in a situation in which he could rule at will. Hence, an Emir’s reign, from accession to the throne and onwards, was conditional upon his skills at forging alliances with leaders of the important villages around Dori, most of which were ruled by other Fulbe clans. Some of these alliances lasted longer than others, but they were all fundamentally circumstantial and temporary.

This socio-political structure was modified during the colonial and post-colonial period. When the Liptako became a French protectorate in 1891, the Amiirou was no longer an independent political authority but became a chief enrolled in the colonial administration. In 1963, at the death of the present Emir’s father, the institution of the emirate was formally suspended by the independent government and never reinstalled (Kintz, 1985: 101). However, despite his formal demotion, the Amiirou and the Ferrobe clan remain tremendously influential and enjoy widespread popular authority. But they have had to operate in ways that take into account the wider political context, in particular politics as it emanates from the country’s capital, Ouagadougou.

Another significant change brought about by French colonisation was the emancipation of the slaves, the Rimaïbe, enabling them to migrate and sell their labour. Especially in the wake of the Second World War, both younger and older men travelled to Ghana and Côte d’Ivoire to work. On their return, many of them bought the land they had cultivated from their former masters and became land owners despite the fact that the existing legislation did not cover this arrangement.

The revolution from 1983 to 1987 led by Thomas Sankara abolished the chieftaincy and traditional land ownership. Moreover, a new hierarchical system of revolutionary committees (CDR, Comité pour la Défense de la Révolution) was put in place, covering village, province and national level. In Dori, the political climate was such that the Amiirou, Dicko Nassourou, left the country for Canada. In the villages the jooro were de-throned, but in many instances the leading figures in the village CDRs were adult sons of the chiefs and the new political power was in fact legitimised by their participation. In certain villages, however, the revolution was seen as an opportunity not only to get rid of the jooro but of his entire clan, and new figures acceded to the political leadership. However, cutting as it did through the revolutionary rhetoric of social transformation and the birth of a new nation, the reform led to a rejuvenation of the political structure in most areas (Otayek, 1989; Labazée, 1989). Alliances between the villages and the new political elite – the revolutionary cadres – were established alongside the discrete kindling of ties with the Amiirou’s relatives and rivals within the aristocracy. In short, alliances multiplied and their volatility was heightened.

With the coup d’état by Blaise Compaoré in 1987, a certain measure of political pluralism was allowed, culminating with the adoption of the new constitution in 1991 and general and presidential elections in 1991/2. The CDR structure was abolished. At village level, a Représentant Administratif du Village, RAV, basically stripped of formal powers, was elected by the village population to represent the
village to the outside world. In some villages, the role of RAV was assumed by the former jooro, in others the RAV was not related to the chief’s family. In several speeches in 1991, President Compaoré encouraged reconciliation between the state and its former enemies, notably the chiefs, and Compaoré probably owes much of his electoral success to his symbolic rehabilitation of the traditional power structure in the country (Loada, 1996: 260). While the rehabilitation of the chieftaincy was a recognition of the chiefs’ cultural role and not a delegation of any formal political power, its interpretation in Dori was somewhat different. Here, not only was it now possible for the aristocratic family to return to a central position as mediators in land and other disputes parallel to the formal legal structure, the way was also paved for their re-entry onto the formal political scene; a scene which offered important posts such as Member of Parliament and mayor of Dori town.

Factions and the Style of Politics

The political elite in Dori falls into a number of factions headed by the members of the aristocracy. The most important are Amiirou Dicko Nassourou’s faction and his cousin, Dicko Sanda’s. While Dicko Nassourou and Dicko Sanda are both descended from the historically victorious family branch of Sori, there is also a third faction headed by Birabia, from the defeated Issa’s line. Birabia is known as a very wealthy local businessman – his popular reputation ranks him amongst the two or three richest men in town, which is not the case either for Dicko Nassourou or Dicko Sanda. Thus, while his pedigree prevents him from ever becoming Emir himself and reduces the likelihood of him ever acceding to any formal public office, his capacity as patron enables him to rally support in the villages around Dori, and he has often tipped the balance in the perpetual struggles between Dicko Nassourou and Dicko Sanda.

With the long absence of the Amiirou during the Sankara period, Dicko Sanda had become the man in Dori who people saw as the Amiirou’s substitute and to whom they would turn when they needed help. Moreover, his influence grew as he gained a seat in parliament standing for President Blaise Compaoré’s party, CDP (Congrès pour la Démocratie et Progrès) in 1992. Ironically, however, he did not win the seat without assistance from Dicko Nassourou and Birabia. As the elections approached, it became obvious that Blaise Compaoré’s party (then ODP-MT, Organisation pour la Démocratie Populaire-Mouvement de Travail, now CDP) would win, but no one from the inner circles of the aristocracy was in a favourable position within the party, partly due to its hitherto anti-chief policy. Nonetheless, with the assistance and backing of Birabia and Dicko Nassourou, Dicko Sanda was manoeuvred into a position as the first candidate’s substitute, and when the elected candidate received an overseas appointment shortly after the election, Dicko Sanda became Member of Parliament.
But this by no means meant that Dicko Sanda could monopolise power or public offices in Dori. The Amiirou, Dicko Nassourou, returned from Canada in 1991 and after Dicko Sanda’s election to parliament, the rivalry between them flared up again. As the time approached for the municipal elections in 1995, Dicko Sanda tried to become the candidate for the CDP, but this time he could not count on the support of his close relatives. Instead, Birabia backed Dicko Nassourou and hence the Amiirou was elected mayor. Apparently, Birabia and Dicko Nassourou did not cherish the thought of seeing the man they had helped to become an MP’s substitute turning into a full-blown MP and mayor of their town. In fact, when it became clear to Dicko Sanda that he could not count on Birabia’s support and that the CDP headquarters in Ouagadougou had tried to promote a candidate from outside the aristocratic family in Dori, Dicko Sanda campaigned for his cousin. However, much to his dismay, Dicko Nassourou won the day and also managed to become party secretary of the Dori section of the CDP.

That seat in parliament gave Dicko Sanda many influential contacts in the capital, Ouagadougou. A local MP has considerable influence on judges and prefects in Dori. Their appointments, promotions, transfers and demotions are decided by the Ministry of Justice and the Ministry of the Interior, and Dicko Sanda made sure he was well informed about a judge or prefect’s mistakes, such as accepting bribes or making the ‘wrong’ decisions. Dicko Sanda could easily pass this information on to the ministries and influence the civil servant’s career. To what extent the MP, Dicko Sanda, actually influenced the decisions of judges and prefects is uncertain. But the important thing is that this was the widely-accepted popular understanding of the relations between ‘la justice’, the capital Ouagadougou, and Dicko Sanda, shared by judges, prefects and CDP party cadres alike. Hence, people involved in disputes increasingly saw Dicko Sanda as a central person to appeal to.

Dicko Nassourou’s position as Amiirou, Mayor and Secrétaire Général of the CDP provided him both with different and overlapping means of patronage. As not only part of the aristocratic family but also Amiirou himself, Dicko Nassourou wielded significant authority in the rural areas. As the principal heir to the historical land-owning family, his involvement as a mediator in land litigation implied, overtly or tacitly, a potential ‘re-confiscation’ or ‘re-allocation’ of land. Thus, despite his non-appearance in the legislation and hence the absence of feudal land rights, the Emir was a socio-political authority in the public’s view. As Mayor, he had contacts in the higher echelons of the Ministry of the Interior and was, not unlike Dicko Sanda, able to communicate tales of professional misconduct (real or otherwise) to the national capital. Thus, the outcome of disputes involving public civil servants was, as in Dicko Sanda’s case, seen as susceptible to influence from the mayor. Moreover, as Mayor, Dicko Nassourou was able to favour certain entrepreneurs and others who had contracts with the municipality. Finally, as Secrétaire Général of the ruling party, Dicko Nassourou had a virtual ‘hot-line’ to the power centre in Ouagadougou, a situation that rivalled Dicko Sanda’s political contacts. However, just as party channels could be used by Dicko Nassourou to reach
and influence Ouagadougou, they could also be used to reach, influence and control Dori from Ouagadougou. The most influential CDP party cadres in Dori were civil servants, originally from other regions in the country, and over whom Dicko Nassourou as Amiirou or Mayor could exercise little social control. Thus, rather than being under Nassourou’s control, they acted as informers to the Ouagadougou headquarters of his partisan conduct, reporting whether he worked for the party or engaged in sordid alliances with no obvious gain for the CDP (see the monthly *La Voix du Sahel* no. 43, March 1998). Some of these civil servants, in particular at the *Palais de Justice*, often ‘reminded’ judges, prefects and the aristocratic family of the reach of ‘Ouagadougou’.

The third major political figure, Birabia, actually held no formal political leverage, but his wealth enabled him to corrupt civil servants, and the occasional support he was requested to offer to Dicko Nassourou or Dicko Sanda would sometimes make them back down if their support for their own clients ran counter to the interests of Birabia’s clients.

This competition between the three tenors of Dori produced situations where the interest in cultivating clients could be overridden by the need to keep tension between one’s own camp and the two others at a tolerable level. Consequently, a villager appealing to either of the three ‘big men’ in Dori would get his case promoted as long as it was not incompatible with the wider constellation of interests at stake. These interests were, as all three of them concurrently explained, circumstantial. As a precautionary measure, many village representatives from around Dori tried to pay their respects to at least two patrons whenever in Dori. Many men head for Dori on Fridays to attend prayers at the mosque in the afternoon, and most left in the morning in order to have time to pay their respects to one, or even better two of the three ‘big men’, to exchange and relish various snippets of gossip, and to visit the market in search of a good deal. Many tried to time their visit to Birabia for lunch time, since his magnanimity included offering people a decent meal. Rarely were fewer than some forty people fed in this way on Fridays. As a result, the three ‘big men’ were remarkably well informed of the situation in the region, the state of old struggles and the emergence of new fields of contestation and competition such as development projects (see Nielsen, 1998).

**Brokers**

However, to make sure a court or administrative decision favoured one’s interests, very few people would contact Dicko Sanda, Dicko Nassourou or Birabia directly. Anybody from the Dori region who had a problem involving the authorities would first contact a certain Souley or another of a handful of brokers. Obviously, each of the brokers had a different history, but Souley’s had some characteristic traits. Souley was between 50 and 60 years of age and his family had been the *Rimaïbe* of
Dicko Sanda’s family, Souley’s father having been ‘valet’ to Dicko Sanda’s father, and Souley had become the helper of Dicko Sanda.

Souley’s career as a broker started in the mid-1960’s when he worked as a driver’s assistant and after 1970 as a driver at the prefecture in Dori. His job acquainted him with the different authorities, their personnel, their different administrative routines, and how malleable they were. Facing the confusion of institutions and rules and the French language, of which only a minority of rural dwellers have some notion, most of them would solicit help from Souley or a similar broker if they had the misfortune to have to engage with the Dori authorities. Due to his political dexterity and his association with Dicko Sanda, Souley stands out as one of the ‘best’ brokers and has for a long time been used as an interpreter at the prefecture, the gendarmerie and the court. Describing himself, Souley would say: ‘I’m just a simple man, I can’t even read and write properly. My French is very poor. That’s why people trust me – I know what to do in court’. Others were less modest on Souley’s behalf: ‘Souley is the man who works, who really works, at the court, he will win your case for you’. At other times, Souley himself would explain his role along these lines: ‘People come to me, not because I am “Souley”, but because I do politics’, referring to his participation in Dicko Sanda’s political campaigns. People were constantly coming to Souley’s courtyard for assistance and advice. During a 19-day absence prior to my interview with him, over 30 people from all over Liptako had looked him up in vain.

Souley wielded considerable influence in certain cases; maybe not as much as reputed, but a significant influence nonetheless. First, since he often translated for both adversaries, he had ample opportunity to present the case in such a way as to obtain the desired result. Second, he would often cause critical delays in the proceedings, advising one party not to show up at the court hearing and stalling either until a new cultivation season had started and the case would have to wait until the next year, or until Souley’s favourite had had sufficient time to persuade the judge or prefect. And since both adversaries often appealed to Souley for help, the eventual loser would accredit his loss to his adversary’s more ample financial means rather than to Souley’s inability to swing the case in his favour. During the Sankara regime, the corruption of government servants was allegedly non-existent; and the political climate was such that it was usually more advantageous for a public servant or CDR-militant to disclose political crimes, amongst which bribery was a serious offence, than to accept a bribe. With the ‘relaxation’ of political surveillance and control, this became much less evident during the Compaoré regime, after 1987. Hence, the gendarmes, the rural police, had a reputation for harassment, arbitrary arrests and blackmailing people to persuade them to drop groundless charges. In fact, people firmly believed that anybody could be bought if approached in the right way and with the right sum of money. Prefects and judges alike confirmed that this belief is widely-held and, though they take pains to exclude themselves, often well founded. There is a local saying used to measure a person’s wealth in money or cattle: A jogi ko njaada Doori banden, meaning ‘you can afford to go and win your case in Dori today’. Stories were also told about a certain judge who was...
incorruptible. He went under the nickname ‘Monsieur la Loi [Mr. Law]’ and was
semi-ridiculed for ‘not understanding the ways of the region’. His brief career in
Seno ended with a transfer to the south of the country which, in the local interpre-
tation of things, was seen as the result of repeatedly failing to comply with Dicko
Sanda’s ‘instructions’.

This reputation for corruption among judges, prefects and gendarmes was,
moreover, zealously fed by Souley and the other brokers operating in Dori. When
someone addressed Souley for his help in bribing an official and turning a case in
his favour, Souley would generally express sympathy with the person, but he would
also let him know that ‘this was a particularly difficult case’. Souley would have no
trouble in outlining an interpretation of the case, say a land dispute, in a way which
was most unfavourable to the villager because of the ambiguous and contradictory
legislation (Lund, 1997; Lund, 1999). As he made the unfavourable position and
the absolutely crucial need for his services abundantly clear to the villager, he
would simultaneously vividly depict the state’s interest in and capacity to enforce
the law contrary to his interests. And since examples of other people’s ‘trouble’
with the authorities are legion, it was not difficult to convey the impression that
people were in worse trouble than they had initially thought. Hence, the outcome
of any such dispute was presented as open but likely to be unfavourable if a special
effort, in terms of bribes, was not made.

Two Cases

I now turn to two different cases of political manoeuvring in and around Dori in
order to depict the ways in which alliances were established. In the first case, the
protection enjoyed by a certain Représentant Administratif du Village (RAV), Daouda,
enabled him to operate unchecked by the law or other social sanctio-
s. However,
circumstances changed and brought an end to this man’s supremacy, enabling the
competition for his replacement to begin. In the second case, alliances proved cir-
cumstantial, and an effort was made to prevent a possible future patron from
emerging.

Case 1. Despotism Protected – Despotism Exposed

The area around Dori is relatively densely populated and pastures are in demand,
as are the cattle corridors linking them with the village settlements. One such cor-
ridor linked five smaller villages and a sixth somewhat bigger village, Yeire, to a
pasture. The six villages were linked like pearls on a string, with Yeire closest to the
pasture. The problem arose in 1990 when villagers from Yeire began to cultivate
the corridor and block access by the others. This pitted the five smaller villages and
their leaders against Yeire and its leader. While the leaders of the five ‘smaller’ vil-
lages were *jooro’s*, i.e. leaders from before the revolution, the village leader of Yeire, Daouda, was a *Rimaïbe*, a former slave.

The corridor was first blocked in 1990 because Daouda had sold land in the corridor to his fellow villagers. The five *jooros* called upon him to refrain from blocking the corridor but Daouda ignored their request. They then reported the incident to the prefect, who visited the corridor and fields in question. It soon transpired that the fields were indeed situated in the corridor, and the prefect ordered the farmers to abandon their fields and instructed Daouda not to allocate land in the cattle corridor. This led to a heated debate where Daouda argued that he, as the new village leader, the RAV, had exactly the same prerogatives as the *jooros* had had before the revolution; he was the controller of the village’s land and could do with it as he pleased. He had even taken the name ‘Dicko’, the name of the noblest *Fulbe* cast, to substantiate this. Now all five *jooros* of the smaller villages and the prefect protested. The *jooros* claimed that Daouda could never become a *jooro* since he was a *Rimaïbe*, and that only the honourable *Rimaïbe* could take a ‘noble’s’ name. And even if Daouda had been such an honourable person, he could only take the name of his former master, a ‘Barry’, not just the name of whoever he pleased. Taking the name ‘Dicko’ was ‘plain evidence that he was mad’. The prefect argued differently, he said that the comparison between the position of the *jooros* and the RAV was entirely irrelevant since the prerogatives of the *jooros* had been abolished with the revolution. Daouda then argued that the revolution was over, and that Blaise Compaoré, the president, and the local UNDP environment-development project argued for ‘local participation and management of resources’. Hence, the ‘state’ had no business in his village. And besides, he argued, when people in Yeire had paid him for the fields in the corridor and the pasture, they had recognised his authority. The prefect promptly arrested him and took him to Dori. Rumour has it that he was beaten up several times in custody.

After 10 days he was released, returned to Yeire and authorised people to continue cultivating the fields blocking the corridor. He also contacted Souley and managed to obtain an audience at Dicko Sanda’s house. All he wanted, as he put it, was to reassure Dicko Sanda of his village’s political support before the impending elections, and of course to report on the general situation in the village. Probably as a result of this, it became impossible for the *jooros* to mobilise the prefecture to inspect the corridor yet again. The prefect would procrastinate and after two years the *jooros* apparently resigned themselves to the fact that the corridor was a dead-end.

Daouda was obviously a fearless man with a burning ambition to become rich and famous. Asserting himself as the village leader able to sell land held out the promise of achieving both these aims. However, his ambitions were such that he did not consult the people whom he wished to represent, considering that the esteem and earnings he would gain within the village would exceed what he would get by paying respect to the five, not very significant, *jooros*. The response from the *jooros* was to label Daouda as shameless and mad, if not in a clinical at least in a social sense. The *jooros* were in a serious dilemma: if they responded directly they
would be recognising Daouda’s position as a peer – maybe even as a superior considering their own inferior bargaining position. But if they did not respond, he would probably ‘get away with it’ and maybe over time become more generally recognised in the region. Since much depends upon how an act and its intention is interpreted, Daouda’s socio-political position was characterised by a certain nervous ambiguity.

The *joors’* efforts to delegitimise Daouda’s actions were intended to force him to reverse them, but they also served a secondary purpose in case he did not. Labelling him as shameless also meant that a challenge by this man to one’s own property could not be considered a challenge to one’s honour since he, as a shameless person, was not one’s peer. And since the abuse and correction by the prefect and even the beating by the *gendarmes* were wasted on Daouda, this may at first have appeared to be a fruitful strategy. The *joors* all expected the authorities to intervene, either the prefecture, as before, or even better, the *Amiirou*, Dicko Nassoourou or Dicko Sanda, whose ranks were indisputably superior to Daouda’s and whose contact to him could not be mistaken for a peer-contact requiring recognition. However, a person’s social rank is always negotiable to some degree and Daouda’s moves to block the cattle corridor, confront the five *joors* and take a noble’s name were all such acts of negotiation. At first, they were dismissed by the *joors*, but due to Daouda’s swift move to contact Souley and thereby Dicko Sanda, he maintained a favourable position from which he could continue to negotiate his position over time. Daouda’s submission to Dicko Sanda established a patron-client relationship where political support was traded for protection and immunity.

It is unlikely that Daouda had worked it all out in advance, but the fact that he contacted Dicko Sanda in an election year probably did not damage his cause, given that he controlled a village the size of Yeire.

After his victory, Daouda stepped up his activities. First, he began to frequent the *gendarmes* of Dori himself instead of using Souley as a mediator. Daouda would inform on minor incidents in the area and receive a cut of the gendarmes’ blackmail earnings when they made false arrests, a line of work hitherto reserved for Souley or one of the other brokers immediately connected to one of the ‘big three’. Second, Daouda made sure that the village pen for keeping stray animals was rarely vacant. Animals were seized and held until their owners paid for crop damages, etc.. Daouda was zealous and people complained that he seized animals on their way to the pasture and kept the fines for himself. However, the last straw was Daouda’s seizure of 15 sheep. Only later did he report to the prefect that they had escaped, despite the fact that numerous witnesses had seen him dispose of them at a nearby market. Once again, Daouda was summoned to the prefecture.

Meanwhile, however, Souley had become displeased with Daouda’s independent arrangements with the *gendarmes*, and with the trouble brewing in Yeire due to the extent of Daouda’s abuse, Dicko Sanda, having been assured of his election, decided to shield his *prokhê* no longer and he let him fry. The prefect had Daouda dismissed as RAV and consulted with Dicko Sanda and Birabia before appointing the son of the *joor* that Daouda had once pushed aside, Modia.
Modia, a man of 35, had been careful to foster his relations with Dicko Sanda as well as Birabia since his early manhood and it was impossible to determine with whom his loyalties primarily lay. That they did not lie with the Amiirou, Dicko Nassourou, was, however, quite clear. The entire operation of replacing Daouda with Modia took place during one of Dicko Nassourou’s prolonged absences from Dori, and on his return he realised that he had missed an opportunity to manoeuvre his own man in Yeire into position. Dicko Nassourou did not hesitate to put pressure on the prefect to recall his nomination of Modia, but since Modia had been in office too briefly to be realistically accused of abusing it, and since his appointment had been made with the consent of Dicko Sanda and Birabia, the prefect let the matter lie. Dicko Nassourou, on the other hand, had no such intentions and brought the matter to the attention of his and the prefect’s superiors in the Ministry of the Interior. This was the state of affairs when I left Dori in the spring of 1998.

The chain of events which led from the five jooro’s protest against Daouda’s behaviour to his demotion and Modia’s contested succession are by no means extraordinary in Dori. They illustrate how the cattle corridor issue was removed from the jurisdiction of the village chiefs and Daouda and put to the préfecture and Dicko Sanda instead, and how their relationship influenced the course of events. Once again, that relationship is not satisfactorily explained by affiliations within their own locality but has to be understood in the light of both parties’ relations to yet other politico-legal institutions. Similarly, Modia’s appointment sparked competition between Dicko Sanda and the préfecture on the one hand, and Dicko Nassourou on the other, with the latter threatening to transfer the contest to an entirely different field of state authority, namely the Ministry of the Interior. Thus, social relations between parties in a given locality are underpinned by their socio-political links with other zones of public authority. And while the initial move to ‘displace’ the dispute was actually made by the five joors in their appeal to the préfeture, Daouda’s political savvy soon neutralised his adversaries’ move by introducing Dicko Sanda onto the scene. There are several ways of connecting one field of authority to another, but in this case political loyalty was the currency in which Daouda paid, and later failed to pay, in connecting with a field of superior authority. On the other hand, Daouda’s move to legitimate his actions by asserting chiefly identity seemed not to work, and probably in the end undercut the support from Dicko Sanda as it developed into a challenge.

Case 2. Weeding Out Potential Competition

Two distinct chains of events intertwine in this case: the re-establishment of a pasture and the nomination and election of Dicko Sanda as candidate and ultimately MP.

The village of Wuro Nagge, some 15 km outside Dori, bordered on a pasture. Over the years, the village jooro and his son, Ousseini, an educated man of 30, had been rather lenient when the villagers had extended their fields into the pasture, and encroachment and outright settlement in the pasture was gaining momentum
until 1995 when the pasture became completely inaccessible to the herders. The jooro and his son then began to campaign to re-establish the pasture. This proved quite difficult, as most of the encroaching farmers were Rimaïbe from the village who saw little point in giving up their fields so that others’ cattle could graze, and it seemed even more unjust in the light of the fact that the jooro’s family had ample land outside the pasture and would not have to sacrifice anything to re-establish it. The main problem was, however, that nobody would relinquish their fields in the pasture unless they could be sure that all others would do the same and that nobody else would cultivate there. The jooro and Ousseini made contact with the UNDP environment-development project. The project would assist in getting the authorities’ official recognition of the pasture if the village could reach a consensus. This was all but reached at a meeting boycotted only by a single village neighbour. As a result, the pasture was officially recognised and the fields abandoned. Now for the second chain of events which was set in motion some years earlier.

After the death of President Sankara and the relative political pluralism from 1987, many intellectuals, among them members of the chieftaincy, enrolled in political parties. Ousseini joined the ODP-MT and quickly rose to become the secrétaire provincial of Seno. Dicko Sanda, on the other hand, had initially run for the MDP (Mouvement pour la Démocratie et le Progrès), but as the general elections of 1992 approached, it became clear that the ODP-MT would clean sweep the board at the elections, and Dicko Sanda approached Ousseini with whom he was related as his senior and who controlled the list of candidates for the party, asking to join. A number of meetings were held to discuss Dicko Sanda’s candidature. Basically, those in favour argued that he would help to consolidate the imminent victory since many people would like to vote for a powerful member of the Ferrobe family. Those against argued that it was not necessary in order to win, and here was a chance for ‘others’ to get political power. However, Dicko Nassourou and Birabia campaigned to have Dicko Sanda admitted to secure at least one senior family member on the list of candidates. As a result he was accepted and within a short while manoeuvred himself to the position of first substitute for the party. The ODP-MT won comfortably in Dori as in most of the country, and as the ODP-MT’s first candidate received an overseas appointment, Dicko Sanda became an MP. Open rivalry between Dicko Sanda and Ousseini gradually developed; on the one hand, Ousseini who had initially been opposed to Dicko Sanda’s ODP-MT membership but had been obliged to assist a senior relative, saw his power being eroded. On the other hand, as Dicko Sanda explained to me during one of our interviews, he felt it embarrassing that he should be indebted to his junior—and someone from a village to boot. In 1995, at the municipal elections, Ousseini got his chance to cut Dicko Sanda down to size. Dicko Sanda attempted to become the ODP-MT candidate for mayor, challenging his cousin, the Amiirou. Ousseini helped to turn the scales in favour of the latter, humiliating Dicko Sanda. Soon after, Ousseini left the ODP-MP for the PAI (Parti Africain pour l’Indépendance).
Two years later in 1997, the ODP-MT changed its name to CDP (Congrès pour la Démocratie et le Progrès). New general elections were imminent and campaigning was intense. Though no official opinion poll was conducted, information about the probable outcome was not in short supply. Souley would circulate among the different villages, and people loyal to Dicko Sanda would frequently report on the ‘atmosphere’ in the villages. Dicko Sanda had resigned and left the candidature to another, but he was still the centre of information. If a village seemed inclined to vote for one of the competing parties, the CDP militants would mobilise. In a convoy of 4-wheel drive trucks the entire ‘État-major’ or high command of the CDP in Dori would pay the village a visit and hold a political rally. As in other parts of the country, gifts in cash and kind, mopeds, bicycles, food, and clothes would be offered to the village leaders, and footballs were often given to the young. As election day approached, most villages appeared to be under CDP control, but in a few villages the majority seemed inclined to favour other parties, and in Wuro Nagge the PAI, Ousseini’s party, enjoyed strong support. This was a thorn in Dicko Sanda’s side, and he orchestrated a campaign in the village to turn the mood around. Souley paid the village a visit and made it clear that ‘the confiscation of land by the UNDP project and the PAI’ was a misdeed, and that its rectification was high on the CDP’s agenda. A few days later, the entire ‘État-major’ arrived, including Dicko Nassourou and Dicko Sanda, and speeches were held. Dicko Sanda did not himself speak about reclaiming the land in the pasture, but other speakers made it clear that this was within reach if the village voted for the CDP.

A few days after the meeting the mood had not changed markedly, and to defeat Ousseini in his home village, Dicko Sanda and the CDP took to gerrymandering. The head of the local election committee (Président de la Commission Communale d’Organisation des Élections Législatives), a CDP militant, had the voting boundaries changed. Invoking errors made during the last census, it was decided that a neighbouring pro-CDP village should vote in Wuro Nagge and that two families in Wuro Nagge should vote in Dori town. In this way, PAI support would be diluted and ‘hopefully’ reduced to a minority. Ousseini protested, but to no avail. However, the final result of the voting in Wuro Nagge remained in favour of the PAI while the result of the entire province gave the CDP its seat for five more years. The gerrymandering would have had no impact on the overall result anyway since all votes cast were counted together. It only made sense as an attempt to humiliate Ousseini and make it clear to everyone in Wuro Nagge that Ousseini, not even capable of looking after himself, could hardly offer suitable patronage in competition with powerful foes like Dicko Sanda. Shortly after the elections, and despite having participated in the campaign against him, Dicko Nassourou invited Ousseini to join his faction by asking him to act as his messenger on a number of occasions.

The events in this case demonstrate how social and political relations do not respect boundaries of locality and how such boundaries even become objects for negotiation and reconstruction. What happened in Wuro Nagge and in Dori does
not make sense without connecting the two, and also linking them to the way in which the CDP’s ‘politics machine’ (again a trans-local entity) orchestrated the election process. In these cases, the actors did not appeal to fields of superior authority; rather, actors from one such field attempted to establish its superiority by first pressurising and later deconstructing a village constituency. This was first legitimated through a virile display of cars and dignitaries trumpeting an ornate political discourse laced with subtle threats, and subsequently asserted through the political control of the election committee.

Conclusion

One of the features of ‘local politics’ in Dori, and I will suggest in most parts of Sub-Saharan Africa, is its trans-local character where ‘the village’, ‘Dori’ and ‘the capital’ seem to emerge as different fields of public authority which are linked in various ways and establish a verticality or hierarchy of power. When we look at Dori, the degree of personalisation of politics is what first catches our attention. Essentially, events there had the peculiar character of a public family row. And there is no doubt that strong feelings fed by deceit and public humiliation as well as ambitions of wealth and esteem strongly conditioned the style of politics. However, the positions held by the three ‘big men’ depended on the resources they controlled as patrons. These resources changed over time: from protection against raids and wars, ending at around the time of the French colonisation; to the protection and recognition of certain land use rights, challenged first by the emergence of an effective land market and later by land reforms denying chiefs’ property; and finally the recent situation where the crucial resource seems to have become access to the different zones of public authority, namely the magistrates and prefects in Dori who are important for village politics, and the central ministries and politbureaus in Ouagadougou which are important for the control of such politico-legal institutions.

In the current verticality of power in Dori the instruments of legitimation and assertion of power are to a large extent based on patron-client relations where people in villages and in Dori recognise, and duly so, the capacity of the patrons in Dori to protect and expose clients. Being a client is not a bad deal considering the alternative, i.e. not being someone’s client, which exposes one to the predatory actions of others who enjoy protection and back-up from their patrons. In short, it is necessary for most people to be someone’s client. However, being someone’s client is not necessarily a safe haven either. The cases illustrate that everyday politics of competition and circumstances may oblige people to engage in alliances contre nature only to rearrange them when circumstances change. This works against predictability for the individual client but this unpredictability is generally anticipated. Under special circumstances when the entire group of patrons was challenged – either by the political elite in Ouagadougou wishing to get another mayor or MP
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elected, or by an upstart yokel like Ousseini – the three closed ranks and co-operated. In fact, this seems to be a part of a compromise between the elites in Ouagadougou and Dori. Instead of competing from different political parties, the elite in Dori had gone for the leading party, the CDP, which had emerged as the de facto single party. In fact, seen from within the CDP, multi-party democracy may well entail the occasional campaign, but ‘everyday politics’ is a matter of forging and betraying factional alliances, a process of politics mastered by the town’s élite, and most of the time it can be done without provoking interference from the capital. From the point of view of Ouagadougou, securing political support in the Liptako could be done rather smoothly and efficiently by relying on the old élite in Dori in its competitive and factional totality.

The position of the ‘big men’ as political patrons in these cases depends on their ability to master the vertical topography of power, to use the words of Ferguson (1998). This élite was through clever political strategies to a large extent able to connect – and disconnect – the various zones of public authority. As Geschiere and Gugler argue, ‘democratisation’ has had quite confusing implications in many parts of Africa. Thus, they state that ‘democratisation seems to encourage the emergence of a particular form of politics centred on regional associations, as some sort of alternative to multi-partyism’ (Geschiere and Gugler, 1998: 309). The process of politics in Dori is a variant of this. The Dori local élite was, despite its chronic factionalism, relatively successful in securing the ‘lines of political communication’. However, in contrast to cases where ‘sons of the region’ attract state funds ‘home’, it is noteworthy how patronage in Dori was used to protect clients against abuse or control from public authorities. What was on offer from patrons was not goods or spoils as such, but rather shielding from nasty encounters with different public institutions. In exchange, village representatives and ordinary villagers offered unconditional political support at election time.

Dicko Sanda and Dicko Nassourou thus offered ‘exemptions’, ‘to make an exception in this particular case’. Their ability to ‘exempt’ was not based on their being MP or mayor. Rather, it was explained as a result of their being honourable men who put their person and prestige behind somebody’s case in a long tradition of protection. On the other hand, as MP and mayor, and ‘big shots’ in the formal political system, the patrons were also capable of undoing the exemptions and exposing the opposition to the full force of other public authorities.

If we wish to analyse the local political arena in places like Dori, then, we are not only obliged to recognise the multiple agencies who each constitute some form of public authority and the processes of negotiation between them, we also have to investigate the political processes which link various zones of public authority in ‘village’, ‘town’, and ‘capital’, and the strategies of the actors orchestrating and thriving on them.
References


Within the conventional analysis of local resource management capacities (Ostrom, 1986; Runge, 1986; Bromley and Gibbs, 1989) it is standard to attribute local communities the ability to generate institutional arrangements apt to ensure sustainable and optimal resource use. Where local resource management arrangements are less successful, this is often attributed to the effects of state interventions. Through its stifling of local initiatives, excessive state tutelage is considered a major obstacle to the development of viable institutions of local resource management. If management of local resources is handed over to the local population, more efficient and sustainable local resource management is, it is contended, likely to occur. Therefore, a central issue in this context has been the granting of legal rights to local communities as a means of controlling attempts to free ride through the enforcement of exclusive rights.

Apart from depicting local communities as sites of consensus and sustainability, this vision conveys a picture of local resource management institutions as single purpose institutions detached from the local political environment of which they are part. Such superficial views of the complexity of the rural scene in the Sahel in which decentralization and participation are to be implemented, are likely to give rise to largely unfounded and unrealistic expectations as to what might be accomplished. The following case explores the micro-politics surrounding boreholes in the pastoral Ferlo region of northern Senegal. It shows how institutions initially designed as simple service provision organizations tend to become politicized as they become part of larger political strives and hence unintendly transmute into key institutions in the decentralization process. By doing this, a far more contradictory, incoherent and chaotic picture of the interests lying behind local resource management practices is revealed. For in the struggles between different groups of users to secure control over crucial resources, it turned out that the composition of the social groups and the value of the resources fought over had changed in the course of the process. Moreover, the arenas upon which the struggles were played out and the claims expressed had evolved into new and unexpected combinations.
The key institutions in Senegalese decentralization: Rural Councils or well committees?

Compared to the other countries in the region, Senegal enjoys a relatively high degree of decentralization. With the administrative reform of 1972, a process was launched which comprised both deconcentration of power from the central government to local administrative offices and a handing over of specific responsibilities from the state to more or less autonomous local institutions. Administratively, the country is now divided into regions, départements and arrondissements, headed by governors, préfets and sous-préfets, respectively. At the lower administrative level, the communes rurales, state administration was handed over to a locally elected body, the Rural Council, while the state at village level is represented by one or several village chiefs.¹ The village chief is in charge of solving minor local conflicts, collecting rural taxes among his dependants and assisting the technical officers from the state administration in their activities. The village chief, however, holds no formal authority and has no means to sanction the infringement of local or national rules or regulations.

According to the legal framework, the central institution in local resource management is the Rural Council, which has been functional in every municipality in Senegal since 1984. The intention is that this council of elected representatives should act as an interface between the territorial administrative hierarchy and the rural users. In principle, the Rural Council enjoys considerable authority over local resources, being responsible, first and foremost, for the allocation of use rights to land and resources as well as for land use planning, i.e. the ability to reserve certain areas of the municipal land for specific purposes. To this is added the power to regulate local markets, cattle walks and residential zoning patterns. Finally, the councils are in charge of carrying out local community projects which are financed through tax remittances.

Despite the broad powers attributed to the Rural Council by the reform, a number of constraints exist which seriously limit the effective control of Rural Councils (see Rondinelli and Minis, 1990; Guellar, 1995; Le Roy, 1980; Blundo, 1995a). First of all, the state maintains considerable powers over the Rural Council. As an agent of the state, the president of the Rural Council comes directly under the authority of the sous-préfet.² Until 1990, the sous-préfet could suspend any decision taken by the president if it was considered untimely, illegal or not in conformity with the spirit of the Rural Council debate to which it applies (Ministère de l’Intérieur, 1984:14 here quoted from Vengroff et al., 1984:12). Since the 1990 revision of the law, most of the prerogatives regarding local resource management

¹ Within a larger village, for example a borehole village, there may be several village chiefs, each representing their own ‘sector’ (understood in geographical terms, but commonly also organised according to ethnic group or sub clan).

² The text concerning the degree of state supervision of the councils has been subject to frequent revisions. Initially land attribution was a prerogative of the president of the Rural Council upon consultation with the other councillors.
have been transferred to the Rural Council, leaving the sous-préfet a more clear-cut role as the controlling party (Blundo, 1995b: 14).

Second, the legal framework concerning land use has a clear agricultural bias. Due to the extensive character of Sahelian grazing systems, pastoral production is not considered a productive investment in the land and cannot, therefore, serve as a justification for obtaining private leaseholds. So even though rights of access are left almost untouched by the law, herders have few means to protect their grazing lands once claims have been made by agriculturalists.

In addition to this, vast tracts of land in the pastoral areas are gazetted (as pastoral reserves, forest reserves or game parks) and therefore remain under the direct authority of the state through the Forestry Services. Finally, the Rural Councils suffer from very restricted logistical and financial support, a situation which is particularly problematic in the pastoral areas where each council is in charge of vast areas, making it very difficult for them to meet.

So, although the Rural Councils are designated a central role in local resource management, few means are provided for regulating access to local resources or for securing pastoral land from agricultural encroachment. The legal framework is both contradictory and ambiguous, making it very difficult for the councillors to carry out any efficient land use planning.

Parallel to this structure, one finds the well committees. Where the Rural Councils and the local state administrators are closely knit together in a web of obligations and control, the well committees enjoy, for better or for worse, a high degree both of financial and legal autonomy. The different degrees of autonomy result primarily from differences in the objectives of decentralization. Unlike in the case of the Rural Councils, the driving force behind the establishment of the well committees in 1984 was the attempt by the state to reduce public expenditure as part of the structural adjustment programme, an intent declared overtly in the legal framework of the transfer. So although public parlance has highlighted the participatory elements of this transfer of responsibility, herders tended to regard it mainly as a transfer of the costs and burdens of maintenance.

Within the decentralization process, the borehole committees were not intended to play any significant role. The well committees that are under the administrative supervision of the Ministry of Waterworks are perceived exclusively as technical institutions in charge of the operation and maintenance of borehole equipment. Hence, institutional backing from the state is limited to the technical equipment. They do not hold any official authority to regulate access to watering facilities, including those on the adjacent grazing lands. On the contrary, the boreholes remain under state ownership, guaranteeing everyone who pays the agreed fees the right to use the facilities.

1 Circulaire Interministériel du 9 janvier 1984 visant a la création et a la généralisation de comités de gestion de forages en milieu rural, and Circulaire Interministériel du 9 janvier 1984, Annexe 5 sur les Comites de Gestion des Forages.
Nonetheless, the measures taken by the state in 1984 to hand over the responsibilities for operation and maintenance of boreholes and pumps to locally elected well committees have, in many ways, proven far more significant with regard to pastoral land use than the creation of the Rural Councils. In the course of time, the well committees have found themselves to be holders of no less than the key means of control over management of local resources, i.e. the ability to limit access to pastures by regulating the number of well users. This unintended consequence of state withdrawal becomes all the more paradoxical when one recalls that in contrast to the Rural Councils, which are under tutelage of the office in charge of the decentralization located in the Ministry of Internal Affairs, boreholes and well committees remain separated from the decentralization process under the supervision of the Ministry of Waterworks.

The following example from the borehole of Naoré illustrates very well the crucial role which the boreholes have acquired in relation to post-drought migration.

The borehole of Naoré

During the dry season of 1994 the borehole of Naoré, located in the arrondissement of Ogo in the Matam department, was the scene of fierce hostilities between rival groups of herders. At the height of the tensions, young Fulanis could be seen patrolling around the borehole with drawn machetes. On several occasions, the police forces from Matam were called out to avoid bloodshed.

The conflict arose when members of the local community sent a letter to the sous-préfet of Ogo to protest over the seizure of the local well committee by herders who were ‘foreigners’ in the area. The foreigners referred to were migrants from the Senegal River Valley (the Fuuta region) who had moved into the area in the course of the last 20 years as part of a larger migration wave propelled by drought and the proliferation of irrigated agriculture in the Senegal River Valley. Through the establishment of a very mobile and labour-intensive herding system, these drought refugees had been able to recover very quickly from the devastating effect of the droughts. At the moment of conflict, they were, with few exceptions, more prosperous than they had been before the drought and in general considerably better off than the indigenous, mainly agro-pastoral and sedentarised, population of Naoré. In the course of the last few years, this group of ‘foreigners’ had further been joined by a small group of equally rich herders, refugees from the Senegal/Mauritania conflict of 1989. These herders are now living around Naoré on a more permanent basis although they maintain a more itinerant lifestyle during the dry season.

According to critics, the seizure of the well committee had occurred in conspiracy with the elected President of the well committee. During his ten years in office, the President had held no general assembly or election to the board of the well committee. Instead, those members of the original board who over the years had died or withdrawn from their posts, had simply been replaced by the president.
with members of his own choice. The result was, according to the critics, an over-representation of FuutankoBe\(^1\) herders and of Mauritanian refugees.

The legal framework relating to the local management of wells stipulates that the mandate of the well committee is for two years, after which time new elections should be held. Urged by the protests from the population, the sous-préfet felt obliged to dissolve the old committee and appoint a new one. This act was carried out at a closed meeting attended, in addition to the sous-préfet and his staff, by five village chiefs from the surrounding ‘sectors’ (including the old president of the well committee in his function as village chief of ‘central’ Naoré), a representative of the FuutankoBe population, and a representative of the refugee population. The aim of the meeting was, according to the official record (procès verbal): ”to settle the legitimate claims of the Senegalese users to hold leadership of the deepwell” together with the equally “legitimate claims of the transhumant and refugee user group to participate in accordance with their share of the watering taxes estimated to 80 per cent of the total revenues”.

In the course of the meeting, the sous-préfet lamented that elections had not been held to the board of the committee for ten years and that “posts were now held by elements with no relation to the former elected board i.e. refugee and transhumant herders”. He also took the opportunity to regret the effects of the internal fighting between the local factions of the ruling party (Partie Socialiste).

This apparently dispassionate moan turned out to be crucial for understanding what was at stake in the conflict. For the leader of the protesters was, it turned out, also the local representative of the ‘B’ Tendency of the ruling Socialist Party, while the outgoing president represented the ‘A’ tendency of the same party. Seeking a compromise, the sous-préfet therefore appointed a new board whose members represented a broad mix of the two opposing local political tendencies and of the ‘settled’ and the ‘transhumant’ population: The leader of the protesters was appointed president, while the son of the former president was designated his deputy. The post of treasurer was given to a sedentary, while a refugee was appointed vice treasurer. Finally, the tax collectors were chosen in such a way as to ensure full representation of all ethnic groups and subgroups in the area.

It is of interest to the case to mention that Naoré is among the boreholes in the Ferlo that host the largest contingent of herders from the Senegal River Valley. Indeed, the population of ‘newcomers’ amounts to around 70 per cent of those households using the well on a regular basis. So, when the sous-préfet selected the official village chiefs as representatives of the population, he actually favoured only a small faction of the actual users of the deepwell. In contrast, the vast majority of the users, including those making the heaviest financial contributions to the well, were represented by only two persons. Even more significant was, perhaps, that

\(^1\) The term FuutankoBe refers to their area of origin, the Fuuta Region. The refugees from the Mauritanian banks of the Senegal River could also be classified under this heading. The FuutankoBe group is however constituted by a variety of subclans, e.g. the UrurBe and the SowonaBe, some of which may also be found among the indigenous population. The FuutankoBe as well as the majority of the so-called indigenous population of the southern Ferlo may be classified as Fulanis.
the representatives of this majority group were incorporated in the negotiations under the labels of “strangers” or “newcomers”, stressing their position as marginal rather than their rank as part of the regular user group.

Not surprisingly, the solution proposed by the sous-préfet was perceived by the FuutankoBe and Mauritanian herders as a way of excluding them, the interest of the sedentaries in controlling the well committee being the large sums of money collected every month. Far from the peaceful solution anticipated by the sous-préfet, the meeting ended in total uproar among the ‘foreign’ population and the mobilization of all available resources.

First of all, a parallel committee was established (identical to the old one). All large taxpayers withheld their watering taxes from the official committee. Instead, they contributed to the parallel committee. The official committee soon went broke, unable as they were to deliver the services expected. Soon, provision of water was taken over by the “rich” parallel committee, leaving the “new” committee with no real functions. It was in the course of this operation that the borehole was ‘guarded’ by youngsters armed with machetes, and the Matam police force had to intervene to prevent bloodshed.

Second, a letter, signed by 95 users of the well, was sent to the sous-préfet of Ogo. This letter addressed the underrepresentation of the majority of the population who, in turn, were the ones who almost exclusively financed the running costs of the well. The letter also condemned the intention announced by the new well committee to raise water fees. Such measures taken by a minority board, it was stressed, would not be tolerated by the majority of the population.

To give further weight to the protests, funds were raised among FuutankoBe herders, not only from Naoré but also from the neighbouring villages. The substantial funds raised were used to finance equipment and the dispatchment of delegations to visit various influential persons from the central political arena in Dakar. Among these were the leading marabouts (saints) of the muslim Tijanya brotherhood.

The effectiveness of these measures could be observed promptly. Shortly after the dissolution of the old well committee, a letter from the Minister of Waterworks appeared on the desk of the Governor of Matam. The letter referred to the Naoré case and pressed for a solution to be found as quickly as possible.

Evidently, this letter was the result of contact made by the FuutankoBe herders with marabouts from the influential Tall family, to whom most of the herders from the Fuuta claim spiritual allegiance, and with the influential director of the Dakar cattle market. Through these channels, contact was established with the Minister of Interior, at that time occupied by Djibo Ka, himself a Fulani with strong ties to the region.

The Governor, tossing the hot potato further down in the system, ordered the Prefect of Matam to solve the problem, a task he reassigned to the sous-préfet of Ogo, i.e. the same person who had originally been compelled to intervene in the conflict.
Forced by the new turn of events, a meeting was held, this time with the participation of the sous-préfet of Ogo, the UNHCR representative, the commander of the Matam police force, the departmental chiefs of Waterworks and of Livestock Services, the local veterinary assistants, the president of the Rural Council and the village chiefs. In spite of the massive representation of the Senegalese administrative system, the meeting was, apart from the passive approval of the de facto dissolution of the committee installed by the sous-préfet, characterized by its lack of clear decisions. The intention to form a provisional committee consisting of representatives of the technical services was never carried out, neither were the proposed new elections to the board. Nonetheless, the immediate effect of the meeting was that the armed battle was suspended and the status quo restored.

Despite its apparent inertia, the case is interesting in several ways. First of all, it questions the enhanced efficiency which is assumed to be produced by the delegation of authority to the locally elected bodies. Secondly, it points to the new roles which the well committees have accredited themselves in the management of local resources. Indeed, the non-intervention of the Rural Council in this serious conflict over local resource distribution speaks volumes about the limited importance given to this institution in villages located far from the administrative centres. Furthermore, the case illustrates the ways in which local conflicts tend to become politicized as they become mixed up in larger political objectives. Finally, it reveals the wide range of resources and strategies which may be employed by the newcomer population to drive a wedge into existing institutions and secure a share in control over key institutions in local resource management. This issue has been dealt with more extensively elsewhere (Juul, 1999) and will only be touched upon superficially in the present article.

Local management as enhancement of efficiency?

In general, the transfer of responsibility of the vital function of water provision to the local population has resulted in poor management, frequent breakdown of the pumps and generalized misappropriation of collected funds. Contrary to the assumption that transfer of power is always welcomed by the local population, herders generally feel that maintenance should be the responsibility of the state, an opinion that helps to explain their widespread reluctance to pay for even minor repairs. An immediate consequence of this is the surprising frequency of prolonged breakdowns. Wells are often blocked for months because of insignificant techni-

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1 According to the Services de l’Hydraulique’s regional office in Linguère, no less than 4 of the boreholes of the Linguère département had been paralyzed for more than two years. To this may be added numerous cases of breakdowns of between a few days to several months.
cal problems or lack of fuel despite considerable inconveniences for herders who may be forced to move to a neighbouring well, often located 30 kms away.\textsuperscript{1}

As in the case of Naoré, the composition of the boards becomes a matter of never-ending battles between rival factions and subclans present around the borehole who are reluctant to trust members of rival clans with the often considerable sums collected in the form of watering fees. Obviously, the high level of embezzlement is condemned vigorously by all parties. Nonetheless it remains a characteristic of the vast majority of boreholes, legitimated as it is by a general reluctance among herders to count their animals, leaving the calculation of watering taxes to be evaluated on the basis of a rough estimate of the size of the herd.\textsuperscript{2} Lack of transparency in accounts further facilitates informal agreements in favour of influential indigenous herders. Indigenous herders in particular tend, through clientelistic relations and informal negotiations, to keep their contributions to the well committees at a minimum.\textsuperscript{3} As in the Naoré case, many wells are now financed almost exclusively by taxes applied to FuutankoBe herds, a practice which seriously throws into question the nonprofit character of the well committees stipulated in the legal framework.

Over the years, problems related to the management and functioning of the boreholes have worsened. As the number of people and animals using the boreholes on a more or less permanent basis has increased, so have the conflicts. This has become particularly clear as pastoral mobility has increased over the past few years, not least between 1991 and 1993, when two subsequent years of failing rains in the Senegal River Valley propelled a new wave of migration towards the abundant pastures of Naoré and southern Ferlo.

Obviously, the growing number of “foreign” herders moving over the area, especially in years of rain deficit, increases competition over pastoral resources, just as it wears out the pump machinery which in most cases is old and fragile. Prolonging the hours of pumping in order to satisfy the large number of animals\textsuperscript{4} contributes to more frequent breakdowns. These may force otherwise sedentary agropastoralists to move to neighbouring wells for longer or shorter periods of time. In order to limit pressure on the borehole pump and also on the adjacent pastures, some firstcomers holding office in the well committees have resorted to the strategy of limiting the number of well users. This strategy involves either di-

\begin{itemize}
  \item [1] The boreholes of the central Ferlo are located at a distance of 30 kilometres from one another, each well covering a radius of 15 km which, according to the calculations of the colonial administration in charge of the first drilling programmes is equivalent to the distance a cow can travel in one day.
  \item [2] Such estimates were not made easier by the fact that a considerable part of the herd was watered at the encampment with water transported by cart (see Juul 1999).
  \item [3] Grenier (1987:138) has also observed how the fees paid in 1987 had been unchanged for 10 years, hence corresponding to notoriously false herd size estimations.
  \item [4] Several well committees could report a doubling or tripling of the number of animals using the well in the peak seasons of 1992 and 1993.
\end{itemize}
rect exclusion (which is illegal) or a policy of discouragement through exorbitant taxing of herds belonging to the migrant population.

For advocates of more clear-cut property rights, the emergence of these more exclusive practices is interpreted as a natural consequence of the increased competition over resources. Nonetheless, this trend is accompanied by its apparent opposite an equally strong inclination towards inclusive practices, generated primarily by economic concerns. For with the arrival of the FuutankoBe herders, the turnovers of the well committees have increased dramatically and have turned into important means for extracting economic revenue. This mixture of contradictory interests, torn between the wish to limit competition on pastures through restrictions on the number of users, and the temptation to increase well committee revenues by expanding the number of economically potent “foreigners”, has pushed most well committees into a constant oscillation between exclusive and inclusive strategies with regard to foreigners’ access to water.

As a result, the chosen policy often turns out to be motivated more by short-term economic (and as we shall see below political) gain than by long-term ecological concerns. In spite of the newly-discovered ability of borehole members to regulate the number of herders grazing in the adjacent pastures, conflicts tend to centre increasingly on problems related to the financial management of the borehole, rather than on management of the pastures. For apart from turning into a key institution in resource management, the deepwells have also proven to be important means for the extraction of economic resources in a region otherwise largely devoid of goods or resource flows which lend themselves to transformation into clientelistic spoils.

The case illustrates how this handing over of control over natural resources does not necessarily lead to more efficient management. Rather than enhancing consensus and providing “mechanisms for the equitable use of the resources with a minimum of internal strife or conflict”, as expressed by Berkes and Farvar (1989: 11), the effect of the handing over of responsibilities has been that new arenas of struggle have been created with regard both to structures of authority and to the rights of access per se. For, as stated by Goheen (1992: 403): “as access to land and authority over natural resources are being redefined by the state through the process of decentralization, contradictions, paradoxes and unintended consequences increase, and struggles over meaning and power intensify”. 
Excessive state centralization or the politicization of local institutions?

A central paradox revealed by the case material is the limited role played by the key institution in the decentralization process, the Rural Council, and the restricted room for manoeuvre assigned to the sous-préfet and the local representatives of the deconcentrated ministries. According to the Common Property framework, it is the state administrators who constitute the prime obstacle to self governance, depriving the rural population of their capacities for local initiative by exercising flagrant state tutelage (Guellar, 1995:140). Seen in the light of the Naoré conflict, it is reasonable to question whether the unfolding of local initiative is, in fact, hindered at all by state interventions.

When evaluating the extent of state control, a first problem relates to state representation. In areas as sparsely populated as the Ferlo region, each communauté rurale covers a vast area. Herders’ relations to the state administration may therefore be rather distant, a situation which is further aggravated by a permanent lack of vehicles, fuel, etc., discouraging frequent contact between the sous-préfet and his administrés. Also, the Rural Council tends to be present primarily in the chef lieu de l’arrondissement, the central village, where also the sous-préfecture and the police forces are posted. Representations of the state in the small villages scattered over the vast territory\(^1\) of Ogo tend to be limited. In cases where no state representative is present, key institutions like the well-committee are therefore likely to take over.

Due to the extensive distances, the lack of information about the actual situation in the more remote areas and a generalized practice of informal arrangements, few of the conflicts played out in the field follow the official routines and formalised structures of decision making. In fact, many of the decisions concerning land attribution which are formally under the authority of the Rural Council, are taken locally without the consent or approval of those formally elected. My own data as well as the rich literature on tenure issues in Senegal abounds with examples of how land, rights of settlement or even rights to dig wells within gazetted areas are attributed by the president or individual members of the Rural Council. These attributions are carried out without any control or measurement by the official agent in charge. No approval is sought from the sous-préfet, nor any consent from the other members of the Rural Council (see Blundo, 1995b:13; Le Roy, 1980; Mathieu, 1996; Juul, 1991c; Juul, 1999).

The extensive formal power attributed to the agents of the territorial administration, as compared to that of the popular institutions, does not necessarily reflect the ‘real’ relations of power between these two parties. As could be observed in the checkmate situation of the sous-préfet in the Naoré case, formal authority need not go hand in hand with actual control. In this case, as in many others, the area of state control turns out to be surprisingly limited.

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\(^1\) Naoré is located at the western extreme of the Ogo arrondissement, one of the largest arrondissements of Senegal, covering more than 18,000 square kilometres.
In reality, the control and influence of the state is severely restricted by the ambiguous position of the *sous-préfet* vis-à-vis the local population. For, contrary to the vision of the Common Property propagators of the state administration giving orders to an obedient population, the local population to a wide extent evades, obstructs or transforms the orders of the authorities as part of a defensive strategy (Spittler, 1979:30). As shown by Spittler, such defensive strategies may take many forms, ranging from the hiding or direct movement of villages into the bush to escape tax collection, labour demands or other forms of bureaucratic pressure, to ignoring or deforming the commands and prohibitions of the state. Simulation of agreement is another means by which herdsmen or farmers hope to bargain with the minimum of annoyance and bring the matter to a close as quickly as possible (ibid.:32).

The effect of such defensive communication strategies is obviously a low level of information on the part of the administration at local as well as central level. According to Spittler (ibid.:35), this lack of knowledge may be partly compensated for by force. Other forms of influence require some knowledge of the overall situation, but this is less of a requirement when it comes to force. This makes force easier to deploy for the administrative authority. Alternatively, the administration may choose to give up the areas in which it is hardest to achieve success. The reaction of the state, therefore, becomes a paradoxical mixture of laissez-faire and force, a situation which also characterised the role of the state administrators in the case of Naoré.

The analysis proposed by Spittler of the interrelation between peasants and the state fits well with the situation of the Ferlo on the overall level. Nonetheless, his focus on the defensive aspects of the peasants’ reactions tends to overlook the political power struggles going on among different groups of herdsmen and peasants and the role of the administration herein. Where, according to Spittler, peasants attempt as much as possible to avoid situations which could bring them into contact with holders of government office, herders in Naoré, for instance, played a very active part in influencing or discrediting the agents of the administration as part of their struggle for political power.¹

As shown in the Naoré case, the *sous-préfet* acts within a highly politicized local environment where the administration is under the strict control of the (ruling) Socialist Party.² Any *faux pas* stemming from insufficient understanding of the intricacies of local politics is likely to cost the local administrative officer his career, or at least put a halt to any aspiration of promotion and of moving closer to civilisation, away from the dust storms and the heat of the Ferlo.

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¹ The state administration is to a considerable degree interwoven with the structures of the ruling Socialist Parties. The large majority of administrative cadres are party members, just as all councillors, at least until the latest elections, were members of the ruling party.

² Where Spittler here seemingly approaches Hydén’s ‘uncaptured peasant’ in his focus on peasants’ autonomy from the state, I prefer the view expressed by Berry (1993:62) according to which people in general seek to activate ties to the state when gains can be made from it, and escape when state resources dwindle or political opponents gain the upper hand.
This situation is well recognized by representatives of the local administration. Indeed, the *sous-préfets* tend to be quite reluctant to intervene in the frequent and often uncompromising struggles among different factions of the population. Paralyzed as they are by the simultaneous pressure from the Ministry, the political party structure and not the least the local politicians, the *sous-préfet* and his officers tend to keep up a laissez-faire attitude for as long as possible, limiting interventions and hence active responsibility to a minimum.

Interestingly enough such interventions are also discouraged by the central government. Situations like the one described above are not infrequent. In several instances, the conflicts around the management of boreholes have developed into such chaos that the *sous-préfet* has been forced to intervene and take measures to dissolve the existing borehole committees. In many cases, the *sous-préfet* has then attempted to replace them with committees composed of the available extension officers (this was also the remedy proposed by the *sous-préfet* in the Naoré conflict). This praxis of ‘re-engagement’ of the state is, however, explicitly condemned in a note from the government (Lettre Circulaire de Jean Collin, 30 June 1989) which enjoins the *sous-préfets* to leave the management of the boreholes to the local population.

As a result, a highly fluid situation prevails with regards to the arbitration of local conflicts, a situation in which decisions are frequently contested and renegotiated. Judgements taken by the government tend to be vague and characterized by the partial application of laws and decrees. This situation is of course further aggravated by the ambiguities and overlaps of the different legal texts which juxtapose the free and open access determined in the Law on the National Domain and the decentralization process according to which some authority to exclude is granted to the local resource management institutions. As in the example of Naoré, local decisions are often overruled while decisions taken by the state often are open ended, leaving space for renegotiations. Th result of this is that the local administration is left in a sort of power vacuum.

Excessive state intervention is, therefore, seldom a proper diagnosis of the limited efficiency of local resource management institutions, and the transfer of power to local institutions is no panacea for improving local management practices. As highlighted by the quotation below, rules do not necessarily determine people’s behaviour, just as many different institutions may compete for the control over the same resources.

It’s difficult to talk of rules in relation to the Rural Council, for among Fulanis, people do not follow what is written down. Formally, it’s the Rural Council that should decide everything in relation to the management of the territory here. But that’s not possible because of Fulani solidarity [Pulaaku]. People ought to make a request before settling in the area. But they just settle where they feel like it. The Rural Council isn’t informed of anything. People only negotiate with the Borehole Committee (Agropastoralist, former president of the Rural Council, Thiargny, February 1993).
Borehole committees as multipurpose institutions

As the number and prosperity of the FuutankoBe herders has increased, the well committees have come under pressure from ‘newcomers’ who request representation on the board in order to ensure the proper functioning of the borehole and who wish to gain control over the considerable financial resources collected by the well-committee. Firstcomers have, in general, exhibited fierce resistance to any division of power, an attitude which in most cases has been backed by the local administration. Such resistance has often been legitimized by a strong dichotomy between “strangers” and “locals”. In this way the “local” population seeks to establish a discourse linking up to a central assumption in the decentralization framework: the existence of a homogeneous and fixed group of users that should be given more fixed property rights, including the right to exclude ‘foreigners from use and decision making.

Nonetheless, the perpetual embezzlement of funds characterizing most borehole committees has led to a new situation where wealthy FuutankoBe herders are able to trade representation in the well committee in exchange for financial help in emergency situations. If the pump breaks down, herders are forced to move their herds to the adjacent boreholes located 25–30 kilometres away. As movement to a neighbouring well often implies considerable risk, notably for those herd-owners used to a more sedentarised life-style, the purchase of expensive spare parts has proved to be a comfortable platform for negotiating a partition of power within the committee. At least 3 cases are known to the author1 where FuutankoBe herders have bargained successfully to be represented in the board of the well committee. An example of such bargaining is the case of Djagueli:

There was a problem with the borehole pump. The Rural Council told us to decide whether we would pay to have it repaired or wait until the waterworks brigade could find the time and means to repair it. The local herders had no way of paying. We decided to take responsibility, and collected 700,000 CFA for the repair (FuutankoBe village chief of Fidjiti, Djagueli, 1994).

In return for this favour, the newcomer population, who have been present around Djagueli in large numbers since the beginning of the 1970’s were granted two key positions within the well-committee.

Nonetheless, such decisions often remain open for renegotiation. In spite of the feeling of superiority expressed through the underlining of the limited economic resources disposed of by the local herders, the new (and evidently more adequate) representation proved short-lived. Within less than a year, the local population, in spite of their numerical inferiority and restricted economic contributions, managed to overthrow this new board and ‘re-conquer’ the key position of president. Needless to say, all these transactions took place without any preceding elections.

1 This strategy has been used successfully in at least three cases (Djagueli, Yonofere and Foudou).
The struggles over the attribution of seats in the well committee is, however, not only a matter of making the well function properly or of controlling the funds collected through the watering taxes. Along with the growing recognition of the key status of the wells, the committees have also become the scene of local power struggles between representatives of local political factions (as could be seen in way the sous-préfet deplored the battles between tendency A and B). For, as noted by Shipton and Goheen (1992), people use resources such as water and land not only for survival and enrichment but also to gain control over others and to define personal and social identities. As a consequence of their newly-acquired role as vital institutions in local economic and political life, the well committees are used by the local elites to gain (and trade) support for their own political career within the ruling and (until recently) all-embracing Socialist Party. This is particularly true for those smaller villages where other state-connected institutions (such as the Rural Council and the sous-préfet) are not present.

Moreover, in such cases the FuutankoBe herders have been able to play very skilfully on the internal rivalry between opposing candidates in the local community. The local purchase of party cards plays a crucial role in the internal alignment of candidates because they are used to measure the support that opposing tendencies within the ruling party can mobilize at local level (see Cruise O’Brien, 1975:174). In times of imminent elections, FuutankoBe herders, who constitute an important source of economic backing for some of the local candidates, have refused to purchase any party cards before the post of treasurer or president was granted to a representative of the FuutankoBe population.

As can be seen, decisions regarding board representation in the key institutions are always open for renegotiation. Rather than determined by the existing rules and regulations (concerning transparency of accounts or democratic representation), the outcome is to a large extent determined by the ability of the various actors to manoeuvre skilfully in the power structures reigning at the time, taking advantage of the various opportunities offered by the moment (such as national elections or mechanical breakdowns).

The appropriation of well committee funds is, therefore, seldom solely a matter of personal enrichment. Apart from constituting a source of profit, the wells are first and foremost important sources of social and political legitimacy and are used as such by the political elites. In the Ferlo, where a person’s status hinges on his ability to mobilize a following, the well committees, not least those swollen with the financial contributions of ‘foreign’ herders, constitute a very important source of capital for clientelistic redistribution. This explains why they have not developed into closed corporations acting to exclude others, as assumed by advocates of the common property framework, but have remained arenas for individual accumulation and mobility, serving to expand the number of supporters. This is not to say that maintenance of a clientele is financed overtly through the taxing of foreign herders (although this might be the case). The mechanism at play is, rather, as proposed by Blundo, that control over such remunerative institutions puts the local bosses represented in the well committee in a situation where they cannot
refuse their village clientele favours (such as tax exemption) as they constitute the very basis of clientelistic exchange. Hence, cases of financial borrowings are therefore also part of the explanation for the frequently empty accounts of the well committees.\(^1\)

The monopolization of (scarce) resources for political ascension is, therefore, not only a matter of a division between firstcomers trying to retain control over their local resources against the economically more powerful immigrants. Firstcomers do not speak with one voice, but are engaged in their own internal struggles over the available resources. The attempts to maintain a monopoly over the well committees are also part of another logic related to the internal struggles among political factions at local level. Disputes over the composition of the board of the well committee are just as much struggles to gain control over the means to compensate the clients who have supported the winning faction, and (with the equally important addition made by Blundo (1998: 2)) of depriving the opponents of the benefits which they, in turn, could have derived from these resources. In this struggle, the rich new-comers are not only being used by the various local political factions. They also manage to play adeptly on internal oppositions in order to secure their share of the political power and resources which are redistributed. This is an example of the processes described by Kopytoff (1987) whereby immigrants attempt to take over local political systems and remould them to their own purposes by skilful political manoeuvring.

What characterized the role of the administration in this situation was that the deviation of funds, the overtaxing or exclusion of foreigners, and the attempts to technically constrain watering, were left strangely unsanctioned. In general, the administrative centres appear uninterested in the misappropriation of funds taking place at the local level and only intervene if protests becomes too overwhelming — or if violence occurs. This is partly the consequence of the submission by the administrative authorities to pressures stemming from the game of factions and from pressures from political and religious notables which may be mobilized by the various parties in the course of the struggles. Another reason may be that many of these actions do not necessarily imply collective reprobation as they are, to a large extent, accepted as legitimate although not uncontested means in the general bid for political power. The involvement of the administrative authorities is, therefore, no neutral act, but is immediately used in the political battle, as the Naoré case shows.

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\(^1\) This is not only the case at local level. The national banks of Senegal have also in several cases been close to bankruptcy as enormous sums of money had been lent to political and religious notabilities with limited motivation for paying off their mortgages (See also Boone, 1990:440).
Conclusion

The transfer of competences and the delegation of responsibility for local resource management to the local community has, as can be seen from the above, not generated a political culture based on well-defined rule-making authorities anticipated by the Common Property Framework. Rather, local institutions whether ‘new’ or ‘traditional’ have, as a result of their embeddedness in specific political and economic structures, remained contingent and indeterminate in character. As shown above, the management of local resources cannot be regarded as an activity carried out in isolation, irrespective of time and space. For in the course of the process, the perception of both firstcomers and newcomers of the object of negotiation changed from being a matter of competition over access to water and pastures to a struggle centred primarily on control over key resources for the accumulation of political power, as expressed in the below. And, as a consequence of this, the social relationships between the negotiating parties were also altered.

In the light of the above, the need to study tactics and strategies, and not merely the rules of the game, cannot be sufficiently underscored.

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Politics, Development and Custom: Strategies of Evasion in Yatenga, Burkina Faso

Lars Engberg-Pedersen

Introduction

Contemporary Burkina Faso is the scene of a fierce pro-democratic struggle. Ever since Independence in 1960, nation-wide social struggle has never had as significant a democratic sting to it as the discontents, demonstrations, strikes and upheavals that followed the death of Norbert Zongo, journalist and editor on December 13, 1998. Deteriorating living conditions or the luxury lifestyle of government leaders were the prime motives behind social unrest on earlier occasions, but this time indignation is directed against the national regime’s disregard for people’s political rights and influence. The question of the relationship between leaders and subjects has come to the fore and has been encapsulated in the widespread cry: Trop – c’est trop!

While taking a point of departure in the killing of Norbert Zongo and his three companions and in the murder of the driver of the president’s brother, the anger and resentment are particularly directed against the indifference of the president and the government when it comes to pursuing the delinquents. It took a long time to establish a commission of inquiry, and the response to the commission’s conclusions was anything but firm. Moreover, the violent treatment of demonstrators and others by the police has created a picture of a repressive leadership against which many Burkinabè have started to voice their criticism.

The struggle seeks to establish democracy in a much more substantial sense of the term than is typically the case in the sphere of development cooperation. While elections and multi-partyism were reintroduced in 1991, only formalists would describe the political system in Burkina Faso as democratic. The crucial relationship between rulers and ruled has undergone very little change. Although the meaning of democracy is contested and sometimes viewed as a reflection of Western cultural imperialism, there is little doubt that very many Burkinabè long for the influence and responsive leadership which the notion of democracy should embrace in order to be meaningful. Much development cooperation focusing on either the formalistic aspects of the political system or romantic imaginations of consensual ‘traditionalism’ could learn many a lesson from the present social struggle in Burkina Faso.
The present essay discusses three topics: 1) The relationship between leaders and subjects; 2) The proclaimed distinction between ‘politics’ and ‘development’; and 3) The links between ‘donors’ and ‘receivers’ in development cooperation. The topics are closely related, and the ambition is to describe their particular and interrelated nature in the Yatenga region in the northwest of the country. This area is dominated by the Mossi, the largest ethnic group in Burkina Faso totalling approximately half of its population. The history and social organisation of the areas where the Mossi live are rather distinct from other parts of the country where a multitude of ethnic groups and social organisations can be found (see Savonnet-Guyot, 1986). The Mossi have, however, prevailed strongly over national political processes, and their social history is undoubtedly one important background for an understanding of present-day national political change.

The relationship between leaders and subjects is interesting in discussions of democratisation, and it also significantly influences the opportunities available for marginalised groups to improve their living conditions. At the national level, their relationship affects the responsiveness of policies to the needs of various social groups; and at neighbourhood level, leaders typically have an important role to play as brokers or intermediaries between heterogeneous communities and a complex world of politically and economically powerful actors. This relationship needs scrutiny in a Burkinabè context because it is seldom the object of overt conflict. Outspoken opposition against rulers is rare, and their replacement is usually more the result of a secretive scramble by potential leaders than a product of people’s publicly-announced discontent regarding the leader’s performance.

As the above remarks show, the relationship between rulers and ruled is by no means stable or unambiguous. The relationship has always been influenced by economic and political changes: colonial rule and its different policies, the fight for Independence and the emergence of new social forces, the ‘invasion’ of ‘developers’, etc. Moreover, rulers and ruled relate to each other in different ways according to the issue in question as their actions and mutual expectations vary among different spheres of life, such as religion, land distribution, conflict settlement, etc. However, some important aspects of the relationship seem to be rather stable despite the rather dramatic social changes occurring at different levels in contemporary Burkina Faso.

The distinction between ‘politics’ and ‘development’ is proclaimed by many leaders of local associations in Yatenga (Engberg-Pedersen, forthcoming). They see themselves as operating within the sphere of development, which is characterised by cooperation, unity and progress. In contrast, the sphere of politics is said to be conflictual, unpredictable and dangerous. In politics, power is the name of the game while harmony and consensus prevail in the development sphere. Therefore, leaders of local associations argue that they tend to avoid contact with politicians and state bureaucrats as much as possible.

It is difficult to uphold the notion of two separate spheres when analysing concrete social and political processes in Yatenga, but the notion is undoubtedly used strategically to attract resources from donors who do not like to become en-
meshed in politics. Moreover, the argument corresponds to a postulate, which we shall come back to more substantially below, namely that leaders and subjects seek to avoid interaction outside specified social situations. They mutually acknowledge the pre-eminence of the other in their respective worlds but refrain from interfering in each other’s business. This suggests a sort of compartmentalisation whereby social actors, though dependent on each other, act quite autonomously.

A short conceptual note is needed at this point. In this article the terms ‘politics’ and ‘development’ are used to describe perceived categories of action, and are not used as theoretical concepts. As indicated above, they denote a widespread understanding in Yatenga of distinct ways of action linked to particular actors. Instead, the term political processes is used as an analytical concept to describe processes related to decision-making and the distribution of resources whether they take place in the world of politics or the world of development.

The third topic is just as ambiguous and difficult to clarify as the first two, and to a large extent it has superimposed itself on them because of the substantial resources involved. The links between ‘donors’ and ‘receivers’ resemble the other topics in terms of the power inequalities involved and by the simultaneous attraction and rejection between the two parties. Of course, the relationship has a number of distinguishing features as well, not least because of the different life worlds of ‘donors’ and ‘receivers’, but also because practices and experiences from social processes relating to the relationship between rulers and ruled and to the ‘politics versus development’ discourse have often been carried into the realm of development cooperation. The opposite may also increasingly be the case. Thus, the ambition is to discuss the nature of the three topics and delineate how they interact.

The text is organised in the following sections. First, I discuss some of those dimensions of the political history of Burkina Faso which touch upon the three overlaying relationships. The subsequent section deals with the relationship between rulers and ruled in Yatenga and seeks to substantiate and explain the propositions that leaders face little opposition and that rulers and ruled tend to avoid intense interaction. Then, the discussion turns to the links between Burkinabé NGOs on the one hand, and politicians and civil servants on the other. The focus is particularly on the NGOs’ strategies and perceptions in relation to political life. Fourthly, some issues related to development cooperation are raised in the field of natural resource management, which is taken as a case of people’s experiences with ‘donors’. This leads into a discussion of people’s actions and strategies given the multi-layered web of worlds and institutional logics that surround them. This field is obviously characterised by ample room for interpretation, and the account given here does not pretend to exhaust the issue. The arguments are based on field work undertaken in two villages in the north of Yatenga in 1992–93 and on a study of people’s associations which was carried out in the capital of the region, Ouahigouya, in 1997–98.
Political change in Burkina Faso

Because of the multitude of social and political forms of organisation, the French, beginning their project of colonisation of the territory of present-day Burkina Faso in 1895–96, had no singular local system of rule which they could use to consolidate their regime. This, however, did not prevent them from instituting a system of chiefs at different levels largely based on the existing social organisation in the areas dominated by the Mossi, but also extending it into areas with no experience of centralised hierarchies. Moreover, the nomination of chiefs depended more on the likes and dislikes of the French administration than on the legitimacy of the nominee among the population (Cabanis and Martin, 1987; Jacob and Margot, 1992). This clearly complicated the position of the chiefs, a trend which was witnessed in large parts of West Africa during the French colonisation (Ajayi and Crowder, 1974), and it is one of the policies that significantly affected the relationship between rulers and ruled.

The role of the chiefs during colonial days was primarily to collect taxes, and the chiefs at the higher levels had the right to preserve a share of the collected tax for themselves (Cabanis and Martin, 1987). They worked as an auxiliary arm to the colonisers and did little to respond to local needs and desires. It has been argued that people distinguished clearly between ‘customary’ leadership and the chiefs installed by the colonial power and that the former was able to control the latter (Jacob and Margot, 1992). While this may be true in some areas, and while local chiefs in Upper Volta may have been less compromised around Independence than their counterparts in other parts of West Africa (Cabanis and Martin, 1987:18–19), the colonial experience undoubtedly influenced people’s perspective on leaders and on politics.

First, the centralised nature of French colonialism where important decisions were very often taken by the Governor-General in Dakar, if not in Paris (Ajayi and Crowder, 1974), supported the view that political processes are the matter of an exclusive elite outside the reach of the population. People had few opportunities to influence the use of local resources or the appointment of representatives of the colonial power at the local level. Furthermore, the political sphere is likely to have been associated with more or less illegitimate enrichment and danger. All non-citizens, i.e. the vast majority of the population, were taxed in cash and in labour, and if used locally, the money was spent to facilitate the further extraction of resources. In addition, the commandant de cercle, a French officer, possessed almost unrestrained powers in the administrative, political, economic and juridical fields within his territorial division (Ajayi and Crowder, 1974; Cabanis and Martin, 1987; cf. Mamdani, 1996). Vestiges of this system are still very much alive in present-day Niger (Olivier de Sardan, 1999). Accordingly, there is little reason to believe that the rural population felt inclined to enter the political sphere, meaning the world of the colonisers and their representatives.

Secondly, the role of ‘customary’ chiefs as brokers between an all-powerful colonial regime and the rural communities has been ambivalent. On the one hand,
village chiefs might have been able to exercise this role without seriously jeopardising their legitimacy among villagers particularly because the colonial regime was not omnipresent and a certain ‘room for evasion’ existed. Thus, it has been argued that

les sociétés ont fonctionné, depuis la colonisation, plus par juxtaposition que par synthèse, les deux cultures politiques – la moderne et la traditionnelle – se côtoyant sans se fondre en un seul système. (Jacob and Margot, 1992:58)

On the other hand, the conclusion is not necessarily that ‘customary’ authority and colonial and post-colonial state power are clearly separated in distinct worlds and seldom interact as ‘customary’ chiefs particularly at higher levels within the Mossi kingdoms have been strongly involved in political processes (Savonnet-Guyot, 1986; Skinner, 1964; Skinner, 1970). For instance, the king of the largest Mossi kingdom, the Moogo Naaba, residing in Ouagadougou was a major force behind the movement to reunite Upper Volta after it was split into two parts, each joining the neighbouring colonies in 1932, but also more locally in Yatenga, chiefs have prior to and after Independence played an important role in political struggles (Ganne and Ouédraogo, 1996). The attempts by ‘customary’ leaders to preserve their own prestige and influence in an increasingly secularised political environment were, however, repeatedly met with opposition.

During the 1950s when it become more and more clear that the colony was heading for Independence, the ‘traditional’ forces were confronted with resistance from three different sources. The Rassemblement Démocratique Africain (RDA), which was an anti-colonial movement with communist sympathies extending to many parts of West Africa, got a foothold in the Upper Volta despite strong resistance by the Mossi-dominated Union Voltaique. Moreover, within the latter party a group of young Mossi together with a Catholic union started to question the ‘feudal’ influence of the ‘customary’ chiefs, and in Yatenga a French captain organised a party with support from the numerous anciens combattants who strongly opposed the chiefs and their ‘traditionalist’ approach (Ganne and Ouédraogo, 1996; Savonnet-Guyot, 1986). While these different oppositions to the ‘customary’ leaders were more urban than rural, they reflect a discontent with the political role of the chiefs even prior to Independence. The zenith of the Mossi chieftainship’s attempt to preserve its political influence came about in October 1958 when the Moogo Naaba ordered his warriors, armed with bows and arrows, to surround the Territorial Assembly. The manifestation petered out, and the political sway of the chiefs has been severely circumscribed ever since.

The colonial experience and the role of the chiefs in the process of decolonisation appear to have influenced the relationship between rulers and ruled. The centralised and oppressive colonial rule denied any political agency and responsibility among the subjects and ensured that outside intervention was perceived as inherently dangerous. The distance between leaders and subjects was reinforced, and the peasants could only perceive state activities and political processes as separated from, and even opposed to, their own attempts to make a living. Moreover, the
chiefs performing an important role as intermediaries between the villagers and the colonial power were increasingly discredited in the political processes leading to Independence, whereby the rural population lost its most significant political representatives. Although ‘customary’ leaders clearly fought to preserve their privileges, they had the support of the rural population to a much larger extent than any other political actor. Accordingly, their marginalisation around Independence contributed to consolidating the distance between peasants and national political processes.

Since Independence in 1960, civilian and military governments have succeeded one another, but generally without much bloodshed. The relatively calm atmosphere in which national political processes have taken place can be exemplified by general Lamizana who was asked to take power by the unions and other social actors in 1966. After four years of peaceful military rule, a civilian regime was established, but turmoil erupted and the general took over again in 1974 only to win fairly democratic elections for president in 1978. Apart from the military and a few prominent politicians, the two major social actors pushing for a change of government have been the unions and the students at the university in Ouagadougou (see Diawara, 1996). More as a response to deteriorating living conditions and less from ideological convictions, they have acted and forced the government of the day to resign. In addition, the ‘customary’ chiefs have sought to preserve their influence and status and although generally weakened since 1958, their discontent with a political regime has at times contributed to its fall. Other social actors including the peasants and opposition parties have seldom influenced the course of events to any noticeable degree.¹

After two military coup d’états in 1980 and 1982, a quite extraordinary government came to power in 1983. Captain Thomas Sankara, the leader of this military government, promulgated an ideology of revolution and self-sufficiency, and revolutionary defence committees and popular tribunals were created all over the country. Young people populated the defence committees, and particularly in the rural areas this took place in confrontation with the old generation and ‘customary’ leadership. The government introduced an investment programme in rural development, socio-economic infrastructure, and human resources,² it implemented austerity measures to reduce deficits of the state budget, and it began a campaign against corruption and laziness among civil servants (Kafandi, 1990:125–26; Savonnet-Guyot, 1986:179–91; Speirs, 1991:100–1). A kind of self-imposed economic adjustment was initiated (Savadogo and Wetta, 1992).

Sankara challenged most of the social groups who had hitherto profited from national political processes. Employment in the public sector was cut down; sala-


² Despite the rhetoric, 80 per cent of the finance of this programme was supplied by external sources (Speirs, 1991:101), which indicates the extremely limited options for the Burkinabè state to initiate development activities.
ries were reduced; agricultural producer prices were increased leading to a rise in food prices in the towns; and trade unions, political parties and ‘customary’ authorities were marginalised (Speirs, 1991:101–3). Even the rural population, whom Sankara had favoured through the price policies, were perplexed and upset by his unambiguous claim that all land was the property of the state (Otayek, et al., 1996).

The assassination of Sankara in 1987 ended this period of radical change from above. Captain Blaise Compaoré took over, and he adopted a softer line towards trade unions and ‘customary’ authorities, and food prices in the towns were lowered (Speirs, 1991:105). Following internal and external pressure, a change to civilian rule and a multi-party system was prepared. The process of reintroducing formal democracy, however, did not gather speed until 1990 when the so-called revolutionary movement, Front National, held a congress on the subject, a commission produced a draft version of a constitution, and a national conference agreed to a slightly revised version of the constitution (Kiemde, 1996; Sawadogo, 1996). The ground was prepared for three elections during 1991–92 where a new constitution was adopted, Compaoré was elected president, and a national assembly was put together.

The transition to liberal democracy should, however, be seen against the background not only of eleven years of military rule, but also Sankara’s four years of radical and imposed change. The revolutionary project did not tolerate competing political visions or multiple agents interacting: “son achèvement supposait l’inscription autoritaire de la société dans la sphère de l’État et le monopole de la parole politique légitime” (Otayek, et al., 1996:10). This centralisation of political power was in line with the colonial practice which had never been seriously changed or for that matter challenged since Independence. Although revolutionary in many ways, Sankara’s project actually seems to have reinforced the political marginalisation of the rural population and people’s perception of the distinction between politics and development. The reintroduction of a democratic political system formally spelled a shift to civilian rule, but it did not substantially challenge the role of the state as the leading agent in the development process. National political processes were and continue to be the prerogative of a small elite.

Public enthusiasm about the democratisation process has been limited. Compaoré had no opponents at the presidential election in 1991, and only 25 per cent of the electorate went to the polls. Furthermore, Compaoré’s political party (Organisation pour la Démocratie Populaire – Mouvement du Travail, ODP-MT, later renamed Congrès pour la Démocratie et le Progrès, CDP) won 78 out of 107 seats in the National Assembly in 1992 (turnout 35 per cent) and 101 out of now 111 seats at the elections in May 1997 (turnout 44 per cent) meaning that debate is removed from the arena of competing political parties. The unions, the students and an increasingly critical press have been the only important opposition until the recent events.

Turning to state interventions to organise the rural world, the patronising approach to the subjects appears equally apparent. First, the colonial power introduced associations of mutuality (Sociétés Indigènes de Prévoyance), which were intended
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to constitute a kind of insurance against misfortune. All peasants were automatically members and paid a fee. However, colonial officers were in control of the associations, and they developed quickly into extension services marketing products and supplying agricultural inputs and advice. Consequently, people did not rely on the associations in times of hardship, and the fees were regarded as a tax (Jacob and Margot, 1992:64).

Secondly, after Independence peasants were encouraged to organise themselves in village groups (Groupements Villageois, GV) which, however, seldom became genuine co-operatives although this was the state’s ambition. Peasants joined forces, but rarely resources. The GV are to a large extent a structure facilitating the work of various extension services. They are the only entities that can apply for agricultural credits, they organise the provision of inputs and the marketing of outputs, and technical services address themselves to them with advice on improved seeds, methods, etc. and with prohibitions (e.g. against cutting the branches of fresh trees). In many cases, the GV cultivate pieces of land in common, and they organise other activities such as the digging of wells. Officially, you need to pay a registration fee to become a member of a GV, which is then expected to register at the public authorities. In practice, things are rarely that formal, and the dynamism of a GV is seldom related to its formal or informal status. The number of GV and other peasant groups expanded rapidly at the beginning of the seventies and again during the eighties partly because NGOs and projects needed a collaborating institution locally. Today, the GV constitute by far the most important type of local organisation in rural areas. Some more genuine co-operatives do exist, but they have generally been created by the state in order to capture the benefits of irrigation perimeters or especially fertile areas.¹

Thirdly, during Sankara’s regime revolutionary committees were created for the young, the old, the peasants, and women at both local and national levels. In the villages, these social groups appointed delegates to a revolutionary defence committee, which was in charge of local affairs (Jacob and Margot, 1992:62). This policy reached almost all villages in the country, and the head of the defence committee, the village delegate, was a powerful person not the least because the ‘customary’ authorities were not acknowledged by the state during this period. With the new constitution in 1991, the village committees were abolished.

This brief discussion illustrates the extent to which rural associations in Burkina Faso have been created, formed and influenced by the state. The reason for the existence of all the more formal local organisations is basically to be found in the relationship between the state and the peasants (see Nebie, 1988). Groups and collective arrangements created by the villagers exist, of course, but they seem to be

¹ Ousmane Nebie (1988:28) gives the following figures for rural organisations in Burkina Faso: 5,893 villages groups, 33 agricultural cooperatives and 5 handicraft cooperatives. According to Armelle Faure and Denis Pesche (1993:20, 43) who refer to figures from May 1990 provided by the Secrétariat d’Etat à l’Organisation du Monde Rural, there are 8,535 village groups (5,723 male, 1,874 female and 938 mixed), 60 co-operatives, 70 credit and savings co-operatives, and 511 groups of young agriculturalists.
less influential, especially with respect to external relations. The importance of the state and national political processes is also reflected by the fact that the number and the nature both of urban and rural associations has responded to political changes at the national level. The number of professional organisations has generally increased ahead of presidential or legislative elections (Diawara, 1996:236). At the same time, the state has approached people’s associations with some ambivalence because they have sometimes been regarded as a means to mobilise the peasantry and to establish a social force outside the state, and sometimes they have been expected to be an auxiliary arm to the state in the rural setting (Jacob and Margot, 1992:66–67).

During the last couple of decades, people’s associations have also been strongly influenced by the exploding number of projects organised by NGOs and multilateral and bilateral donors. These social actors are often very concerned about having their own particular partners in the villages, and people respond to this concern in a very pragmatic way:

Leur participation ne relève donc pas d’une stratégie qui viserait à satisfaire immédiatement une demande précise – même si, comme on l’a montré, elle existe bel et bien – mais plus d’une attitude attentiste qui se fixe pour objectif de formaliser la relation avec un opérateur externe au village, susceptible, à terme, de répondre à une ou des demandes encore ‘latent’ (Piveteau, 1996:195)

Thus, villagers tend to comply with outside demands regarding particular ways of organising themselves and their activities. Accordingly, people’s associations should be analysed in the context of national and international political and ‘developmental’ changes.

Rulers and ruled in Yatenga

The relationship between rulers and ruled in Yatenga today, must be analysed it in its particular regional context. The region has been the object of repeated outside interventions, and although almost forty years of substantial changes have passed since Independence, present-day social organisation still bears witness to processes and changes dating several hundred years back.

To cut a long, rich and interesting story short,1 the region was conquered by Mossi groups of cavalrymen in the first half of the 16th century. The ‘original’ population, which was a mixture of more or less different ethnic groups, was primarily composed of peasants organised in families and village communities. The Mossi and the original population amalgamated to some extent, and a society de-

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1 The following is based on M. Izard (1985) and C. Savonnet-Guyot (1986). Particularly M. Izard has made a tremendous effort to elucidate the nature and history of the Mossi kingdom in Yatenga. Interested readers are kindly referred to his works since the present discussion in no way accounts for all important aspects of the issue.
developed with one language; a single, hierarchical political authority; and a uniform pattern of social organisation. Although unified in this sense, the society was also characterised by a fundamental distinction between ‘people of power’ and ‘people of land’. The former being the Mossi were organised in families, who according to the Mossi ideology possessed the Naam, meaning the power to control people. An ingenious system structured the competition for power among the families, and chiefs all possessing the Naam were organised in a hierarchy from the village level to the king in Ouahigouya. The ‘people of land’, who were basically the original population, could never take part in the struggle for power, but on the other hand they controlled the land. A land chief (TengaFa) knew the spirits of the earth, distributed plots and dealt with conflicts over land in most villages. The Mossi did not take over this authority, and the two spheres of life, the political and the agricultural, were fairly autonomous. Today, the distinction between the two social groups is less sharp as people speak the same language and generally recognise the same myth of origin, but when a chief passes away and a new one has to be found, the genealogies are up for discussion and history is fiercely renegotiated.

The power of the Mossi chiefs was originally established through the use of force, but partly because it did not entail a substantial intrusion into the lives of the peasants, the ideology of the Mossi, according to which the possession of the Naam gave them the right to rule, became increasingly dominant and force was no longer as necessary to uphold power. It is also important to note that being in power was a very important goal in itself, much more so than using power to gain material advantages.

La disjonction entre pouvoir et richesse, où celle-ci procéderait d’une accumulation d’espèces, de grains, d’animaux et de marchandises, marque que le pouvoir se suffit à lui-même, qu’il y a presque liaison directe entre détention du pouvoir et jouissance. (Izard, 1985:562)

While village chiefs generally possessed more land, more labour power, more food, etc. than the average villager, the struggle to become chief had more to do with status and influence than with wealth. The king of Yatenga controlled more resources and based his affluence partly on plundering outside his kingdom, partly on controlling trade and handicraft production in the region. In contemporary rural Yatenga, village chiefs have lost some of their prerogatives and command less respect than they did, but the struggle to become chief is typically tough and sometimes violent. In addition to the prestige attached to the chieftainship, chiefs typically have connections with important actors outside the villages. Before the colonial period, the village chief was an important part of the state-like structure of the Yatenga kingdom. Today, the chief is no longer the only representative of a village, but nonetheless remains an important one, and since resources are much more abundant outside the villages – in donor agencies, NGOs and even the state – than inside them, connections with influential outsiders can be advantageous.

The peasants, on the other hand, seem to heed the proverb: “Pour vivre heureux, vivons cachés.” They tried to stay clear of the Mossi families’ scramble for power and to make ends meet as they had always done.
L'homme du commun ne se révolte pas: il se résigne et il ruse. L'homme de la plèbe joue son humble rôle dans la grande machinerie du royaume, il sait se jeter à terre quand il le faut, mais il n'en pense pas moins et ne manque pas, à chaque fois qu'il est possible, de se réfugier dans l'évitement silencieux. (Izard, 1985:560)

The peasants were not alienated from their land, and they were not forced to provide soldiers or work the lands of the Mossi to any significant extent. They could, therefore, live a life of relative peace protected against plundering from outside and with recourse to an authority in case of social conflict. Moreover, the village chiefs could do little to improve the living conditions of the peasants, as they did not control the main cause of rural anxiety: rain. Denied any possibility of acquiring Naam because of their humble origins, the peasants could just as well mind their own business and leave political processes to the dignitaries.

Since the late sixties other rural leaders than the chiefs have begun to emerge in Yatenga. The Programme for Rural Education with three years of training was followed by the state-initiated creation of associations of young cultivators (Groupe des Jeunes Agriculteurs, GJA) which had the purpose of stimulating them to stay in the rural areas and creating cooperative-like organisations employing new farming techniques. In addition, the so-called Groupements Naam (G-Naam) soon emerged out of the activities of a particularly ingenious teacher. They were based on a discourse emphasising a history of mutual assistance and collective efforts by young people (Ouédraogo, 1990). The G-Naam were fairly independent of the state and sought to mobilise the villagers to improve their livelihoods through the cultivation of collective fields and other activities much in line with those undertaken by the GJA. Almost simultaneously, in around 1970, the GV (Groupements Villagés) with a rather identical repertoire of activities emerged out of an initiative by the Ministry of Agriculture extension service. The GV and the G-Naam have since competed for followers and as both are present in most villages in Yatenga, their relationship is typically rather tense.

During the eighties and particularly the nineties, rural associations mushroomed in response to the activities of bilateral donors and NGOs. Taking the example of two villages in northern Yatenga, the number of associations is far beyond what can be regarded as effective or useful from an organisational point of view. By the early nineties, Pogoro Silmi-Mossi with 400 inhabitants had three groups organised by two NGOs and a bilateral donor in addition to a GV and a G-Naam. Ninigui, with 3,800 inhabitants, had ten different associations collaborating with a similar amount of organisations outside the village. Each of these associations has a management committee and a president who is in charge of the group. Although not possessing the ‘customary’ authority of a chief, the presidents of rural associations are regarded in the same light by the villagers who, to a large extent, respect them, obey them and avoid them. This is all the more so because the large majority of rural associations are created in response to an outside demand. Consequently, the presidents are expected to deal with outside actors rather than to interfere with the lives of the villagers, and this is also how the presidents typi-
cally regard their role. The founder of the *Naam* movement, Bernard Lédéa Ouédraogo, argues with respect to the GJA and the G-Naam that a leader

> en plus de ses fonctions de coordinateur doit s’efforcer d’établir des relations avec les autorités administratives et judiciaires de la région. Mandaté par le groupe auprès de tous, il doit parler au nom de l’association. (Ouédraogo, 1988:85–86)

Such relationships with actors outside the villages are crucial for understanding rural associations, whose role basically seems to be to attract resources. Therefore, the leaders of these groups have increasingly gained a position comparable in importance to that of the chiefs. The struggle for leadership is no longer directed only towards the chieftainship, but also to the presidency of the associations. A twist to the struggle is the inter-generational aspect, as the older men who hitherto have monopolised ‘customary’ authority and political processes at the village level, have difficulties in handling the range of outside actors. This has provided an opportunity for younger men and a very few women to gain influence in the rural associations.

A couple of examples of the relationship between leaders and subjects may help clarify this issue. At the beginning of the nineties, a bilaterally-financed project concerned with natural resource management sought to superimpose village councils on the many rural associations in northern Yatenga. The councils were supposed to include representatives of different social groups and to manage land and other natural resources. The councils were generally composed of a number of sub-committees who were responsible for activities relating to agriculture, stock breeding, water, etc. Still, the presidents of the councils tended to monopolise the work and particularly relations with outsiders. When a sub-committee dealing with agriculture deemed it necessary to contact the local extension officer to acquire a treatment for seeds, the president of the council interfered and argued that he would deal with it. However, he took no action. The sub-committee’s reaction was frustration, but also resignation. Many sub-committees have complained about similar problems: that letters dealing with their field of responsibility are kept with the illiterate president; that he keeps the accounts although this is the duty of the treasurer; that the president receives visitors instead of leaving this to the sub-committee whose task it is, etc. Apart from muttering privately about this, council members, let alone villagers in general, do very little to change this practice. Hence, the president is typically able to continue monopolising the work of his organisation (Engberg-Pedersen, 1996).

As a researcher presumed to have connections with powerful people outside the village, I, too, became the object of monopolising efforts. Upon arrival in a village through the mediation of an extension officer, the president of the GV introduced himself as the village representative. He stonewalled when I expressed my wish to visit the village and land chiefs, and this brought about a temporary, but intense outbreak of a seemingly rather permanent conflict between two factions in the village. This incident bears witness to the importance of creating social
ties with outsiders and to exclude others from these ties. Relations with outsiders are a resource in the continuous political struggle in the villages.

While the proliferation of rural associations has expanded the scene for political struggle in the villages, it has not substantially altered the relationship between rulers and ruled. The interpretation favoured here is that leaders manoeuvre vis-à-vis each other and the outside world, and subjects hope that they may get a share of the benefits accruing from the manoeuvring, but they rarely interfere with or contradict the decisions made by the leaders. The implicit understanding is that villagers support their preferred leader when he needs to show his political strength by referring to the number of his followers and, in return, he makes available to them whatever opportunities and resources he can procure. Apart from this, their interaction is restricted to a minimum. They do not live in separate worlds, but neither do they have any claims on each other.¹

Organisational strategies and political life

A similar uneasy and detached modus vivendi characterises the relationship between politicians and Burkinabè NGOs. Although both have a discrete power base—politicians being central to political and administrative processes, NGOs having some access to donor funds—their interaction is limited, complicated and, to some extent, reluctant. This is primarily due to the dim view that NGO leaders hold of politicians and their affairs.

In Yatenga, NGOs tend to concentrate on concrete activities within agriculture, education and other social issues together with their more or less clearly defined target groups (Engberg-Pedersen, forthcoming). They do not perceive themselves as advocates of the cause of particular social groups in a political context. Few of them would see it as a straightforward matter to address politicians, the municipality in the capital of the province or the deconcentrated state officers. Some NGO leaders state clearly that they try to avoid the politicians as much as possible: “Nous ne nous adressons jamais aux hommes politiques” (personal conversation). They prefer a distinction between development and politics where NGOs and associations are concerned about ‘making development’ through activities with the population whereas politicians are involved in politics, which, according to the NGO leaders, has nothing to do with development. The distinction does not appear to be a reflection of social processes in Yatenga, but rather an attempt to enlarge room-for-maneuuvre by creating a discourse that recognises the NGOs as independent actors who undertake important activities in an otherwise neglected field. By establishing a distance from the political world and monopolising the field of social progress, it seems that NGO leaders seek to construct a power base, not least vis-à-vis politicians and the state. Moreover, the distinction reveals a certain

¹ For a similar discussion, but in the Nigerien context, see Jean-Pierre Olivier de Sardan (1999).
apprehension towards politics as the scene of deceit and power struggle. La politique is perceived to have very little to do with social progress or different development visions.

NGO leaders give two explanations of this reluctance to become involved in the field of politics. First, the leaders would be compromised in the view of their target groups and members if they addressed politicians either to get financial support or to influence policies. Those in opposition to the ruling party would start to mistrust leaders who associated with the politicians in power. The rift between the ruling party and the opposition is seemingly so great that any interaction with either one of them immediately puts a person in a suspicious light according to some. It seems to be impossible to stay neutral in this conflict: you are against if you are not explicitly in favour.

Secondly, NGO leaders fear being exploited or harassed by the politicians. Many say that they do not trust them (personal conversations). If an NGO turns to the ruling party, is promised support for the construction of a school, for instance, and eventually when no support shows up, the NGO leaders fear that the people expecting the school will turn their back on the NGO and argue that the leaders have pocketed the funds. Leaders also fear that politicians will take the credit for their work if they maintain close relations with them. For instance, the municipal funds available for various activities are regarded as politicised by some, though not by everybody, meaning that in order to access these resources you have to subscribe to the ruling party.

Despite these reservations, some NGOs are strongly involved in politics. Politicians who seek to establish an independent group of followers often create an NGO. The influence of politicians as well as village leaders seems to be strongly related to the number of followers an NGO can count on. By creating an NGO, a political leader might be able to enlarge his or her constituency, and this gives greater political leverage. Notwithstanding the proclaimed distinction between politics and development, the leadership of a large NGO with many partner associations in the villages appears to be a political asset. Furthermore, a politician may see opportunities for accessing resources from donors through the creation of an NGO since donors prefer to stay clear of party political struggles. As one observer puts it: “Tout le monde sait que les bailleurs de fonds s’adressent aux associations.”

At times, NGO leaders also try to exploit relations with the political world. An important way of gaining access to resources is to develop connections with people within the world of development assistance. While donors shun political parties, they are presently eager to support decentralised governments, and they still channel substantial resources through the state. Politicians and civil servants are therefore likely to be instrumental in bringing about contacts with various kinds of donors. For instance, a couple of NGOs in Yatenga have profited from the twin town arrangements between Ouahigouya and a number of French towns. Politicians lead these arrangements, and by associating with them NGOs have established contacts with French NGOs. This suggests that it is more important to associate with the ruling party since the opposition has markedly fewer opportuni-
ties for facilitating contacts. However, once the contact is established, it is important to appear to be fairly ‘outside’ political life because of donors’ dislike of politics.

Conscious strategies therefore produce links between NGOs and the political world, and even NGOs that seek to steer clear of it cannot avoid being involved in it. Although an NGO may officially claim to be apolitical, its leaders cannot. In the relatively small environment in Yatenga, most people know the political inclinations of the leaders, and adversaries tend to infer that members and target groups of the NGO share the political sympathies of the leaders. This leads to interesting organisational strategies, such as having leaders from both sides and sending people known to support the ruling party to contact civil servants when the organisation has to deal with the public administration (Engberg-Pedersen, forthcoming). The alleged distinction between politics and development is, accordingly, difficult to uphold in concrete contexts, and the discourse is challenged by the widespread saying: “Si tu ne fais pas de la politique, la politique va te faire.”

Although the rhetoric separating NGOs from the political sphere is, to a large extent, an illusion, it strikes a familiar note when compared with the above discussion of rulers and ruled. The rhetoric seeks to establish distinct worlds, each of which follows its own particular rules and whose interaction is limited to a minimum. The discourse reflects the lack of mutual expectations and trust, but also to some degree a subordination of NGOs to politics. NGOs deal with people’s daily livelihoods through concrete activities in the fields of agriculture, health, education, etc., but they do not put up demands for support from the state or for policies which meet the needs of their constituencies. Quite the reverse, the smaller NGOs, in particular, seek refuge in activities of little controversy, or manoeuvre in the political sphere with the single purpose of preventing interventions that undermine their enterprise. Politicians and civil servants, on the other hand, are only concerned with the NGOs insofar as they control significant resources. The struggles for influence are directed upwards to the national level, notably within the ruling party. NGO activities in the rural areas are generally of little interest in that context, but may be so during, e.g., electoral campaigns. Hence, on the one hand, people’s perception of politics and development as separate reflects the fact that certain actors do not actually interact all that much; and on the other hand helps distinguish between what are sometimes thoroughly inter-linked processes.

This compartmentalisation of political and social processes has a number of consequences. It not only reduces the role of NGOs as a mouthpiece for marginalised groups; it also channels NGO efforts away from political initiatives to improve rural living conditions. NGOs tend to focus only on a limited number of the range of activities that may be conducive for rural development. They leave out almost every issue that might entail conflict or a challenge between entrenched interests. Furthermore, public resource distribution and policy-making may easily become detached from local needs and reserved for the power struggle of an exclusive elite of political leaders. Given the deprivation of most rural groups and their lack of other ways of accessing political processes, NGOs appear to be the
only imaginable representatives of rural interests in political circles. However, they do not seem to take this task upon themselves.

‘Donors’ and ‘recipients’ in natural resource management

Yatenga is a region that has not only a comparatively large number of Burkinabè NGOs, but also several foreign NGOs and bilateral and multilateral donors. Since the 1960s, there has been a strong tradition of activities funded by foreign actors in the framework of development assistance. Being a densely populated, politically important, and resource-poor area, Yatenga has attracted considerable attention not least with respect to rural development and natural resource management. Concerning the latter, the severe droughts in 1973–74 and 1984–85 prompted a lot of activity, and in the second half of the eighties, the Burkinabè government tested and launched a land management programme named Programme National de Gestion des Terroirs.

The purpose of the programme is to bring land degradation to a halt and increase agricultural production. It applies technical measures to improve the physical environment, socio-economic issues of decision-making and collective management, and questions of land tenure and the clarification of rights to natural resources (Toulmin, 1994). The programme focuses on the village level and seeks to define borders between different villages and create an understanding of natural resources as a scarce good. Village councils have been created to organise resource-improving measures, such as planting trees and constructing contour lines across the fields to prevent soil erosion, and to deal with conflicts over the use of natural resources. Originally, the village councils were intended to comply with democratic standards by having representatives of different social groups with varying interests in relation to natural resource management (GOB, 1989). This has, however, been difficult to implement uniformly, and the implementation of the programme has generally suffered from a lack of resources. Donors carrying out project activities in the field of natural resource management have, to varying degrees, taken the programme into account with the result that it has been turned into reality in different ways. To the extent that this difference reflects the significant regional variations in the country, the variety of approaches has been quite positive, but the process of implementation has also been influenced strongly by the particular agendas of the donors financing each project. This undermines the impact of the programme which, moreover, has been implemented only in pockets dotted around the country due to the scarcity of resources.

In northern Yatenga, the land management programme has been implemented to some extent. As mentioned above, a project sought to establish fairly elaborate village councils with sub-committees in the early nineties. Since it was a financially important project, from the outset prepared to respond to the needs of the rural population including in other areas of life than natural resource manage-
ment, the villagers were quite eager to establish a close relationship with it. Accordingly, they did not hesitate to introduce the latest wished-for token of cooperation and development, namely the village council. On other occasions, villagers have constructed a school building or carried out other similar donor-valued activities as a way of getting the attention of outside actors and attracting resources. Pierre-Joseph Laurent describes this strategy in a somewhat picturesque style:

Les tactiques populaires rusent par une invention quotidienne. Cet art se compose à la fois d’une pratique du ‘coup par coup’, c’est-à-dire de l’acuité à se saisir de l’occasion et de la transformer en opportunité, d’un fort sentiment d’autonomie vis-à-vis de l’ordre institué qui peut s’exprimer par de l’indocilité ou de la résistance passive et enfin de l’élaboration d’un réseau de relations basé sur le don, le recours ou la dépendance réciproque (dans le sens du don créateur du tissu social). (Laurent, 1996:15)

One may wonder whether these tactics are as deliberate and shared by the rural population as described here, but there is little doubt that village leaders handle relations with outsiders and ‘development actors’ with great care.

A significant problem in the context of natural resource management activities was that the village councils did not correspond very well to the institutionalised practices of decision-making at the village level in Yatenga. Based on a case study of two villages, a number of institutional contradictions were identified (Engberg-Pedersen, 1997). First, the councils were supposed to include representatives of all social groups, including women, newcomers and others who have not so far had any role to play in existing channels of decision-making. Second, the elaborate division of labour within the councils was at odds with the above-mentioned centralised control of all activities. Third, the idea that villagers can substitute council members who do not live up to expectations runs counter to the awesome respect with which leaders are generally treated. Fourth, conflict resolution based on negotiation in a public arena is substantially different from the dispute mediation undertaken by the higher authority of ‘customary’ leadership. Finally, the councils were meant to earn their legitimacy through their organisation and actions in a context where legitimacy is basically linked to family, age, sex, etc. These institutional contradictions in the sphere of village-level decision-making obviously produced disturbances and resistance on the part of the villagers. Whether the new councils stood a chance in the villages depended very much on the configuration of powerful actors, their interests and the opportunities they saw emerging through the councils. Generally, however, it is fair to say that most villagers perceived the councils in the context of external relations and as an arena for leaders to manoeuvre and enact their struggle for influence.

Another aspect of the relationship between the project and the villagers relates to their differing concern for natural resource management. While the project was prepared to support the creation of socio-economic infrastructure such as wells, health clinics and the like, it perceived such activities as a way of getting the attention of the rural population and improving the management of the natural resources. The villagers, on the other hand, were less disturbed by the degradation
of the natural resources. At a certain point, ten villages had the opportunity to propose various activities that they would like the project to support, and they came up with a total of 64 activities of which 15 pertained to natural resource management, 19 to agriculture, and 30 to socio-economic infrastructure (Engberg-Pedersen, 1996). Although the figures can only be interpreted as a rough indication of the villagers’ preferences, it is noteworthy that less than a quarter of the suggestions relate to environmental degradation, not least given that the villagers are very concerned about preserving good relations with donors. The comparable lack of interest in natural resource management was confirmed through interviews with village leaders, and it can to some extent be explained by the fact that many villagers pursue non-farm income activities, which occupy labour power at moments when resource-improving activities should be undertaken (Reardon, 1994). Furthermore, doubts have been raised as to the effectiveness of some of the more widespread anti-erosion techniques (Piveteau, 1996).

Thus, the relationship between the villagers and the project was complicated both with respect to the issue of natural resource management, and the social and institutional implications of its organisation. However, this did not prevent the villagers from seeking to collaborate with the project and to get its support for their various concerns, and they were able to do so without having to accept the social implications of the changes proposed by the project. They agreed to put up village councils according to the principles established by the project, but the councils did not significantly enhance the influence of village subjects on village level decision-making as the project had expected. Rather, the councils worked as intermediaries, diluting the social impact of the project interventions since very few villagers seemed to be interested in or supportive of a wholesale change of the decision-making processes. In this way, the project activities appeared to be caught up in a web of social institutions which shield ordinary villagers from the vagaries of the outside social world and leave it to leaders to exploit its opportunities and tackle its setbacks. Being a powerful actor by virtue of its resources, the project was also perceived by village subjects to be closely related to the dangerous game of politics, which further undermined its reputation as a trustworthy and whole-hearted supporter. Neither the village leaders, nor their subjects had any immediate interest in changing this situation, and the project, therefore, had few chances of accomplishing its ambitious task of establishing a new form of natural resource management and transforming existing decision-making practices.

The land management programme and the project seemed to regard the village councils partly in terms of their potential for natural resource management and partly as a platform creating space for ordinary villagers to influence a significant aspect of their livelihoods. While this may have been the result in a few cases, it seems appropriate to venture another interpretation. Peasants, herders and other natural resource users may very well have perceived the councils to perform three functions: They work as a token of the development-minded concerns of the villagers in order to attract resources from outside actors; they protect against the social obligations that are always attached to resources; and they constitute an
arena for power struggle among leaders. With such an interpretation, village subjects have little reason to engage in council deliberations.

Furthermore, the attempt to democratise village-level political processes in addition to the efforts of projects, NGOs and extension services to organise groups as a point of reference in ‘collaborating’ villages may actually further consolidate the lack of interaction between rulers and ruled. As the agendas and approaches of outside actors differ substantially from the concerns and outlook of many villagers, the various government programmes and project activities are regarded with scepticism and left to the leaders’ discretion. This reinforces the division of labour whereby leaders deal with external relations and village level decision making while subjects focus on making a daily living. The only interaction between rulers and ruled is that the subjects supply labour power when the leaders need it for collaboration with external actors. This is typical in the context of the provision of a supposedly collective good, but as the subjects play a very minor role in choosing and managing the good, it sometimes turns out to reflect a less than common concern. For instance, a pen for innoculating cattle is not that appealing to households without livestock, and health clinics are seldom used by people who cannot afford their services. Moreover, since development actors only address the leaders of ‘their’ association in each village, the political marginalisation of the subjects is constantly reinforced.

**Struggling with a web of separate worlds**

With three significant ‘colonisations’ each leaving particular institutional legacies, the rural population in Yatenga has learned to bow its head, avoid powerful people and concentrate on its daily livelihood. After the Mossi rode in, the basic distinction between rulers and ruled emerged with its characteristic features of cohabitation, mutual non-interference and absolute authority. The ‘customary’ chieftainship was the institutional manifestation of this first colonisation. The second was begun by the French imperialists and later taken over by a centralised state and national political regimes which have seldom bothered about the plight of the rural population. From the villagers’ point of view, it is characterised by an even lesser degree of accountability, by arbitrary decision-making and by ruthless implementation. Its most important local institutional expression is the prefecture embodying state power at the department level. The third wave of ‘colonisers’ has been the so-called development actors, each with their own vision of the changes needed in the rural areas. Here, the unequal distribution of resources and the lack of mutual understanding stand out. The institutional materialisation of this subjugation has been the proliferation of rural associations, which has extended the playground for village leaders’ struggle for power and influence.

The three colonisations have not just brought about oppression, but also some advantages and opportunities. It would be erroneous to state that villagers see ‘customary’ chiefs, prefects and leaders of rural associations as actors merely
representing external powers seeking to control their livelihoods. Local rulers are, to varying degrees, important actors providing protection, solving disputes, granting resources, etc. They are neither adversaries nor allies. In some situations, they can procure important benefits, and in others they are best avoided. Accordingly, local elites cannot be condemned as suppressing the rural population, but have to be understood as actors with little room for manoeuvre struggling for influence. They are not concerned about the needs of their subjects, per se, but they are, on the other hand, to various degrees dependent upon their support. They are the most important asset of the subjects since political leverage is counted in terms of numbers of followers. Leaders lose legitimacy and influence if they inflict problems and hardship on their followers because they then lose their loyalty. Even prefects, who otherwise can be completely indifferent to the sentiments in their departments, typically seek to avoid creating strong opposition. Thus, there are limits to what rulers can do to the ruled, and moreover, the latter can make use of the former in particular situations.

The discussion in this article has highlighted the distinction between rulers and ruled as central to an understanding of local political processes, responses to development interventions and natural resource management. Neither the rulers nor the ruled are, however, homogeneous categories. Rulers may be organised in hierarchies, they may compete or join forces to pursue common interests, and they may have a considerable say in particular issues or contexts but little influence over others. For instance, a division of authority is fairly unambiguous between ‘customary’ chiefs and leaders of rural associations. While the former deal with land disputes, social conflicts and the like, so-called development activities are generally the prerogative of the latter.

Likewise, the ruled are made up of various social groups with different concerns and interests. Distinctions are often made according to family, gender and age (Faure, 1992), and they are significant with respect to decision-making both at household and village level. From having been very marginalised, women in many villages are beginning to take part in meetings although their influence is still limited. Many NGOs and projects work directly with women’s groups, and this is undoubtedly one reason why they feel more confident that they, too, have a role to play. Younger men are also increasingly becoming involved in village-level decision-making and in establishing connections with the ‘modern’ world of external development actors. Ethnic groups or families who arrived later than the allegedly original inhabitants, constitute another typically marginalised group whose situation differs from village to village, however. Herders can also be singled out as a separate category. All in all, this makes it necessary to emphasise the heterogeneity of rulers and ruled, respectively.

The distinction is nonetheless significant since groups of subjects, despite their differences, seem to relate to leaders in a rather similar way. Subjects may propose ideas, and some may be better placed than others to do so, but they cannot criticise a leader or his decisions without jeopardising their mutual relationship and calling the power of the leader into question. Moreover, whilst it is evident
that substantial changes are taking place in contemporary rural Burkina Faso, it is also clear that new actors participating in village-level decision making are not representatives of particular social groups, but first and foremost capable individuals pursuing their interests in a political game. The mushrooming rural associations have provided room for new leaders who may not be old men belonging to the historically dominant families, but who are neither particularly concerned about cadets (the younger brothers), women, immigrants or other marginalised groups. Partly with the exception of the women, new participants in the power struggles at village level are just as eager to manoeuvre and secure influence as the leaders of earlier days. Consequently, contemporary social changes do not necessarily transform the nature of village level political processes or increase the opportunities of the ruled to influence decision-making.

From the perspective of the subjects in Yatenga, three separate institutional spheres or ‘worlds’ embodied by the ‘customary’ chiefs, the presidents of the rural associations, and the prefects impose themselves as the channels of political authority through which people must handle a range of problems. Although villagers generally mind their own business, cultivate their land, look after their animals, migrate in the dry season, dig for gold, engage in petty trade, or exploit other economic opportunities, situations emerge in which they either need assistance from a higher authority or are directly influenced by leaders’ decisions and political changes. Therefore, now and then they will have to deal with all three institutional spheres. For instance, conflicts concerning land, animals causing crop damage, theft, abuse, etc. require an authority to mediate and judge when the parties cannot agree.

Despite the above-mentioned division of labour between ‘customary’ chiefs, prefects and presidents of rural associations, overlaps definitely exist and the eternal power struggles among leaders sometimes make it possible for people to change institutional sphere according to their preferences and the most promising solution to their concern. For instance, passing herders whose cattle have destroyed the crops in a field may seek to avoid the village chief as arbitrator and take the case to the prefect in the hope of more favourable treatment. There is room for manoeuvre and subjects may try to exploit this if they cannot avoid dealing with the political authorities. In some cases where leaders have made a decision of which people disapprove, e.g. the construction of a school building at a disputed site, one response is to keep out of the implementation of the decision (see also Olivier de Sardan, 1999), but when the ‘exit’ option is not possible, the conflicting parties often seek to phrase the disputed issue within a discourse belonging to the institutional sphere where they believe that a favourable outcome is most likely.
Conclusion

Generally, the political strategy of the rural population in Yatenga can best be described as one of evasion. The three worlds of ‘customary’ authority, politics and development are so fraught with power struggles, incompatible agendas and opacity that most villagers perceive them to be dangerous to enter. In accordance with well-established historical practices, subjects appear to avoid village leaders and outside actors and to get the best possible out of existing conditions. The world of development is partly an exception to this description since foreigners are given a cordial reception in most villages. This warm-hearted hospitality should, however, not be mistaken for a willingness to accept outsiders’ demands and suggestions at more than a superficial level. One thing is to be hospitable; another is to enter the strange and unknown world of foreigners with their dangerous links to politics.

The political agency of marginalised groups is rather limited, and the increasing space for local leaders that has emerged in the wake of numerous development interventions does not seem to have led to a qualitative change in the relationship between rulers and ruled. The most significant exception to this general postulate is the increasing recognition among women that they have a legitimate right to take part in some decision-making processes. This recognition is not the result of the creation of village councils with female representation, but has rather begun to emerge in connection with the economic achievements of women’s groups taking up horticulture, petty trade, etc.

In addition to their power struggles, village leaders do, however, perform functions that are valuable to their subjects. They deal with external actors, attract their resources and dilute some of the negative implications of their interventions. Leaders also provide authority in social and material conflicts, and they compete sufficiently to be dependent on the support of the subjects – a point that circumscribes the leaders’ interest in exploiting or interfering in the lives of their followers. A modus vivendi exists between leaders and subjects whereby the latter support the former in return for protection and authority, but interaction is generally limited to a minimum.

Much debate on local political processes in Africa has turned around the dichotomy between traditional and modern institutions. The dichotomy has been heavily criticised (see e.g. Berry, 1993; Blom, forthcoming; Lund, 1998) because traditions are being reinvented continuously and because modernity covers a wide range of qualitatively different phenomena. The argument in the present article supports this criticism since three significant institutional spheres, relevant to local political processes, have been identified. While these spheres are perceived by people to be clearly separate, they are in reality deeply linked, and actors often manoeuvre across them to pursue their interests in the most beneficial way. What may be termed traditional and modern elements cut across the institutional spheres, e.g. ‘customary’ chiefs may be eager to get health clinics constructed in their area. The general point is, however, that the institutional spheres are organised in different ways; that different discourses relate to each of them; that particular actors can
legitimise their position and power with reference to the logic of a specific sphere; and that political issues are dealt with in different ways according to the sphere in which they are discussed. Accordingly, political processes need to be understood on the basis of a set of institutional orders and their concomitant discourses rather than through a rather meaningless dichotomy of traditional and modern institutions.

Finally, in the context of the ongoing struggles for democratisation in Burkina Faso, it is worth stressing the several hundred years old practice among the rural population in Yatenga to avoid interaction with leaders, chiefs, civil servants, project employees, and other powerful persons. While popular discontent with the national political regime is clearly growing, it is doubtful whether this has taken root in the rural areas. Yatenga is a special region in Burkina Faso in a number of ways, but the strategy of evasion is not exclusive to its population, and there is reason to believe that the rural population in general is unlikely to take an active part in national political changes in the near future. However, the increasingly outspoken criticism of the political leaders by the urban population can hopefully be seen as a first step towards a thorough democratisation of Burkinabé society.

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Inside Government Extension Agencies:  
A Comparison of Four Agencies in the Sikasso Region of Mali

_Tove Degnbol_

**Introduction**

It is widely acknowledged that African government extension agencies, like many other parts of the state, are failing to fulfill their role as providers of relevant services to local populations. Extension agencies are being criticised for not doing enough, not doing it well and not being relevant. Its agents are said to spend only a very small part of their working time meeting with farmers and to concentrate on better-off farmers at the expense of the poor. Their failure to support farmers is believed to have serious consequences for agricultural production in many countries (Rivera, 1991:5; Hulme, 1992:434; Jacob & Delville, 1994:8).

In the general development debate, there is a tendency to see misbehaviour by individual civil servants as a root cause of the problems. As Judith Tendler puts it, it is generally believed that “civil servants are self-interested, rent-seeking, and venal unless proven otherwise” (Tendler, 1997:5). Consistent with this view, recent reforms have mainly aimed at reducing their discretion (room of manoeuvre) and thereby their opportunities to misbehave. In the field of agricultural extension, the literature is concerned with how to plan and constrain the actions of field personnel. While the attention to ‘farmer-first approaches’ implies that the mainstream view is now to acknowledge farmers as creative managers, extension agents are still seen as mere implementers of plans. Even when seemingly ‘participatory tools’ such as Participatory Rural Appraisal and the Gestion de Terroir Villageois approach are introduced in government agencies, staff members applying the tools are often expected to carry out preconceived plans, while they are given very limited leeway to adjust activities to local conditions. The promotion by the World Bank of the ‘Training and Visit’ extension system (T&V) in more than 30 African countries can be seen as an attempt to standardise and routinise the tasks of extension agencies in order to limit the risk of self-serving behaviour by individual agents (Christoplos and Nitsch, 1996:13–15, 42; Tendler, 1997:139).
This chapter argues that it is a simplification to reduce explanations for the poor functioning of government agencies to the issue of self-serving civil servants. It is also a simplification to discuss 'government agencies' as if they were all similar and all characterised by the same type of problems. By comparing the organisational characteristics of four different extension agencies, all involved in aspects of natural resource management in the same geographical area and all under the same government ministry, the chapter demonstrates just how differently various parts of the same state may function.

The empirical data derives from a study of extension agencies in the Sikasso region of Mali, carried out in the years 1993–96.¹ The study includes the livestock service, the forestry service, the cooperative service, and a cotton parastatal, Compagnie Malienne pour le Développement des Fibres Textiles (CMDT). The latter is respons-

¹ The study is reported in greater detail in Degnbol, 1999, where the theoretical framework is also presented in a more elaborate way.
sible for extension activities in relation both to cotton and food production. During the period in focus, all agencies were under the Ministry of Rural Development and Environment (MDRE). An administrative reform initiated in mid-1996 has changed the ministerial affiliation of one of the agencies, which also had implications for its internal organisation. The analysis in the following, however, refers to the time when they all belonged to MDRE. A total of 64 staff members of the four agencies have been interviewed and their answers compared to those obtained from 312 farmers included in a questionnaire survey carried out in 10 villages in the region.

Sikasso – a privileged region

The Sikasso region is located in the southern part of Mali, bordering Burkina Faso to the east and Côte d'Ivoire to the south. The population is approximately 1.5 million, and the area is 71,790 km² (DRPS, 1992). By Malian standards, the region is relatively privileged. With the most abundant rainfall pattern in the country (700–1200 mm) and fertile soils, it has favourable conditions for agriculture. Degradation is a much debated issue: whereas the mainstream view among researchers is that soil fertility is declining (e.g. Bagayoko & Bengaly, 1995:8–13; Giraudy, 1996:3), two recent contributions present more optimistic assessments of the situation (Benjaminsen, 1998 and this volume; Ramisch, 1999). Although on the increase, tenure conflicts in the Sikasso region are few compared to the situation in other parts of the country.

Cotton constitutes the main economic axis in the region, but the production structure is highly diversified and includes cereals, vegetable and livestock production as well as a range of non-farm activities such as migration, trade and handi- craft. The region is self-sufficient in food, and cereals production per capita is considerably higher than in other regions of Mali (Coton et Développement no.17, 1996:11; Brock and Coulibaly, 1999:49–67).

Given the importance of the Sikasso region to the national production of cotton, farmers in the region receive considerably more attention from government extension agencies than their colleagues in the drier northern parts of the country. Besides activities undertaken by other agencies, a large rural development programme run by CMDT since the early 1970s has included the provision of credit facilities and physical infrastructure (roads, boreholes, rural health centres, etc.), literacy, bookkeeping and accounting courses and organisational support to the rural population. The relatively close contact between farmers and government agencies is reflected in the finding of the village survey that the 312 farmers interviewed had on average about 18 annual contacts with the four agencies involved in natural resource management. This is substantially more than in other parts of Mali and differs markedly from the situation in many other countries in Africa, where government-run extension services have virtually ceased to exist.
Insufficient service by government agencies

Given this background, one might expect to find a high level of satisfaction by farmers and positive assessments of the services provided. According to the farmers interviewed, however, there is much left to be desired: farmers describe their access to extension services as very difficult, they complain about requests by extension agents for bribes, and they bemoan the tendency of the better-educated government staff to talk down to them. In the view of many farmers, extension agents lack commitment and understanding of the peasant way of life, and this is considered the major reason for insufficient assistance. It is worth noticing that most farmers do not complain about extension messages being irrelevant: extension assistance is considered a means to economic progress, and those unable to obtain it deplore the fact that they do not receive it.

Analysis of the responses shows that there are marked differences between the assessments given of each of the four agencies working in the region. According to farmers, the CMDT is clearly the agency that provides the most extensive and most useful service, whereas the ability of the livestock service to accommodate their demands is reported to be somehow more varying. The performance of the forestry service is described as very poor and, finally, farmers consider the cooperative service a completely useless and non-performing agency. In the following, each agency is ‘opened up’ and their organisational features are compared in order to understand what makes some of them good performers, while the performance of others seems very poor.

Performance of government agencies

When wanting to understand the performance of government agencies, Grindle and Hilderbrand (1995) have suggested considering both a range of contextual issues outside the control of the individual organisation and a range of organisation-specific issues.

The contextual issues relate to the general economic and political situation of the country and to the way the public sector is organised. Thus, in a situation characterised by economic stagnation, low levels of human resource development and extensive social conflict, the potential for effective public sector performance may be virtually nonexistent, no matter what interventions are made at the level of the individual agency. Similarly, a situation of low budgetary support, continual public sector cutbacks, inadequate recruitment procedures and few rewards for good performance may be so constraining that remedies introduced within specific organisations may not produce any improvements (Grindle & Hilderbrand, 1995:448–453).
Inspired by contributions by several different authors, it is suggested that organisation-specific factors enhancing performance mainly include the following: 1) ‘high-trust management’ based on close dialogue between supervisors and workers, 2) performance-related rewards, 3) strong organisational identification on the part of employees, 4) group cohesiveness among employees carrying out the same type of work, 5) providing people with meaningful work, and 6) the existence of demand pressure and a close relationship between service providers and their clients. In situations where contextual conditions are not completely dysfunctional for development, performance-enhancing factors at the level of individual organisations may be able to compensate for constraints rooted in more general problems. The six factors are discussed in relation to the four agencies below.

Contextual issues for Malian government organisations

Although far from favourable, the Malian economic and political situation cannot be characterised as completely dysfunctional for development. In 1991, a public uprising put an end to 23 years of military rule. The new democratically elected regime has initiated a wide range of democratisation and decentralisation initiatives. Accommodating the many different interests in society still represents a serious challenge to the regime, but existing social conflicts do not threaten the stability of society as such. After years of economic stagnation, the second half of the 1990s has seen quite impressive growth rates. The devaluation in 1994 of the CFA has increased incomes from cotton and livestock production and thereby benefited the previously economically squeezed and politically neglected rural population (Degnbol, 1999: 86–100).

Public sector organisation in general, on the other hand, is characterised by serious problems. Budgetary support is low, and low salaries and the retrenchment of staff have resulted in poor motivation and widespread corruption. A historical heritage in the form of a generally centralised and hierarchical institutional set-up provides a poor basis for responsiveness by the various government agencies to demands raised by their clients. Limited formal access by the population to influence government structures further reduces the capacity of government agencies to gradually adjust to changing conditions and improve their performance (Degnbol, 1999: 101–108).

To varying degrees, the performance of individual government agencies is affected by the highly problematic overall conditions of the public sector. While the following analysis of the Sikasso case concentrates on organisation-specific issues, their difficult contextual situation is borne in mind, and wherever relevant the analysis points to problems found in individual agencies which are due to factors beyond their control.

Inspiration for the discussion of organisation-specific factors has been drawn from a number of contributions to revised agency theory (notably Leonard, 1977; Wade, 1995) and from contributions to theories about workers’ performance, which focus on work satisfaction (notably Tendler and Freedheim, 1994; Tendler, 1997; Christoplos and Nitsch, 1996; Lipsky, 1980; Grindle, 1997). For a more elaborate discussion of the framework, see Degnbol (1999: 53–70).
Organisation-specific issues: a comparison of the four agencies

CMDT

Originally established in 1949 by the French as Compagnie Française pour le Développement des Fibres Textiles (CFDT), CMDT was nationalised in 1974, and the Malian government now holds 60 per cent of its shares, while 40 per cent are held by the CFDT. The agency has a mixed role as both a public agent of the Ministry of Rural Development and Environment, and a private sector actor with economic interests in cotton production, processing and marketing. In an area covering about 10 per cent of the total area of Mali, the agency has the dual objective of promoting cotton production and implementing an integrated rural development programme. It has more resources than the other agencies, as funding for its various activities is generated from the surplus of cotton sale and supplemented by funds from donors such as the French Development Cooperation agency and the World Bank.

The CMDT resembles other government agencies in its adherence to a traditional authority system, where superiors make decisions and subordinate staff execute their orders. The basic organisational set-up implies that management, authority and communication are structured according to a hierarchy ranging from the headquarters in Bamako to the lowest administrative unit in the field. The extension approach applied is inspired by the T & V system. It basically aims at the distribution of a standard technological package designed to increase the production of high quality cotton. Village-based multipurpose field agents are supported by a large team of subject-matter specialists with whom they regularly meet for training sessions. All village-level agents follow a tight six-month work schedule and report frequently to superiors. The system, however, differs considerably from the T & V in its ‘pure form’, and village-based agents are given a certain discretion to plan their own work.

External funding and the surplus from cotton production allow the CMDT to pay wages and allowances to its staff considerably above the general level paid by government agencies. Unlike other government agencies, CMDT undertakes career planning for individual staff members based on current evaluations of their performance, including assessments of their contact with farmers. High performance and good relationships with farmers are rewarded by promotions, whereas poor performance may result in transfer to less prestigious positions.

Organisational identification among CMDT staff is very high: the agency cultivates an image as the most popular and useful of all government agencies. Its staff are constantly assured that they are something special and very different from the majority of government agents, who are reputed to sit idly in their offices and only work when forced to do so or motivated by allowances or bribes. CMDT staff often work long hours. While other government agents are believed to have much to

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1 For a description of the basic principles of the T & V extension system, see Moris (1991:135–136); Hulme (1992).
learn from the CMDT, the agency itself is considered ‘simply the best’ and therefore unable to gain much from closer cooperation with others.

Peer pressure is also strong. Within each administrative subunit, CMDT staff form a small and cohesive group, who share common living and working conditions. Many agents also share the same geographical and ethnic background, as the overwhelming majority of staff originate from the Sikasso region. Transfer of staff is not very frequent (staff usually stay 3–5 years in each position), and staff members keep close contact through the regular training sessions.

CMDT staff generally express considerable work satisfaction. They appreciate their relatively high wages and benefits, but their satisfaction derives mainly from the positive feedback they get from farmers. The general orientation towards cotton in the region constantly confirms their importance. Wherever they go, the main topics of discussion among people are cotton prices, cotton yields, cotton inputs and the cotton harvest, and the staff know that they play a key role in getting results. In recent years, however, the emergence of a farmers’ union, Syndicat des Producteurs de Coton et Vivriers (SYCOV), has created frustration among some staff members, notably in the northern part of the region, where the movement is strongest. They feel that farmers are ungrateful for the efforts the CMDT has made to improve their living conditions.

Due to the economic importance of cotton production, demand pressure on the CMDT is substantial. To a very large extent, this pressure comes from the government, donors and the CFDT, but equally important is the pressure from its direct clients and ‘the general public’ in the area where it works. The crucial role of cotton in local incomes ensures the CMDT a clientele which is extremely interested in all the assistance it can offer to increase cotton production. Thus, farmers have gradually become more explicit in their demands to the agency. The development of trust between field agents and farmers is a significant aspect of relations. Because the agents live in the villages and share conditions with the local population, establishing face-to-face relationships with them is easier for farmers than it is for the majority of town-based government staff. Besides the policy of basing field agents in the villages, the CMDT enhances trust by giving priority to communication skills in local languages and by avoiding frequent staff transfers. Furthermore, relatively high wages for CMDT agents and their access to transport and fuel from the agency have tended to make them less inclined to ask farmers for contributions to travel expenditures, minor equipment, etc.

As regards the responsiveness by the agency to more organised demand pressures that go beyond the wishes of individual farmers for assistance, the CMDT seems to have become gradually more sensitive. Already in 1974 it responded to farmers’ demand for more influence on extension activities by implementing a policy of gradually transferring tasks from extension agents to village associations. The agency realised that it was in its interest to satisfy farmers’ demands while at the same time off-loading some of its tasks onto unpaid villagers. Over the years, this policy has brought about a substantial decrease in the number of field agents and a gradual building up of local capacities. Partly as a result of this support, a farmers’
movement, SYCOV, has emerged in the region. After initially refusing to talk to farmers' representatives, during the 1990s the CMDT has accommodated a range of demands concerning price issues and conditions for collaboration, including the representation of SYCOV in all CMDT decision-making structures.

The Forestry Service

The history of the forestry service dates back to 1935, when it was created by the French and initially staffed with former military personnel rather than foresters. Until the mid-1980s, it had purely police functions, and its objectives were described as the protection of all unregistered land and forest areas against destruction by fire and over-exploitation. In 1986, an extension objective was added to its mandate, but its major activities remained related to its broad but ill-defined police powers. The change of regime in March 1991 exposed the agency to a fundamental shock. Tensions between forestry agents and farmers were high, and farmers' reckoning with the agency was sometimes very violent. Immediate reactions were physical attacks on the most hated staff members, and when the physical persecution was beginning to ebb, forestry agents were forced to remain in their offices for fear of provoking new reactions. For several years, the forestry service was completely paralysed. In 1995, a new forestry law was approved by Parliament, and the agency gradually resumed its operations now with more focus on extension activities. This study was undertaken during the period when it was still extremely difficult for forestry staff to work.

The paramilitary character of the forestry service has reinforced the general tradition of low trust management in government agencies. Authority is based on position and operates through the control and application of sanctions. Like in an army, absolute loyalty is demanded by all staff members. Any deviations from decisions taken by superiors are sanctioned by transfer to positions in remote areas of the northern part of the country. Control by superiors, however, is generally not very effective. They rarely visit the field and do not receive any reports from the population. Assessments of performance, therefore, have to be based on reports written by staff members themselves. Given the distance between management and field staff and the low risk of detection, forestry staff have little incentive to perform more than minimum tasks. Before 1991, this meant that in practice they spent most of their time feathering their own nests.

Salaries are low in the forestry service, and there is no linking of salaries and promotions to performance. Whereas 'disobedient' behaviour is sanctioned (when detected), there are no rewards for making a special extension effort. Until 1991, the wage system strongly encouraged repressive efforts, as low basic salaries were supplemented by access for individual staff members to a share of revenues from permits and fines. The system not only encouraged the issuing of legal and illegal fines and permits, but also widespread corruption which meant that in the past, forestry staff had considerably higher real incomes than other government staff.
Since 1991, when agents were no longer able to issue fines and permits, incomes have fallen dramatically.

Before 1991, a strong team spirit in the agency helped divert possible individual doubts about the legitimacy of its practices. Thus, the self-image cultivated by the staff emphasized its role as protector of the environment against the misbehaviour of ignorant and irresponsible farmers and herders, who would immediately destroy everything if not kept under close supervision. After 1991, this strong organisational culture has disintegrated. Internal cleavages, which probably existed long before the change of regime, have erupted, and divisions and frustration have replaced the previous feeling of unity.

Until 1991, peer pressure played an important role in the agency’s performance. Through their education, especially their paramilitary training, forestry agents were socialised to perceive of themselves as a closely knit group. Since 1991, this peer pressure has almost disappeared. Limited horizontal contacts among field staff, frequent transfers and lack of guidelines about how to deal with the new situation have left forestry agents to interpret the situation themselves.

Previously, forestry staff enjoyed a certain work satisfaction which derived from being powerful, having a certain discretion, earning well, being part of an agency with a strong organisational culture, and being appreciated by the government for maintaining law and order. For some field-level agents, the extremely poor relationship with clients may have negatively affected satisfaction, but in retrospect the majority of the staff interviewed referred to ‘the good old days’ before 1991, when they enjoyed their work. Since 1991, the prevailing feeling has been one of frustration. Field staff feel let down by their management, which has not given them any assistance in acquiring new skills or in interpreting the new situation, while at the same time they are hard pressed by the population. Their superiors still treat subordinate staff in a top-down way, and nobody has cared to listen to their frustration and fear after the radical change of conditions.

Before 1991, the only demand pressure on the agency was exerted by the government and donors calling for something to be done to protect the environment. The agency’s focus on repression has made it difficult for farmers to see that they might have any interest in the ‘services’ offered. Naturally, relations of trust have been non-existent. Many villages have been visited every single day of the year by agents with a license to send the inhabitants to prison for up to five years or issue fines corresponding to their annual income even for modest offences. The only reason that the agency has been able to continue its activities for so many years despite its hostile attitude towards clients is the almost total insulation of the forestry service from public reactions. Individual staff members were, of course, aware of the feelings of village populations but they never depended on farmers’ assessments of their performance either for their professional career or for their social relations. Farmers had no means to complain about or influence the agency’s practices, and among its own staff nobody had any interest in initiating reform. After the change of regime, the prevailing strategy of farmers is still to avoid any contact with the agency. It is generally acknowledged that the agency has changed,
but except for farmers interested in fruit tree production, who actively solicit the advice of forestry staff, the majority of the population doubt the sincerity of this change.

The Livestock Service

In the Sikasso region, the CMDT was in charge of all livestock activities until 1992. When the livestock service decided to take over its tasks, a rather complex institutional set-up resulted. Some CMDT staff were transferred to the livestock service, while others were kept on by the CMDT as so-called ‘zoo-technicians’ with a particular responsibility for draught oxen. With the privatisation of vaccinations from late 1994, the situation has been further complicated, and in addition to livestock staff, CMDT zoo-technicians, and private veterinarians, a growing number of village-based ‘barefoot veterinarians’ are operating in the field of animal health. Since 1992, livestock service resources for transport, office equipment and investment in infrastructure such as cattle dips and wells have been down to a minimum.

Despite the adherence by the livestock service to a low-trust and authoritarian management system, discipline in the agency is far less strict than in the forestry service. Subordinate staff seem more willing than either CMDT or forestry staff to speak up in the presence of their superiors, and during interviews agents did nothing to conceal their dissatisfaction without worrying about the possible disapproval by superiors of their outspokenness. This lack of fear of superiors may partly be explained by the non-application of sanctions for offences against internal rules and regulations. Staff transfers do not seem to be used either as promotions or as sanctions, and inefficient work monitoring by superiors makes it difficult to detect offences.

Salaries are low in the livestock service, and there is no linking of salaries and promotions to performance.

The agency does little to encourage organisational identification. Whereas livestock agents previously found an identity in their role as the only knowledgeable people on issues relating to the much appreciated draught oxen, the many zoo-technicians, barefoot veterinarians, and private veterinarians are now challenging this position. It is notable that there is a major difference in the agency between village-based livestock agents and office-based agents. Whereas the former do not have much contact with the agency and seem to be ‘lone wolves’ whose tasks are defined more by clients’ demands than by agency policy, office-based staff lack both close contact with clients and an organisational culture that could give their activities a purpose.

The general uncertainty about the work has reduced peer pressure in the livestock service considerably. Differences between young and old staff and between village-based and office-based staff have made it difficult to reach a common understanding of the situation, and in practice the various agents interpret their tasks very differently. While some are ready to pay for fuel for their mopeds by private
means to visit livestock owners, others use the excuse of a broken-down moped to avoid going on field visits for several months.

Despite considerable discretion in their work, many office-based livestock agents express deep frustration about working conditions and describe their *work satisfaction* as much reduced compared to a few years ago. They tend to give up and adopt a mental exit option in the form of absenteeism, slowdowns, etc. They do not seem to care to do even the little they could do, do not request assistance from superiors when faced with problems they cannot solve themselves, and concentrate on financial requests for fuel, repairs of mopeds, etc. Many village-based staff, on the other hand, receive constant feedback from farmers who are pleased with their services. They seem to experience a basic work satisfaction and to struggle to do a decent job although they work under the constraints of a tight budget. While office-based staff seem to use the lack of close supervision and the considerable discretion they have to do as little as possible, village-based staff sometimes use it to make an additional effort.

The demands on the livestock service by its direct clients have been reduced by the emergence of a range of alternatives to cover the most pressing needs relating to animal health. It has become more cumbersome and expensive for livestock owners to contact the livestock service for the treatment of sick animals, hence they often prefer to go to private veterinarians instead. Contributing to more difficult relations with clients is a serious *loss of trust* between livestock agents and owners, otherwise strongly encouraged by the agency. The most detrimental change has been the withdrawal of many agents from village-based positions to *arrondissement* offices. The increased physical distance seems to have been accompanied by a growing psychological distance. Thus, it has become common for agents not only to ask livestock owners to pay travel expenditures but also to request a ‘field allowance’ for visits to sick animals.

The Cooperative Service

The cooperative service in Mali is responsible for support to all organisations at village and inter-village level but suffers from an overlap of its activities with the other agencies. The problem is particularly pronounced in the Sikasso region, where the CMDT for more than two decades has undertaken exactly the tasks stated in the mandate of the cooperative service. Until the late 1980s, the cooperative service had a certain financial basis for competing with the CMDT, but after a financial restructuring of the agency in 1988, activities in the Sikasso region have come to a virtual standstill. Many staff members have not been paid for months, even years.

Hierarchies of *authority* in the cooperative service are less clear-cut than in other agencies because resources are so scarce that in practice field-level staff are left to make the most of their means. Working programmes leave plenty of discre-
tion to field-level staff but rarely do they have the resources necessary to undertake any activities.

Whereas in the past the staff had both stable salaries and access to illegal incomes from abuse of cooperative funds, the agency is now in a situation, where salaries are so low and so irregularly paid that employees are not ensured enough money to live on.

One would not expect to find very many signs of organisational identification among field agents placed alone in poor office premises, deprived of virtually all means of work, irregularly paid or not paid at all – and last but not least – surrounded by CMDT agents with a similar mandate and plenty of funds to carry out activities. Surprisingly, however, several agents interviewed expressed a certain pride in their agency. Referring to what they described as the glorious past of the cooperative service, they seemed to perceive of the agency as a potentially powerful organisation with a lot to offer the population. Thus, some staff expressed a view of their role as protectors of farmers against exploitation by the CMDT. According to them, the CMDT only supports farmers’ organisations with a view to increasing cotton production, whereas the cooperative service helps the rural population to strengthen their management capacity and thereby their autonomy.

Peer pressure does not exist at all. All field agents work in splendid isolation and have only limited contact with colleagues from other agencies.

The work satisfaction of CAC staff is generally extremely low. Being forced to stay in their uninspiring offices due to lack of resources to carry out any activities, cooperative service staff express deep frustration about not being able to use their skills. More than anything, the total lack of contact with clients is discouraging the agents. While they used to be actively involved in economically important transactions related to the purchase and sale of cereals and the organisation of cooperatives, the population now hardly know who they are.

There is no demand pressure whatsoever on the cooperative service. The major reaction by the population towards the agency is indifference. Its agents are rarely seen in the villages, and if they come they have usually nothing to offer. Whereas before the political changes in 1991, people may have put up with attending meetings held for no apparent purpose, they no longer accept this. In some villages, thus, cooperative service staff have been asked to stay away as farmers do not want to waste their time on meetings where a (material) outcome cannot be ensured.
Table 1. Overview of findings from the analysis of the four agencies.

<table>
<thead>
<tr>
<th>Authority</th>
<th>CMDT</th>
<th>Forestry service</th>
<th>Livestock service</th>
<th>Cooperative service</th>
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<td>Peer pressure</td>
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<td>Work satisfaction</td>
<td>Very high because of</td>
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Comparison of the four agencies

The analysis of the four agencies in Sikasso shows how very differently the various parts of the same state (even the same ministry) may function. It portrays the state as a complex structure composed of many different parts, which all tend to pull in different directions. The organisational set-up and the way the agencies relate to the population vary considerably. While the CMDT is pursuing an engagement strategy aiming to influence virtually every possible aspect of rural life, the strategy of the cooperative service exemplifies a form of state withdrawal. While the
CMDT has found it advantageous to allow farmers a certain influence on its operations, the forestry service has sought to remain insulated from all public reactions to its activities. Even within the same agency, different strategies may be pursued: livestock agents based in villages actively address the population and are available for requests any time, day or night. Office-based agents, on the other hand, have given up and request ‘incentives’ to work.

The crisis in the public sector contributes significantly to the poor performance of some agencies: low budgetary support seriously constrains the performance of the forestry service and the livestock service, and is detrimental to the performance of the cooperative service. The experiences of the three agencies clearly illustrate the limited usefulness of analyses of public sector problems which focus mainly on misbehaviour by individual civil servants as a root cause of poor performance. No matter how interested staff of the cooperative service might be in their job, the agency is so crippled by lack of resources that they are unable to perform at all.

Given its mixed status, the CMDT is less dependent than the other agencies on general public sector conditions. Its access to more plentiful resources and its capacity to define its own performance-enhancing employment conditions are important reasons for its better performance. This may lead to the objection that the agencies are so different regarding mandate and working conditions that it does not make sense to compare them at all. Two main arguments for the relevance of the comparison exist: first, the forestry service with a law enforcement mandate obviously has to function differently from the commercially-oriented CMDT, but this is exactly the kind of difference which characterises the public sector in all countries, and which is often overlooked in simplified analyses of problems of the public sector. Second, while different mandates and contextual issues explain some of the differences, the four agencies also illustrate the importance of internal organisational factors. It is the economic imperative to produce cotton at low costs and the request from farmers for assistance that have forced the CMDT to become more creative and experimental than the other agencies. Still, this does not imply that the internal organisation of the CMDT can only work in this agency. In both the livestock service and the forestry service, more attention to issues such as work satisfaction and organisational identification, and greater discretion among individual staff members combined with access by farmers to influence the agencies are likely to result in improved performance.

It appears from the comparison that the various internal organisational factors tend to ‘go together’. This is supported by the findings of Grindle and Hilderbrand in a study of 29 organisational cases that among organisations that perform better, it is likely that several performance-encouraging factors are present, whereas the absence of these factors generally characterises poorly-performing organisations (1997:487–488). The case of office-based livestock agents shows that it is not enough for an organisation to give its staff a large degree of discretion if it totally lacks demand pressure. Whereas a strong organisational identification by employees is an asset if other conditions are also favourable, the case of the cooperative
service shows that this does not improve performance if other factors are absent. Finally, strong demand pressure in an understaffed and under-supplied organisation with low work satisfaction may result in even lower morale among employees. Thus, the recent experience of the forestry service bears witness to the difficulties government agencies with a limited capacity may face when requested to make sudden changes. The experience attests to the fact that if other conditions for good performance are absent, a sudden demand pressure will result in little more than perplexity.

Whereas the CMDT experience appears to be a success story, a closer analysis reveals that it has not been very appropriate in all situations. Although the agency has gradually become more flexible by incorporating some learning from farmers and the experience of field agents, it shares with the other agencies a hierarchical and centralised structure. At times, this has limited the discretion of field staff and made it difficult for local populations to influence the way it works. Existing tensions between CMDT staff and farmers in the area, where the SYCOV movement is strong, illustrate the problems for a centralised organisation of adjusting to new conditions.

Lack of organisational agility may also explain that the CMDT shares with the other agencies a social bias in the distribution of its services. Socioeconomic differences in the Sikasso region are large, hence farmers make up a very heterogeneous group including both large-scale cotton producers, who possess several pairs of oxen, and poorer farmers, who cultivate manually. The village survey revealed that all agencies tend to concentrate extension efforts on better-off farmers at the expense of the poor. This is reflected in extremely negative statements given by the poorest group of farmers, who feel that extension agents discriminate against them, and are reluctant to ask for assistance for fear of being turned away. Better-off farmers, on the other hand, meet extension staff with a firm belief in their right to receive assistance, and they express a general satisfaction with the services provided. Despite their many differences, the social bias in the distribution of contacts suggests that an undifferentiated approach based on standard extension messages is a common feature among all of them.

Conclusion

The highly diverse performance of the four agencies and their different organisational characteristics support the overall conclusion that the much-discussed ‘breakdown of the African state’ is only partial: while some parts of the state have virtually stopped functioning, varying levels of good performance may characterise other parts.

Examples of misbehaviour by individual civil servants may be plenty, but the article has argued that it is a simplification to consider this a root cause for poor public sector performance. Self-interested and rent-seeking agents are more likely to be symptoms of problems rooted in the overall conditions of public sector
functioning and the absence of performance-enhancing conditions in individual agencies.

To the extent that the four agencies share any common features, it is their hierarchical and centralised organisation, which leaves limited discretion to field staff and makes it difficult for local populations to influence the way they work. Rather than contributing to improved performance, the control-oriented set-up of the agencies is a core reason for their generally poor functioning.

If government agencies are expected to contribute positively to improved natural resource management, the solution is therefore not to tighten working routines and increase control but to improve farmers’ possibilities to influence the organisations and to introduce a range of performance-enhancing conditions, including increased work satisfaction among employees.

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History, Continuity and Change in Fulani Resource Regimes

Trond Vedeld

Introduction

This chapter compares political processes in two Fulani village societies of the Inland Niger Delta, based on an historical account of institutional transformation during the 19th and 20th centuries. Many scholars have been intrigued by the dramatic history of these Fulani societies and its consequences for politics, property institutions and economic transformation. The chapter explores continuity and change in key institutions that condition co-ordinated action in the management of common-pool resources (CPRs). The focus is on institutions that determine rights of exclusion and rights of internal use-regulation to floodplain CPRs, mainly highly productive wetland pastures (bourgou). Access to floodplain CPRs is critical for the livelihoods of most local households, both pastoral and agricultural. These CPRs are considered to be managed under some of the most efficient common-property regimes in pastoral Africa.

The evidence in this chapter supports the literature on these Fulani societies. The institutions of the Hamdullahi Caliphate of the early 19th century still constitute the most important and legitimate reference under which CPR boundaries are defended, and status hierarchies defined and observed with importance for rights to CPRs (Ba and Daget, 1962; Gallais, 1967; Moorehead, 1991). These institutions persisted through history – and more or less modified – by various social structures (power systems), cultures (rules, norms, identifications) and practices at different levels of society (Scott, 1995). But as the social actors with a stake in the CPRs changed in terms of status and organisation, political processes also changed among different groups and levels of society. Significant changes in institutions and practices have therefore occurred, and new property rights institutions have emerged.

Two forms of institutional change have particular implications for the structure of the CPR regimes. First, the creation of the central Malian state administration removed the power to manage CPRs from Fulani society. There is much less autonomy at village and regional level for self-management today than under the Caliphate period, and perhaps less re-investment in local resource development. The former authority of Fulani leaders was gradually transferred to the national government and its officials, which now to a larger degree regulate livestock
movements and production through the control of dates and numbers of animals entering the Delta, transhumance routes, livestock markets, and flood regimes in the rivers. This happened through the penetration of post-independence laws, agricultural policies, and administrative reforms. Officials of the nation-state and military police have increasingly taken over many functions in the enforcement of CPR access rights and rules.

Secondly, at community level the gradual rupture of patron-client relations and labour-tying institutions between noble Fulani families and ex-slave cultivators in major ways affected the political economy underpinning the management and protection of CPRs. As attached labour became less common, liberated cultivators started to bargain for more flood-fed crop land at the expense of CPRs, and to push the boundaries of the village common-property regimes. The ex-slaves accumulated wealth and challenged traditional social hierarchies and institutions over the control of CPRs. From defining themselves through vertical status hierarchies, defined by the dominant Fulani elites in the past, new and broader criteria for defining status and power emerged among these groups – through the acquisition of education, the exposure to urban values, greater economic wealth and accumulation, and new political positions in society. The comparison of political processes at village level illustrates how “democratisation” and new ways of defining identity provided new motives, models and directions for bargaining, and new rules for defining access to and use of CPRs. The outcome of organised political processes among emancipated ex-slaves varied between villages and depended on the local history, political economy and degree of support from the local elite and state officials in local struggles. Village politics conditioned institutional change processes.

Methodology and Concepts

The first part of the chapter is historical, and explains the importance of the wider system as it constrains, shapes and penetrates social structures and processes of institutional change in Fulani society. The second part shifts focus from the external and system-wide levels to illustrate how CPR institutions are affected by political processes at village and neighbourhood levels. A broad framework of institutional analysis is used to consider the patterns of interaction between the attributes of the physical resources/drought, the social conditions within which an action takes place, and the external institutional system that conditions individual and collective behaviour at lower levels (Ostrom, 1995, 1990). Field data at village level was collected in the period 1990 to 1996 through local interviews by the author, studies of archives and documents, and household surveys (Vedeld, 1997). The historical account is mainly constructed from secondary sources.1

Institutions refer to rules, norms, rights, authority and practices that structure behaviour and the constitution of meaning at different levels of social organisation (in this context mainly in relation to the management of CPRs). Rather than trying to understand changes in relationships between relatively abstract institutions, such as customary and state law, the analysis is focused on the ways in which ‘structures’, ‘law’ and ‘custom’ interact and materialise in politics and decision-making by legal and administrative authorities and local groups.

1) Rights of exclusion concern the rights to determine who will have access to CPRs, and how this access right may be used and transferred. Institutions of exclusion are rules and structures of land administration, military protection, the policing and enforcement of CPR boundaries, and the exclusion of unwanted outsiders (at local and state levels) 2) Rights of internal use-regulation concern rights to manage and regulate the use of CPRs among insiders or co-owners of a common, here mainly related to the zoning of floodplains for either CPR grazing or for wetland rice cultivation; allocation of rights to graze; dates for entering and leaving the CPRs with livestock; and rights to cultivate on individual plots. The bundle of rights, ranging from rights of access and use of CPRs to rights of management and exclusion, are associated with ownership positions and status hierarchies in local Fulani society, which is caste-based.

Dilemmas of Common-Pool Resources (CPRs) Management in Niger Delta

The political elite of these Fulani villages dominates management of some of the largest remaining flood-plain pastures in West Africa, partly under village-based common-property regimes, partly under lineage-based commons (managed by the customary ‘masters of pasture’ – the Jown). The key dry season pastures (bourgou) are used in combination with rainfed pastures outside the Delta and form a CPR system of critical importance for the local and national (livestock) economy. The CPR wetlands are also of high value for flood-fed rice cultivation and irrigation, both as a cash crop and as food security for agro-pastoral and farming households. Herein lies a major resource conflict for collective decision-making, with different implications for different social groups. Should these wetlands be used as common-pool pastures for cattle or be converted into individually-held crop fields? Once converted it is very labour demanding and difficult to return them to wetland pastures. In either case, the fencing of CPR grazing, as well as crop land resources, would be expensive and impractical, partly because of the large geographic areas, partly because productivity varies in space with seasons and through climatic changes (Swift, 1995). Since the cost of monitoring and fencing individual properties would be high, these CPRs are most economically attractive as common-prop-

property regimes relying on natural boundaries (rivers, streams, trees). As wetland pastures, they also provide breeding space for the important fisheries of the lakes and rivers of the Delta. Dilemmas need to be resolved at different levels of social organisation; from the individual household, to village and national levels. There are also significant global bio-diversity interests attached to the conservation of these wetlands, which have been declared as environmental ‘hot spots’ by the IUCN and the World Bank (1996).

Part I: The Historical Heritage

The historical account emphasises the following events and relationships as critical for political and institutional change related to rights in Inland Niger Delta CPRs: 1) droughts and fluctuations in resource productivity which affected local economies, migration patterns, and motives for political action; 2) systems of local slavery and labour-tying arrangements, reflected in social interactions between ex-slave cultivators and noble Fulani elites; 3) the slave trade; 4) change in major trade routes (from the period of the Trans-Saharan caravans to sea-borne trading from the coastal areas); 5) Islam and relations with the Arab world; 6) the emergence of the Hamdullahi Caliphate in the 1820s and the establishment of military-administrative control over the entire Inland Delta; 7) the arrival of the French and colonial administration; followed by increased integration into new world markets; and, finally 8) the post-independence period and new forms of state-locality interactions related to agricultural policies and administrative reforms.

Going back several centuries, the rise and fall of the large Sahelian empires (Ghana, Mali, Songhay) led to significant transitions in the Fulani political-administrative systems, located as they were on the fringes of these empires in economically important wetland zones. Succeeding the Ghana empire, the Mali empire rose from around AD 1300 to cover the area from the Atlantic coast in the west between the Senegal and Gambia rivers, to Gao and the present-day borders with Nigeria to the North-East. The Mali empire collapsed in the late 15th century (AD 1494) and was replaced by the Songhay empire (1494–1591) with its base in Gao further north/east on the Niger River. The borders of the empire were extended to the north into the desert in order to control the lucrative Trans-Saharan trade. Despite unrest and internal rivalries, the relative prosperity lasted until the Moroccan invasion in 1591. The Moroccans (1591–1670) were not able to keep the empire together, this being a distant province far from the centre of the Moroccan Empire.

The orderly government gradually built up throughout the western Sudan by Ghana, Mali and Songhay, and the resulting development of domestic production and trade, was replaced by anarchy and destruction. Trans-Saharan trade which had been developing well under the Songhay administration, declined and then shifted east to more peaceful caravan bases. At home, famine, rare for several hundred years, again
became a constant danger. Central government was replaced by small states and warring tribes. (Swift in Park, 1983:v)

Following these conflicts, the Western Sahel became isolated from the influence of trade and cross-cultural contacts, especially with the decline of the Arab world and the European discovery of a sea-borne trade route around Africa (Lippman, 1990).

**Increased Market Integration, the Spread of Islam, and the Slave Trade**

During the 19th century, western Sudan was increasingly drawn into the Western world market. But the local population remained close to the Islamic world throughout the century. Islam had spread peacefully across the Sahara with the Berberian and Arabic traders and the trading economy (Swift in Park, 1983:vi). But from the mid-18th century, Islam and Islamic movements, which had been dormant for several centuries, again became a political force and motive behind more violent military campaigns. In these ‘holy wars’ (*jihad*) Fulani groups played important roles. The wars resulted in significant political and institutional transformations of the Western Sahel. Before AD 1800, Fulani-dominated theocratic states or kingdoms were established in the Futa Djallon (Guinea Conakry), Futa Toro (Senegal River valley), Waalo, Kajor, and Sokoto of Nigeria, and in Cameroon – i.e. both south and west of the Inland Niger Delta.

The slave trade and use of slave labour were major factors influencing political, institutional and demographic transitions. Domestic and cultivating slaves constituted the key labour force in the local economy (Brown, 1969; Johnson, 1976). The French and English slave trade reached its most intense period between 1760 and 1790. Many of the slaves came from the Bambara kingdom of Segou (1670–1818) which was one of the larger and longer lasting of the Mande states in the Sahel, dominating also the Fulani of the Delta. Recurrent droughts also had a significant impact on economic development, migration patterns, and the capacity to maintain peaceful coexistence and stable societies (Webb, 1995; Kadomura, 1994; Vedeld, 1997).

**The Ardobé Warlords: Origin of the Property Rights Institutions**

(1400–1818)

In the Inland Niger Delta, the first Fulani clan groups to establish permanent presence arrived from the Futa Toro of the Senegal River Valley in the 14th century. This was at the height of the Mali Empire. These Fulani clan groups, referred to as

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1 Islam spread first in the cities among the traders, then gradually into rural villages, and united people from different ethnic groups. It provided common laws, behavioural rules, and education (Koranic). Islamic law gave rules for trading and exchange. It recognised customary rights. Private property became a known concept (unknown in local religions).

2 Only the Sokoto Caliphate survived colonial rule and form even today the most important political area of today’s Nigeria (Dupire, 1962).
Ardóbé, shared the political model of Tekrur state formation and of a tenure system based on organisation around pasturing territories (*feydi*) and corporate herds (*eg-guiryg*) (Park, 1993). With time, these clan groups united under the Ardóbé kingdom of Maasina, and acquired control over the whole Delta for four and a half centuries (1400–1818) (Legrosse, 1995; Ba and Daget, 1962). The *Ardóbé* let chiefs of other Fulani groups, with whom they had a personal relationship, herd their cattle. These Fulani chiefs, the *Jourro* (‘masters of pasture’), were subordinates of the *Ardóbé*, who were their political leaders. The *Jourro’en* were not settled in villages, but moved with their herds. The *Ardóbé* extracted payments from the local cultivators and fishermen through slavery and dependency relations (Ba and Daget, 1962; Turner, 1992:19).

Successful accumulation by the *Ardóbé*, and to lesser degree the *Jourro’en*, made it possible for the economy to support specialised castes like the clergy (marabouts, Imams) and craftsmen: the *Nyéebé* (blacksmiths, weavers, leather workers, gold- and silversmiths). Another important Fulani caste was the *Dianambé* (traders), who were middle-men and specialised in cattle trading, while also being courtiers to the *Ardóbé* warlords. The emergence of these castes and cultivating slaves (*Rimaybé*), which defined themselves largely through occupational ‘guilds’, conditioned status hierarchies in relation to access to and ownership of crop land and CPRs.

Customary Tenure on a Community Basis: The Hamdullahi Caliphate
(1818–1862)  

At the turn of the 19th century, a growing resentment against the political and economic dominance of the *Ardóbé*-Bambara Kingdom in Segou arose among the Islamic Fulani of the Delta and the cultivating slaves in a situation of drought and famine which started in the 1790s (Kadomura, 1994). At the same time, the prolonged drought must have pushed the nomadic *Tuareg* southwards into the Delta and the Moors eastwards (Brown 1969:8, 161). External pressure, combined with a piratical and exploitative *Ardóbé* nobility, eroded community cohesion and stability. In 1818 the clergy caste and clergy brotherhoods mobilised a *Jihad* – a holy Islamic war – through the leadership of Sékou Amadou (as defenders of ‘true’ Islam) (Ba and Daget, 1962; Brown, 1969:113). With military support from the slaves, they managed to overcome the combined forces of the Bambara kingdom in Segou and the discredited *Ardóbé* nobility, which was perceived to pursue a flamboyant lifestyle with little regard for Islamic virtues. Sékou Amadou and his followers established a Caliphate, which gradually achieved hegemony over a territory from Maasina in the south to Tombouctou in the north. A new political and social organisation emerged: an Islamic theocratic state – the Dina – centred at Hamdullahi (near Mopti). This was a reminder of the intimate relationship that existed between politics and religion in the Islamic world. The revolt by Sékou Amadou and his

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1 ‘Dina’ means ‘religion’. It refers to the political and cultural revolution under the political and religious leadership of Sékou Amadou, a Fulani clergy.
clergy was, in important ways, inspired by similar Jihads among the Fulani of Futa Jallon and Sokoto.

The Hamdullahi Caliphate installed new regional clergy leaders across the Delta and a new administrative system, building on the village as the lowest level. The new clerical class gained significant political, administrative and economic power – both at central and local levels. They controlled the courts and the legal system. The political leadership was basically recruited from the Barre clergy clan of Sékou Amadou in a dynastic manner (Legrosse, 1995). The Dina was established on Islamic law (shari'a) and rules for an ‘ideal’ state. Of particular interest here is the institutionalisation of the land tenure and the pastoral resources management regime. Locally, it is referred to as the ‘Dina system’ or the ‘Dina code’.

While often cited as an example of a well-functioning traditional range management system..., the specific conventions of the Dina system were established by Amadou not necessarily to conserve range or even maintain production but to tighten his political control over Fulani factions; to strengthen security against Bamanan (Bambara) and Twareg cattle raids; or to simply institutionalise existing Fulani practices. (Turner, 1992:24)

The Dina meant that tenure rights were codified and regulated within and among communities to favour the interests of the Fulani nobility and political elites. It brought greater internal stability for a while, and better organised protection from external forces. The protection of boundaries relied on an organised military system of horse cavalry, located at Hamdullahi as well as in key clergy villages. This ensured stable conditions for agricultural and livestock production, as well as control over people (slaves) and trading systems. Regarding the management of CPR rangelands, the central administration of Hamdullahi recognised the division of the Inland Delta into about thirty pasturing territories (leyde) headed by the ‘masters of pasture’, the Jowro. Several smaller village commons (harima) were allocated to clergy groups that had supported Sekou Amadou (e.g. to the clergy of Kakagnan village, in this study). This hand-over of authority over land to clergy elites happened at the expense of other groups, for example the more nomadic and non-Islamic Fulani of Dialloube village (see below). These nomadic groups were punished since they had not participated on the side of Sékou Amadou in the Islamic movement (Ba and Daget, 1962). Internally, each leydi was divided in sub-leyde and systems of cattle-tracks and stop-over-points. The rights to use these pastures depended on membership and status, in particular corporate herds (eggurdhi), which were headed by the Jowro. The Hamdullahi administration granted the Jowro full control over pastoral resources in their leydi and implicit rights to allocate land to their slaves as they saw fit (Turner, 1992:22).

1 Shari’a means ‘way’ or ‘road’; in legal-religious terms understood as ‘the way to salvation’. This law treats every aspect of social life, from penalty law and inheritance to the way of dressing and behaving (appropriate manners). It is a religious and holy law. God is considered the lawmaker. Attempts to reform the shari’a are necessarily associated with defection from Islam (Vogt, 1993:129–134).

2 Leydi (leyde pl.) means land or a band of land.
The main result of the Dina concerning changes in property rights institutions was the legitimization and enforcement of a more uniform set of written rules for regulating access to land and water, based on Islamic laws (adapted to existing customary or pre-Islamic rules). These were captured in the tarikhs which were written in Arabic (and they have less legitimacy as tenure titles today). The Dina modified very little, according to some reviewers (Legrosse, 1995). But one should not underestimate the effect on resource management of the codification and legitimization by central authorities of territories and transhumance rules (through Islam). Other important societal changes that affected the boundaries and robustness of property rules were the sedentarisation of nomadic groups, the creation of new clergy-dominated village structures, the written rank orders of corporate herd management, and the more firm control with dates for crossing the main rivers by settled villagers that relied on both crop cultivation and livestock grazing.

The Delta economy during the Dina has been described as a highly centralised war economy (Brown, 1969). The financing of an extensive military and administrative system relied on the use of slaves which had been captured or became controlled through the process of settlement (Johnson, 1976). The slaves were forced to settle among or close to their Fulani ‘masters’. In his early years, Sékou Amadou planned to abolish certain aspects of the slavery, as a reward for their military assistance in the revolt against the Ardoba, but he changed this plan when he realized the difficulties he confronted.1

The Hamdallahi state extracted surplus for its relatively large public finance budget through war booty, fines and confiscations imposed on individuals or communities, agricultural production by state slaves, growth of state herds, and taxation. (Turner, 1992)

Although it was not an egalitarian social and political system, the Caliphate was apparently a fairly complex and efficient common property regime for the management of CPRs (Ba and Daget, 1962; Gallais, 1967; CIPEA, 1983; Marie, 1985; Swift, 1988 and 1989; Marty, 1995; Sanankoua, 1990; Turner, 1992; Ba, 1996).

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1 According to Lippman (1990), the Koran discourages slavery (but does not prohibit it). Mohammed, the Prophet, “was a practical man”; he refrained from banning slavery outright, since he knew many would not obey.
carious (Johnson, 1976). Internal rivalries among different Fulani factions grew within the ruling class, partly based on different interpretations of Islam. In this sense, Islam carried the seeds of internal tensions. Conflicts arose among different groups over succession within the Caliphal lineage, and there were 'reactions by an emerging younger generation against social transhumance and military caution' (Brown, 1969:iii). Internal divisions opened the way for the Omarian conquest of the Caliphate in 1862. The Caliphate had also been gradually weakened through external pressures from hostile neighbours on all sides, and it is doubtful whether the Caliphate exercised continuous authority beyond the region of actual Fulani cultural and numerical dominance.

In conclusion, the basic weakness of the Dina as an effort to build a nation and a centralised resource regime, aside from its precarious economy, was its dynastic character, ethno-centric orientation, and ambitions among the narrow political-economic elite to control labour and key resources for its own benefit and the fulfilment of its own religious goals. The central authority structure never really acquired sufficient legitimacy among broader societal groups to sustain control over local resources in the longer term. 'Stern authoritarianism' was considered by the ulama of Hamdullahi as the 'most effective method of controlling turbulent and anarchic Fulani clans (Brown, 1969:105). The Dina represented a relative authoritarian and puritan form of Islamic rule dominated by the male clergy elite. Women were deprived of their relative freedom, required to dress with modesty, avoid jewellery, and remain subordinate to men (Brown, 1969:222). Geography and ecology partly explain the ethnic nature of the Dina and the CPR regime boundaries. For the Fulani, who were basically cattle herders, the floodplain pastures of the Inland Delta were essential to the pastoral economy. These were of less importance for the Tuareg dromedary nomadic herders to the North and the cultivating Bambara in the South (Brown, 1969:96).

Toucouleur Period: War and Unrest (1862–1893)

The Hamdullahi state formation lasted 42 years, after which it was overthrown by Islamic Fulani warriors headed by El Hadj Omar in the name of a ‘purer’ Islam. Omar belonged to a different Muslim brotherhood. He controlled more organised military cavalries and modern weapons. His conquest considerably disrupted the established orders and stability for internal production (Ba and Daget, 1962). The attack came after a fatwa (legal declaration) issued by Uthman Dan Fodio of the Sokoto Caliphate. Omar was in constant war with local Fulani groups (and later with the French in 1893). A major part of the Fulani population was deported from the Central Delta to live in exile on the east bank of the Niger River for decades (including groups in Kakagnan and Dialloube villages studied here). Omar was never able to establish any administrative or military control. In this regard, his project turned into a sorry failure (Ba and Daget, 1962; Ba, 1992). Peace among different Fulani groups was only re-established after his defeat by the French in 1893.
The Colonial Administration and Increased Market Integration (1893–1960)

The French agreed to sustain the Dina (Convention no. 88, 1904). Reflecting the robustness of customary institutions, the clergy elite lineages of the Delta were able to recreate the old village authority structures and re-establish resource regimes, even after three decades in exile (Brown, 1969: 207; Ba and Daget, 1962; Vedeld, 1997). The central Dina-state was, however, never re-created. By maintaining customary Chiefs as local administrative rulers, and obliging them to provide forced labour and army recruits, the colonial administration discredited their authority and capacity to manage CPRs (Hesseling and Coulibaly, 1991; Coulibaly and Le Roy, 1990). Unlike the Chiefs, the Jowro had no official positions and maintained a reduced role in livestock and rangeland management.

Arguing that land, in order to be efficiently used, should be brought under private property regimes, the French colonial administration legally declared all vacant land for property of the state (domaine privé de l’état) in 1904. All land that was not ‘developed’ (‘mise en valeur’) i.e. not cleared and used for cultivation, was nationalised, including all rangelands. A next step was to encourage private appropriation and titling. The transformation of pasture land into crop land by cultivators finds its basic legal reference here.1 These processes opened up for the arrival of new cultivators and new pastoralists i.e. for all citizens of Mali. A policy of extracting wealth from the Delta, and integration into a wider monetarised market economy led to increased pressure from these outsiders for the state to ignore customary systems of exclusion and allow them access to resources. The outcome was increased pressure on local resources (Vedeld, 1997; Moorehead, 1991; Gallais, 1967). The French also introduced a new and important state institution which still exists today: the Conférence de Bourgoutière, which was a regional-level conference that determined access dates and crossing points for cattle herds to the dry season pastures of the Delta.

The Liberalisation of Slaves and Changes in Labour-Tying Arrangements

The French did not initially take a firm stand against slavery, but agreed after local negotiations in 1908 to abolish slavery.2 Hence, direct legal, ideological and moral pressure to abandon the system was exerted. Ideas of ‘social justice’ and ‘human rights’ gradually transformed identifications, first from the outside, then due to changes in behaviour by Fulani groups. Most of the Rimaybé ex-slaves did, however, remain settled within the Delta. The French gave them the right to farm the land they were already farming, and facilitated access to new arable land.

1 One might, however, also claim that Islamic law provides weak tenure rights for rangelands and stronger rights for crop land (Park, 1993).

2 In France, slavery was forbidden by law in 1848 and in Britain in 1809.
Of major importance for CPR management is the fact that the French agreed that the ex-slaves should continue to pay a rent to the Fulani ‘landowners’, who included the Jowro. At the same time, the former masters were obliged to provide the ex-slaves with land to meet future subsistence needs. As observed by Turner (1992), this inherent contradiction in the rules made permanent share-cropping arrangements difficult to sustain. The Rimaybe ex-slaves could no longer easily be denied access rights to crop land (at the expense of CPRs). The foundation was laid for a gradual break away from attached labour relationships. A movement among ex-slaves started for upward social mobility and new ways of defining status. Their position in relation to (but outside) the caste system became less defined within a vertical status hierarchy and more related to occupation and new relationships. Today, access to crop land continues to be relatively open to ex-slaves. Casual labour is taking over as the most common form of employment. This transition in labour-tying arrangements represented a shift from the traditional agriculture-based mode of production to greater income diversification. The expansion in the crop land area at household level and overall was also a consequence of the rapid introduction of oxen and ploughs in the relatively wetter years between 1950 and 1970 (by 6 per cent per year). This allowed individual households to cultivate more land in a shorter time and released time for migration. This technology-induced change encouraged ‘bottom-up’ processes of institutional change. For Rimaybe households, this implied less reliance on subsistence crop cultivation and greater participation in off-farm employment (through migration), livestock production, and more market-orientated production. Increased formal education and exposure to urban values brought about new ways of defining social status and identity. A combination of economic accumulation, upward mobility, and increased organisational capacity enhanced the Rimaybe’s political power in local struggles over land. In the initial post-independence period, support for land claims by organised groups of ex-slaves was given by local officials of the new Malian state administration (against ‘feudal’ Fulani elites). This was less the case under the one-Party period in the 1980s, when state officials again played more along with local Fulani elites (Vedeld, 1997).

1 Interestingly, such processes of emancipation of former slaves and low-caste groups have gone much further in Indian caste societies partly since the modernisation of political institutions has gone further. Here, caste consciousness among the scheduled and low caste groups has more firmly become a political consciousness expressed within the new social opportunity structures provided by economic accumulation and organisation in specific political parties. The membership belonging to a caste is increasingly expressed in the nature of horizontal community consciousness, rather than in hierarchical status terms (Seth, 1999). This was particularly obvious in the recent national election, for example in the state of Uttar Pradesh, where “scheduled” and “backward” caste members united under own parties and left the political parties of former “masters”, such as the Brahmmin (clergy) dominated BJP and Congress parties.
The Post-Independence State (1960–): Interventions and Changing Property Regimes

Even though the economic policies and administration of the Delta largely followed the trajectories of colonial rules and regulations, some important changes came with independence. New administrative boundaries were established by regrouping a number of villages into Arrondissements and Cercles. The new boundaries cut across the limits of the chieftainships, Cantons, and pasturing territories (leyde), and further undermined the Chief’s and Jowro’s area of influence. The role of the Jowro was actively discouraged, and several of them were put in jail. The new Chefs d’Arrondissements were often of military origin in the French tradition and came from different cultures than those they served. They did not speak the local language and were often foreign to local customs and knowledge of ecology. New Village Chiefs were appointed as the lowest level in the state administration and made responsible for hut and livestock tax collection. But while tax to the Dina was spent locally, little was now returned for local development. The Chiefs’ powers were enhanced through close association with the state administration, especially after the military coup d’état in 1968 (and establishment of the Union Démocratique du Peuple Malien (UDPM) and the one-party state in 1978). In this way, the management of the common rangeland became separated from the community control that the earlier customary leaders had represented.

Regarding water rights, the state continued to heavily subsidise the upstream irrigation schemes in Office du Niger, initiated by the French. By diverting water for Office du Niger, flood-water peaks were cut and the areas for floodplain pastures, crop production and fisheries reduced in size among the Delta communities downstream (Turner, 1992). The government continued the French colonial policy of making access to the Delta resources easier for ‘all Malians’, effectively undermining local authority and resource regimes. ‘Outsiders’ increased investments in irrigated crop cultivation, livestock raising, fishing, and charcoal burning. These outsider groups, local or urban merchants, government officials or other investors, were typically more interested in short term gains than in long-term management of local CPRs (Moorehead, 1991; Shanmugaratnam et al., 1992).

Overall, these institutional and economic transitions resulted in the pastures and floodplains of the Inland Delta being reshaped into a cultural landscape of fallow crop land and private rice fields. These private fields, ironically, are to a large degree owned by the ex-slaves of the noble Fulani, and to some degree by urban outsiders to the Fulani communities. Other important factors behind these changes in CPRs were recurrent droughts, population growth, demographic change and migration (both within the Delta and to urban areas), and growth in urban markets (ORSTOM, 1994; de Bruijn and van Dijk, 1995; Webb, 1995; Legrosse, 1995; Barrière and Barrière, 1996).

1 At present the Inland Delta consists of 70–80% cultivated land (of which a large part is fallow or also used for grazing), 20% exclusive pastures, and 4% under permanent water and thus available for fishing (CABO, 1991).
Part II: Institutions and Property Rights Change in Fulani Villages Today

In order to deepen the understanding of change and continuity in property rights institutions, the diversity in political processes is contrasted in two Fulani villages of Kakagnan and Dialloube following the coup d’état at national level in April 1991. The comparison shows, first, how bounded but heterogeneous social groups, in response to new pressure from the national and external political system, rather quickly built new alliances and bargained jointly for changes in institutions that conditioned access to and internal use of CPRs. Second, it shows that outcomes of internal political processes differed in the two village communities due to different historical and contextual circumstances. The clergy-dominated village community of Kakagnan revealed stronger and longer traditions for civic engagement (Putnam, 1993), more respect for political authority and CPR access-rules among a variety of social groups, and better capacity for leadership. In comparison, the pastoralist-dominated community of Dialloube, due to more pronounced conflict and rivalry among the political elite groups, was not able to supply leadership and put a halt to the rapid conversion of the CPRs to crop land. The destabilisation of the leadership and the CPR regime in Dialloube occurred as different forms of heterogeneity coincided and intensified among the two elite groups of the village. In Dialloube, the ex-slaves organised and played along with the trader elite in order to gain access to crop land – against the elite groups of pastoralists and the village Chief. In Kakagnan, a more robust and ‘democratic’ CPR regime emerged as the ex-slaves and cultivators remained ‘loyal’ to the clergy nobility and the established order.

Community characteristics

In both these Fulani village communities there were several ethnic groups and ‘castes’ living together with distinct cultural identities. Dialloube had the largest population (4,000 people) and possessed a larger village common than Kakagnan (2,500 people), cf. Fig. 1 which provides an overview of the characteristics of the two village societies and CPRs. The boundaries of the village commons were delineated by natural boundaries, although conflicting zones existed with overlapping claims (vis-à-vis neighbours). The village common (barima) of Kakagnan was approved by Sekou Amadou under Islamic law in the early 1820s (partly by taking land from neighbouring pastoral groups). Dialloube’s village common, however, was legalised only in the early 1970s with assistance from the state. Therefore its ‘constitution’ carried less customary legitimacy. Dialloube lost land to neighbouring clergy groups in the 1820s, as they were forced to settle, abandon nomadic pastoralism, and embrace Islam.

Today, the village of Dialloube is closest to the central state, and it embodied the local state administration and services and the key local political party offices. The centre of Kakagnan was located 15 km away from these politico-administrative centres. This created more space for autonomous decision-making
and control over local resources. The original rules and rights of exclusion and utilization were crafted by the Fulani elite in each of the villages; mainly by the clergy of Kakagnan, supported by groups of influential craftsmen; and by the pastoralists of Dialloube, supported by groups of influential traders. The users of CPRs in both villages were basically clergy (agro-pastoralists), pastoralists, traders (cattle- and crop land-rich), craftsmen (agro-pastoralists), and ex-slaves/Rimaybé (cultivators).

Within each community, ‘caste’ was observed to divide the society into hereditary groups, distinguished according to hierarchy which ranked the groups as relatively superior or inferior to one another; by separation in matters of marriage and contact; and in division of labour. In Kakagnan, the key clergy families were considered of highest rank, while in Dialloube the pastoralist family of the Chief had the highest status (clergy families were hardly present in Dialloube). Joint political bargaining for land and property rights among social groups was typically not along lines of occupation and resource interests (cultivator/pastoralists), but according to ‘caste’ and lineage. Both villages were surrounded by several satellite ex-slave villages that had long-standing rights in the CPRs (rights of first comer and rights of long term occupancy). But these rights could be contested by the elite. Ex-slave families in some of these villages were still tied to tenant and patron-client relationships of noble Fulani families in Kakagnan and Dialloube, but such relations were continuously challenged and changing. Particularly in Dialloube, agricultural labour was increasingly being paid in cash and clientage and attached labour was breaking up (more so than in Kakagnan). In Kakagnan, the ex-slaves were still found within the compounds of their masters, as household labour or attached agricultural labour. Kakagnan village had expanded its village territory through heavy-handed tactics, as a response to the drought (rather than through restraining resource use).

Both village communities had developed a zone for individually held crop land and another zone for CPR pastures, although the zoning was not always respected. There were rules for who could have cattle in the pastures and for what length of time. The common pastures were used for milking cows all year.
Fig. 1. Characteristics of two Fulani villages and their CPRs

<table>
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<tr>
<th>Determinates</th>
<th>Kakagnan village</th>
<th>Dialloube village</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>2,500</td>
<td>4,000</td>
</tr>
<tr>
<td>Size of common/CPRs</td>
<td>100 sq km</td>
<td>3–400 sq km ++</td>
</tr>
<tr>
<td>Distance to CPRs</td>
<td>0–3 km</td>
<td>2–15 km</td>
</tr>
<tr>
<td>Constitution of regime</td>
<td>Established in 1820s (Islamic law)</td>
<td>Established by state in 1970s</td>
</tr>
<tr>
<td>'Caste' composition</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clergy</td>
<td>25</td>
<td>1</td>
</tr>
<tr>
<td>Transh. pastoralists</td>
<td>29</td>
<td>32</td>
</tr>
<tr>
<td>Traders</td>
<td>1</td>
<td>27</td>
</tr>
<tr>
<td>Craftsmen</td>
<td>13</td>
<td>17</td>
</tr>
<tr>
<td>Cultivators (ex-slaves)</td>
<td>24</td>
<td>23</td>
</tr>
<tr>
<td>Others (Tuareg)</td>
<td>8</td>
<td>-</td>
</tr>
<tr>
<td>Political authority (dominant 'castes')</td>
<td>Clergy and craftsmen lineages</td>
<td>Pastoralists ('peul rouge') and lineages of traders</td>
</tr>
<tr>
<td>Access-regulation</td>
<td>Strict, respected</td>
<td>More open, less respected</td>
</tr>
<tr>
<td>Use-regulation</td>
<td>Use-regulation in relation to resource productivity</td>
<td>Former use-regulation out of control</td>
</tr>
<tr>
<td>Collective resource enhancement</td>
<td>Collective work organised by Chief; done by ex-slaves</td>
<td>Collective work organised by individual smaller groups</td>
</tr>
<tr>
<td>i) Control of crop land expansion</td>
<td>i) Crop land allocation by Council</td>
<td>i) Crop land allocation by Council</td>
</tr>
<tr>
<td>ii) Policing of CPRs against outsiders</td>
<td>ii) Surveillance committee for protection of CPRs</td>
<td>ii) No surveillance committee for CPR protection</td>
</tr>
<tr>
<td>Local conflict management</td>
<td>Conflicts mainly resolved locally few by state</td>
<td>Conflicts resolved locally, but frequent recourse to state</td>
</tr>
<tr>
<td>Graduated sanctions</td>
<td>Yes</td>
<td>Yes, but ambiguous</td>
</tr>
<tr>
<td>Nested enterprises</td>
<td>Yes, with local autonomy chosen by local elite</td>
<td>Yes, but less local autonomy from state and external agents</td>
</tr>
<tr>
<td>Inst. performance</td>
<td>Stable</td>
<td>Unstable</td>
</tr>
<tr>
<td>Outcomes</td>
<td>Controlled conversion of village CPRs; benefits all groups</td>
<td>Uncontrolled and rapid cultivation of village CPRs; benefits cultivators</td>
</tr>
</tbody>
</table>

Note: The 'caste' composition is based on results from a household survey (N=191), not official figures.

round and for the main cattle herd during 2–3 months, outside the period of transhumance. There were defined cattle tracks through the commons and stop-over points for other pastoral groups with rights of trespassing. Crop land was used privately and inherited from father to son. New crop land for flood-fed rice cultivation was allocated by the Chief and the Village Council. Dry forest areas were used for sheep and goat herding and fuelwood collection. Fishing in the rivers, ponds and marshland was an important activity in both village commons, and was regulated by similar rules as the pastures. There was fairly egalitarian access to private crop land, while access to CPR grazing was more exclusively for the noble
elite and influential Fulani. Ex-slaves – even if their forefathers were first comers in the zone – had only indirect access rights to grazing in the village common, through entrusting livestock to the clergy or pastoralists.\(^1\) Regarding access to crop land, the ‘caste’ to which people belonged was a main determinant of the size of their crop fields, representing their occupational orientation. The cultivators (ex-slaves) had in fact the largest crop land areas (7.2 hectares), as illustrated by Fig. 2.\(^2\)

The pastoralists had only small fields (0.5 hectares). Among the leadership groups, the Village Councillors and traders of Dialloube had the largest fields (3.3 hectares and 2.2 hectares). Both groups controlled indirectly even larger land areas through patron client relations (ex-slaves cultivating for them). Both groups had their fields almost exclusively within the boundaries of the village common (defined through rights of last conqueror). What mattered in terms of actual use and benefits of the resources was not only endowments (access- and use-rights), but also the capacity to transform endowments into entitlements (benefit streams) (Drèze and Sen, 1990). Such capabilities were related to control over capital, labour, technology (oxen), and livestock, not only to ascribed ‘rights’ to land. Only by actually having oxen and ploughs or livestock, could a CPR endowment be transferred into benefit streams for the household.

Following the authoritarian regime of Moussa Traore from 1968 and the one-Party rule (after 1979), Fulani elites tightened hegemony and control over resource regimes at the local level in both villages. Property rights conflicts between pastoralists and cultivators (ex-slaves) that were not resolved at village level, were referred to the state administration (and the courts after 1986). Both courts and state officials typically handled disputes in ambiguous ways (Vedeld, 1997 and 1998). In both villages, the CPRs were governed in an authoritarian way, in part through the use of customary means, in part with the support of state military police, which was requested from the local regional officials (through close personal or political alliances and bribes). The military police assisted the Council in the surveillance of the commons boundaries. The suppression of land demands by less influential or low-status groups (ex-slaves, non-Fulani) occurred, and there was increasing conflict and tension over access to land, both internally in the villages and with external groups.

---

1. This was in contrast to most village societies across the world, which are typically characterised by all groups having relatively egalitarian access to CPRs, while poor or low status groups have little access to private land and power. Relatively equal access rights to CPRs co-exist with large politico-cultural heterogeneity.

2. But the cultivators were forced to cultivate at least one or more plots of land in a zone 20–30 km away from the village, in the region of Kootiya under land controlled by the Jowo. In Kakagnan, only 18 per cent of the cultivators (ex-slaves) had all field plots within the boundaries of the village common. Despite this sign of insecure property right, it was still the group with highest investment in crop cultivation (86 per cent of household heads with one or more plough oxen).
Fig. 2. Heterogeneity in political power, endowments and entitlements according to status group in Kakagnan (K) and Dialloube (D)

<table>
<thead>
<tr>
<th>Social status group</th>
<th>Political power</th>
<th>Endowments</th>
<th>Entitlements</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Size of crop field (ha)</td>
<td>Tenure security (percentage households with all fields in vill. common)</td>
</tr>
<tr>
<td>V. Council.</td>
<td>high</td>
<td>3.1 ha</td>
<td>87</td>
</tr>
<tr>
<td>Clergy</td>
<td>K: high</td>
<td>1.7 ha</td>
<td>76</td>
</tr>
<tr>
<td>Pastoralists</td>
<td>D: high</td>
<td>0.5 ha</td>
<td>84</td>
</tr>
<tr>
<td>Traders</td>
<td>D: high</td>
<td>2.2 ha</td>
<td>96</td>
</tr>
<tr>
<td>Craftsmen</td>
<td>K: high</td>
<td>1.8 ha</td>
<td>70</td>
</tr>
<tr>
<td>Cultivators</td>
<td>low</td>
<td>7.2 ha</td>
<td>56</td>
</tr>
</tbody>
</table>

Note: Crop income is an estimated value combining subsistence production and sales over two seasons in Kakagnan (K) (1991/92) and three seasons in Dialloube (D) (1991/92/93).

Institutional change in Kakagnan and Dialloube

The coup d’état in Bamako in April 1991 came as a political shock to the villages and created considerable external pressure for change. The outcomes of village politics differed among the villages and were determined by the dynamics of patterns of interaction among the caste groups, reflecting how various forms of heterogeneity intensified, coincided and created motives for action (Vedeld, 2000). In Kakagnan, social groups were able to recreate a new, relatively stable authority structure for CPR management. In Dialloube, the CPR regime became destabilised. How can this difference be explained by comparing processes of political bargaining and institutional change?

In Kakagnan, the two elite groups (the clergy and the craftsmen) constituted relatively small, but compact elite groups with 25 per cent and 13 per cent of the village households, respectively. Following the national events, the young clergymen, inspired by the student movement in the capital, were especially active and engaged. They demanded ‘democratic’ changes in the Village Council and more influence in the management of the village CPRs. They were not happy with the way the CPRs had been managed in the past. They felt, for example, that too many outside pastoral groups had been granted access to CPRs by the Council in ambiguous ways. In response to these complaints and demands, the political elite in position recognised the new political context and stepped back. They granted (timely) political concessions to the young clergy, as well as members of the political opposition, in the form of higher representation in the offices of the Village Council and the CPR Surveillance Committee. The noble women of Kakagnan were also politically active in this process, and facilitated reconciliation among different political factions of the clergy men. The ex-slave cultivators, even if they
were denied access to more crop land, conformed to the old order. They did not challenge the rules for zoning between crop land and CPR pastures – as the ex-slaves ended up doing in Dialloube – something that will be explained below. The ex-slaves remained under clientage and fairly strong social control by their ‘master’ families. Reflecting their shared economic interest as agro-pastoral groups, the two elite groups of clergy and craftsmen agreed on the need to continue a balanced conversion of CPR grazing to crop land. There were few members of the elite with sufficient capital or interest to start any large-scale private crop cultivation at the expense of other groups’ interest in CPR grazing. For such expansion, capital would be needed to invest in oxen, ploughs, and labour. Both elite groups had fairly equal access to CPRs/crop land. Hence, they were fairly homogenous in land endowments. Differences in cattle-wealth and crop land income between the two groups were not so large i.e. they were also fairly homogenous in terms of wealth. Culturally, the two elite groups were also homogenous, in the sense that they shared affiliation to Islam, and had similar exposure to education and urban migration. They shared views about the management problem facing the CPR regime and how to address it. Politically, the craftsmen did not challenge the political dominance of the clergy and the Chief’s authority in the Village Council. They did not trigger access conflict and cultural antagonism of the sort that emerged in Dialloube. Despite considerable heterogeneity among social groups, the political elite in Kakagnan could assume leadership and provide an authority structure for the enforcement of rules and conflict resolution. The outcome of institutional change in Kakagnan was primarily a more democratic authority system of exclusion and control of boundaries of the CPRs vis-à-vis neighbours and external groups. No real change in internal social relations occurred between elites and subordinates as a result of the political changes. Institutional change was mainly a result of pressure emanating from within the village political system, and not so much from outside forces.

In Dialloube, on the other hand, the social groups did not come to terms on a new CPR authority structure. Here, it was particularly striking that the two leadership groups, the traders and the pastoralists, had different economic interests in the use of the CPRs; the pastoralists had an interest in protecting the CPRs for grazing and the traders in converting CPRs to crop land. The pastoralists constituted mainly members of the Chief’s pastoralist lineage; about 32 per cent of the households. The traders constituted 27 per cent of the households, and were cattle-rich and well-organised compared to the pastoralists. In a situation of drought and declining income from livestock, the traders decided to take advantage of the new political context and mobilised their larger capital possessions to expand cash-crop fields in the floodplains (enhancing heterogeneity in land endowments and entitlements/wealth). This reflected their market- and profit orientation. Hence, conflicts intensified with the pastoralists, as did their demands for the preservation of key grazing zones. The two leadership groups were not in agreement about the village and CPR authority structure. This disagreement reflected an historical conflict between the traders and the Chief’s lineage over the right to rule and deter-
mine access to CPRs (i.e. they were heterogeneous politically). The traders used their power to overrule the Chief and to gain access to CPRs with the support of the ex-slaves. Both traders and ex-slave groups ‘rushed’ to the CPR zones with their oxen and ploughs, and started a rapid and disordered conversion of important CPRs to crop land. The pastoral elite, on the other hand, had little economic or cultural interest in cultivation.

The Village Council had, until recently, controlled the conversion of CPRs, partly due to the Chief having frequent recourse to the state and the one-Party system. The one-Party state officials supported a policy of denying ex-slaves access to CPRs in ways perceived as unfair. This policy was an ‘easy way out’ for the Chief, whose position was under constant threat from the powerful groups of traders – while he also was in need of support in order to withstand the ex-slaves’ demands for crop land. But this tactic undermined the Chief’s autonomy and legitimacy as leader. When the one-Party system fell, the Chief was not capable of re-establishing a viable political coalition among his own pastoral group. He was outmanoeuvred in politics by the well-organised and powerful elite groups of traders. The high degree of cultural heterogeneity among traders and pastoralists aggravated communication and coordination problems. The traders were educated well above average, more exposed to urban life and values, and many mastered French (reflecting their occupation as middlemen in cattle sales). There were no politically engaged associations of young men among the pastoral groups that could counter the factional rivalries. The ex-slaves, many of whom had been arrested on two earlier occasions for the ‘illegal’ cultivation of CPRs prior to the coup d’état, were able to establish coalitions with the traders. They also approached members of the dominant political party in the capital, and gained the support of the Governor of Mopti at regional level. The ex-slaves started voting for ADEMA (Alliance pour la Démocratie au Mali), the party of the Governor. The traders – constituting noble groups of fairly high rank – signalled in this process that they might take over the Chieftainship (if the situation allowed).

The Chief lost much of his legitimacy and power in the process. This was also because he had earlier supported land-grabbing by Village Councilors in certain pastures, despite the fact that an open village meeting had decided that these pastures would remain protected. Hence, the Chief and the Council undermined their own decisions. This happened with the help of a local rent-seeking state official. The Village Council was completely in the hands of representatives of the traders and pastoralists, with no representation from among the ex-slaves. The outcome of institutional change in Dialloube concerned mainly internal use-regulation. Traders and ex-slaves no longer agreed to refrain from use of CPRs. Change was due to a combination of two types of pressures; one emanating from the external political system, inducing internal political reaction; and the other emanating from the economic system, related to the integration of traders and trader associations in the larger market. The outcome was a minor internal revolution that changed power structures and social relations as many of the ex-slaves left former pastoralist patrons. Some of them attached themselves to new patrons among the traders, either
through new patron-client relationships or as paid agricultural labourers. The Village Council stopped functioning for a long period.

Overview of Continuity and Change in Property Rights Institutions

This comparison indicates how political processes at village level can set in motion very different patterns of change in property rights institutions regulating the use of CPRs. Figure 3 provides an overview to this end, contrasting the Dina period with the situation today. The overview forms a static snapshot and summarises the empirical evidence regarding change and continuity in CPR institutions. In relation to rights of exclusion and use of CPRs, a combination of the rights of last conqueror and rights of first comer typically take precedence over the rights of long term occupancy and rights of all Malians. This is exemplified by the position of the ex-slaves in relation to access to CPRs in the village communities. But although land rights are basically ascribed according to status positions, land can obviously be achieved through political struggle and action, as suggested by the large private crop fields possessed by the ex-slaves. In more peri-urban areas of the Delta, the rights of all Malians to land often take precedence over the right of last conqueror or rights of first comers, depending on the discretion of local state officials in the given context (Vedeld, 1998). The fluidity in rules and rights, as well as variations from one location to another, make it difficult to be firm about which institutions have changed and which remain unaltered. Even so, some generalisations are attempted in Figure 3.

Theoretical Reflections

In explaining the emergence of property rights institutions, economists have tended to follow what has been termed the “naïve model”. The naïve model explains the structure of property institutions and organizations in terms of the demand for new arrangements by rational individual actors, who are constrained by them (in a situation of increased population growth and land scarcity). Actors seek new institutional arrangements that maximize the joint value of their economic assets. This approach is considered naïve because it does not seek to explain the supply of property rights, which occurs within social and political organisations (Eggertson in Berge and Stenseth, 1998:55). It does not explain the political economy of how groups come together, unify stands, create bargaining power and gain acceptance for demands. In this study, it was found that behaviour by actors within village organisations reflected rational economic interests and the exercise of conscious choice, in certain situations, as held to be the most plausible explanation for organisations by neo-institutionalists (North, 1990). This occurred, for example, when ex-slaves or traders organised and demanded access rights to more crop land (and changes in CPR boundaries).
<table>
<thead>
<tr>
<th>Level of social organisation and type of institutions</th>
<th>Hamdullahi Caliphate in 1880s</th>
<th>Multiparty system in 1990s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual actor level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Access and use rights</td>
<td>Slaves and women have few access rights in CPRs, but provided crop land at masters' discretion</td>
<td>Access and use more open, but ex-slaves/women few rights in village CPRs</td>
</tr>
<tr>
<td>Labour-tying arrangements of individual cultivators (slaves/ex-slaves)</td>
<td>Slavery a dominant mode of production, both at domestic and Delta-wide level</td>
<td>Clientage/attached labour continues under milder forms. Casual labour more common.</td>
</tr>
<tr>
<td>Status and identifications</td>
<td>Caste seen as a vertical hierarchy of status. Clear distinction between &quot;free&quot; (Rimbé) and &quot;non-free&quot; (Rimaybé), Islamic and non-Islamic, outsiders and insiders.</td>
<td>Status and caste hierarchies and identifications still observed, but scope for upward mobility and new ways of defining identity e.g. through education, migration, economic expansion, and political organisation.</td>
</tr>
<tr>
<td>Individual rights and opportunities to organise</td>
<td>No rights to organise and few real opportunities outside the Fulani elite structures</td>
<td>Freedom to organise from 1991 and new opportunities for horizontal organisation of low caste groups in political parties</td>
</tr>
<tr>
<td>Organisational level (collective)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internal use-regulation</td>
<td>Rights of last conqueror and rights of first comer dominated land ownership. Access and use fully controlled by Fulani elite.</td>
<td>More ambiguous interpretation of several historical layers of rights. Rights of first comer and last conqueror still important but challenged by traders and ex-slaves with reference to rights of all Malians and rights of long term occupancy.</td>
</tr>
<tr>
<td>Democratic local arenas for co-ordinated action and resource conflict resolution</td>
<td>Local arenas at village level and Hamdullahi, but not democratic.</td>
<td>No, but evolution towards greater say for sub-ordinate groups and decentralisation.</td>
</tr>
<tr>
<td>Exclusion and physical boundaries</td>
<td>Boundaries enforced at village level and Delta-wide level by Fulani nobility through horse cavalry and military dominance. Pressure from Bambara in the South and Tuareg and Moors in the North; insecure transhumance outside Delta.</td>
<td>Boundaries enforced at village and Delta-wide level through recourse to state and use of military police. Bambara dominate national politics. Tuareg and Moors threaten Fulani transhumance outside Delta.</td>
</tr>
<tr>
<td>Clear membership defining access right</td>
<td>Membership clearly defined.</td>
<td>Membership less clearly defined - outsiders have preferential links to state officials or village leaders.</td>
</tr>
<tr>
<td>System-wide level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>State laws and systems for military and administrative exclusion and intervention</td>
<td>Central control at Hamdullahi. Little intervention with CPR management at village level. Central control of trade, labour, taxes; but invested in the local economy.</td>
<td>Central control in Bamako/Mopti. Intervention at Delta-wide and local levels. Control of trade and taxes by central state authorities. Little reinvestment in local economy.</td>
</tr>
<tr>
<td>Infrastructural development, access to markets, and local economy</td>
<td>Extensive use of horses, weak roads/communication. Many local markets and trading networks. Weak local economy due to drought and subsistence production</td>
<td>Better infrastructure and roads; no horses. Weak local economy due to drought and production mainly for subsistence. Surplus production and labour transported out of Delta.</td>
</tr>
<tr>
<td>Outcomes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outcomes regarding conversion of CPRs to crop land</td>
<td>Gradual and locally controlled transformation of CPR grazing to crop land</td>
<td>Rapid and chaotic transformation of CPR grazing, but depending on local leadership and social context</td>
</tr>
</tbody>
</table>

But it cannot be generally asserted on the basis of the evidence presented here that the institutions and organisations of Fulani society were simple creations of aggregate individual action and changing preferences regarding the need and demand for...
land. For example, local leaders and state officials exercised power and could choose whether to supply new institutions or not. In Kakagnan village, the ex-slaves were denied increased access and leaders chose to uphold institutions regulating access to and use of CPRs. The ex-slaves were forced to seek crop land outside the village common. Power mattered. Authority structures and institutions constrained both the supply and the demand for CPRs, illustrated by the ex-slaves of Kakagnan. They accepted (self-imposed) restrictions on demand for more crop land— in contrast to the ex-slaves of Dialloube, who gained acceptance for land claims through political negotiation and struggle.

The fact that the institutions of the Hamdullahi Caliphate continued to determine behaviour in many situations, provides support for newer institutional theory, in contrast to neo-institutional explanations of change in formal institutions. New theory suggests that the most solid carriers of institutions over time are grounded on human rationalisation processes of an ideational nature that arise from the effects of cognitive (shared meaning, identity, status) and normative structures (values, norms, power) (Scott, 1995). The institutions that regulated access dates for livestock, membership in corporate cattle herds and the system of cattle tracks in the Delta typically reflected shared knowledge and observation of status over time. These institutions have persisted through fairly chaotic or revolutionary historical events that led to new practices and new institutions and organisations, such as in the 1820s with the Dina, in the 1890s with the French colonial administration, and in the early 1990s with the coup d’état. During the events of the 1990s, historical institutions and traditional status positions mattered in the political bargaining between elites and ex-slaves. But these institutions had a different significance for each of these social groups. The past was not a “collective reference”. Interpretations of institutions changed fairly quickly and old orders and rights were circumvented in the political struggles that followed. New, regularised practices manifested themselves in new institutions and authority relations and new CPR boundaries (Douglas, 1986:46), while the original institutions also conditioned the political relationships and the way practices changed (cf. the contrasting reactions of ex-slaves in the two villages in the 1990s). This classical chicken and egg situation raises the old tension of whether human agency (North, 1990) or structure (Scott, 1995) is most critical for explaining human behaviour and social and institutional change. It also confronts the rational choice perspective (North) with a more open perspective on human choice, behaviour and institutional change (Scott).

Conclusions: Continuity and Change

*Continuity* in property rights institutions of the Hamdullahi Caliphate concerned several key relationships, such as status hierarchies which defined access and ownership (*rights of last conqueror/first comer*); clientage and labour-tying arrangements (which still exist in milder forms today); boundaries of and membership in the
CPR regimes; systems of cattle tracks and stop-over points; and membership in corporate herds (egguirgi) that defined access to grazing outside the village commons. Customary authority is still important, illustrated by the key role of customary leaders in regime enforcement, even though the discretionary power of state officials was great and often decisive in conflict management.

Regarding change in property rights institutions, two major transformations have taken place at different levels of society. First, at local level, the institutions that conditioned the internal use-regulation of CPRs were challenged through the break-up of clientage and emancipation of ex-slaves; a process which started during the period of French colonial administration. These internal institutional change processes emanated mainly from political and market-related changes. These processes were central to the understanding of social and institutional change in Fulani society. When the one-Party regime fell at national level in Mali in 1991, the patterns of political interaction changed rapidly at local level. The early “democratisation” of political institutions, combined with the effects of a more a market-oriented economy, released new economic and political power in both village societies. In Dialloube, market- and cash-crop oriented traders and ex-slaves joined forces and challenged the authority of the Chief and the rules that used to protect CPRs from conversion to privately owned crop land. The hierarchically ordered strata of castes functioned as horizontal political groups, competing for power and control over arable land and CPRs. The CPR regime became destabilised. In Kakagnan, the regime’s robustness was maintained by a broader representation among the elite factions and younger educated men being accepted as office bearers in the governing bodies of the CPRs. In both villages, numbers now counted more, although power continued to determine who decided what over whom regarding access to CPRs.

The second major institutional transformation was related to the penetration of state institutions and organisations operating with support from the national level. Major institutional change processes occurred through encounters at the interface between state and customary institutions and leaders. Rights of exclusion to CPRs were largely determined by the application of administrative powers by state officials. Rule enforcement represented an ambiguous interpretation by state officials of contradictory historical layers of law – often working in tandem with customary elites with the aim of self-enrichment (Vedeld, 1998). Internal use-regulation at community level was to a larger degree determined through political struggles conditioned by factors internal to the village. Village politics mattered. But the case of Dialloube illustrated how ambiguous and interventionist state officials undermined the stability of the CPR regime in a critical situation. This underscores the importance of local autonomy for decision-making in the daily management of CPRs in these conflict-ridden societies (Ba, 1996). The destabilisation of the regime in Dialloube came when intensities increased in economic interest conflicts over the use of CPRs between the elite groups of the market-oriented traders and the pastoralists, and these conflicts coincided with political and cultural heterogeneity. The conditions of the market were, to some degree, determined by state policies, which fa-
voured agricultural expansion rather than livestock production. When comparing the two villages, the clergy leadership of Kakagnan showed more capacity for resolving internal conflicts and creating effective government, reflecting a long standing tradition for dialogue and debate across social groups (Putnam, 1993). Internal debate was less part of the pastoral-dominated culture of the fairly politically and culturally fragmented Dialloube society. The leaders of Kakagnan chose to listen to demands from influential groups, and agreements were reached on the supply of new legitimate institutions for utilization and protection of CPRs. The leaders also chose to deal with external state officials in ways that were perceived (culturally) as legitimate across the social groups of the village. The differences in social patterns and caste relationships between the two village communities, including the capability for leadership, were largely historically determined. This underscores the importance of historical events and political context (time and place factors) for good governance and for directions of political and institutional change. Only with the emergence of electoral “democracy” in the early 1990s was the foundation laid for a structural break with the authoritarian village regimes of the post-independence period. Opportunities were then created for more decentralised and legitimate local governance.

Literature


Questioning Some Assumptions About Land Tenure

Christian Lund

Introduction

Keen attention has been paid for some time to development narratives. Various writers have demonstrated how such narratives, even when proved wanting, contribute to standardise, package, and label development problems and justify very simple and standard off-the-peg solutions (Roe, 1991; Hoben, 1995; Leach and Mearns, 1996). Narratives are based on assumptions of certain causal relationships and subsequently used to justify interventions, privilege certain institutions and favour certain groups, and they are therefore often peddled by specific stakeholders. This is also true for the domain of land tenure in Africa and in the Sahel.

One of the central issues of land tenure in the West African Sahel is the confrontation and mutual emulation between customary tenure systems and the statutory or formal land laws (IIED, 1999; Lund, 1998: 9–19). The construction of a ‘modern’ and a ‘traditional’ realm both veils very complex historical and socio-political realities, and constitutes an institutional reality with political ramifications. One of the results has been the construction of conceptual dichotomies which have given rise to essentialist as well as teleological assumptions. Two assumptions stand out as particularly persistent and influential. First, it has often been argued that private property is inherently un-African. Second, it is often claimed that private property is a prerequisite for investment and development. Both statements purport to explain the ‘absence’ of development through property – or rather lack of property. In a simplified form, one might put it like this: ‘One of the reasons why agricultural development is so unsatisfactory in sub-Saharan Africa in terms of productivity and sustainability is that there is no investment; this is due to the lack of security of tenure which, in turn, is due to the absence of private property’. The problem is, obviously, that if these underlying assumptions are wrong or only have circumstantial validity, policies based on them may not only fail to achieve the expected results, they may actually amplify the problems they seek to address.

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1 An earlier draft of this article was presented at the 10th Danish Sahel Workshop Sahelian Perspectives – Myths and Realities, 1998.
The objective of this chapter is to give examples of policies that illustrate how these lines of reasoning inform and fashion development efforts. I shall then point out some of the weaknesses in the underlying assumptions and implied causal relationships in these policies. The ambition is not to replace one set of assumptions with another, merely to point out that the multiple, shifting, recombining and constantly-negotiated practices of rural Africa warrant empirical validation. Most of the contributions in this volume bear witness to that. My argument is thus intended to be polemical rather than a comprehensive effort to establish new theories. I shall simply argue that we do actually have evidence of privatisation processes of African rural land, including in the Sahel, and that we do have evidence to suggest that the linkage between security of tenure and private property is circumstantial and in many cases not as simple as suggested. Indeed, privatisation often seems to hamper rather than enhance land tenure security.

Assumption 1, ‘Private Property is Inherently Un-African’

‘Land is not sold in Sub-Saharan Africa’. This could be the opening line of an essentialist argument, which might continue like this: ‘Land is distributed according to a system of caste, seniority and gender. The land can only be transferred while observing certain clauses and it cannot be attributed permanently to someone outside the clan’. An influential variant of this sees the ‘village’ as the primary socio-political unit for land tenure and other political decisions. While acknowledging the existence of units within the village (individuals and families), entities which over-arch the village, such as the state; and political structures such as churches, political parties and ethnic groupings which cut across villages; are accorded secondary importance. This approach has been taken by various authors. Belloncle (1982) sees this as a potentially democratic advantage for African rural communities:

African villages ... generally have democratic power structures. This is particularly evident in the existence of a council of household heads assisting the village chief (the first among equals), and by the consultation surrounding public decision making. It is never sufficiently recognised what a trump card this may constitute from the perspective of ‘contractual’ development. ... In general, African villages still exhibit a great deal of economic homogeneity. And primarily, but for a few exceptions, the general rule is equal access to land. (Belloncle, 1982: 76–77, my translation)

This type of statement seems to justify a particular type of developmental intervention. By stressing the local community’s inherent democratic polity and the egalitarian economic structures, development efforts based on ‘participation’ and ‘community projects’ are favoured, and in terms of natural resource management certain approaches seem particularly obvious, as I shall illustrate below. Belloncle is, however, not alone in arguing that land in sub-Saharan Africa is so imbued with the intrinsic and ineffable identities of their owners that it is virtually inalienable. For instance, one of the most influential French writers on African land tenure, Étienne Le Roy, argued together with two colleagues, Karsenty and Bertrand, that:
It is fundamental, in the French understanding of a good, for it to be valued in terms of money. This is not the case in Africa, at least not generally, since all things are not considered goods because they are considered as at times outside the realm of commerce and at times transferable though without complete alienation. In the absence of such full command the thing is, in the strict sense, not a good. Still, land is not only an anonymous and interchangeable thing. It is not only riches but also at times “a person” (in the traditional sense) which can be made to talk (like the dead). It was also (at least sometimes) a deity holding vital powers which should be dealt with with precaution. It is in this sense that we propose to use the concept of “common patrimony”. (Le Roy et al., 1996: 52)

‘Common patrimony’ indicates a common heritage, which though not equally distributed, makes an argument for communal or communitarian rather than individual management. However, ‘land’ contains a rich variety of important cultural connotations in most parts of the world, not just Africa. Moreover, dismissing private property in Africa in the across-the-board manner described above is an unnecessary and unpromising analytical path. I shall shortly present some evidence to support this, but let me first illustrate how these ideas translate into policies.

Policy

The village development perspective has been operationalised in several different forms. The best-known is the ‘gestion de terroir’ approach which ‘holds out the promise of integrating the social and the physical environment in a meaningful way, particularly as seen from a village community’s perspective’ (Painter, 1991: 14). As Degnbol explains:

When reference is made to “the terroir approach” a common understanding of the phenomenon is often taken for granted. It obviously has to do with the management of natural resources, and in the general debate the concept has acquired a sense of grassroots initiatives, democracy, the transfer of authority and the empowerment of local populations. ... The terroir is an area of which the limits are recognised by a given local (agrarian) community and which is customarily used by community members for their livelihoods. The land is rarely the private property of the individual community members, rather, they have a sense of collective claim to the area and exercise some degree of control over access to its resources. (Degnbol, 1996: 3)

This development approach grew very popular with governments and donors alike during the 1980s and 1990s in the Sahel in particular. In 1994, the United Nations Soudano-Sahelian Office (UNSO) attempted to summarise these experiences and outline recommendations for operationalisation. The report addresses the question of land tenure from two perspectives. First and foremost, control over resources must be wrested from the state’s hands and placed in the hands of the local people.
Affirming the rights of local populations to control resources takes power away from the state administration and allocates this power to a particular group of rural producers, which tends to be sedentary farmers. The reform of tenure and shift of power towards local people should therefore prevent more powerful interest groups from seizing resources over which, until now, ownership rights have been confused and difficult to assert. (UNSO, 1994: 13)

Second, the report argues that once land rights have been taken out of the hands of the state, they are negotiable at village level; that the village polity (either traditional chiefs or village committees) could and should control allocation and land use.

Throughout Sub-Saharan Africa, there is great diversity regarding rules of resource tenure, the persistence of customary controls, and their relative effectiveness. In some places, customary management systems remain largely intact and can provide a very useful basis for future systems of management. For example, the “chefs de terre” amongst the Mossi of Burkina Faso, and the Bambara of Mali retain considerable moral and religious authority over local people and outsiders, and hence, can get their decisions respected. In other places – such as areas of in-migration, resettlement or conflict – customary systems may command little adherence from any party. In such cases, Gestion de Terroirs projects must help support the evolution of a local decision-making body capable of discussing the interests of different, possibly conflicting groups, and arriving at decisions which will be supported by this heterogeneous group of resource users. UNSO, 1994:6–7)

The thrust of these efforts to promote the ‘gestion de terroir’ approach and the attempt to outline representative village bodies often means that very little attention is paid to private land, or rather land undergoing forms of privatisation either because this tenure form is not considered relevant or because this process could and should be countered by communitarian measures. The ‘gestion de terroir’ approach has been criticised by various commentators (see e.g. Painter et al., 1991; Degnbol, 1996; Marty, 1993), but let us in this context focus upon the evidence concerning some of the assumptions relating to land tenure.

Some Evidence

Let us first confront the ideas of equal access to land and the democratic polity in African villages as expressed by Belloncle with evidence from various researchers. Historically, people’s access to land and other natural resources depended on their membership to and status within a particular group wielding political control over the land. Neither the state nor the market channelled the distribution of land – on the contrary, kinship and ethnic adherence along with status, gender and seniority determined access and use rights (Berry, 1989; Migot-Adholla and Bruce, 1994: 5). This does, to a certain extent, support aspects of Belloncle’s view. The general principle of land allocation seems to have been inclusion rather than exclusion.
However, membership of villages or other organisations does not guarantee access to land, and indigenous land tenure systems neither were nor are characterised by egalitarianism or collective land management. They were and are often quite hierarchical and management by individuals and households is often secured by a range of more or less extended use-right arrangements.

Moreover, it has been documented how social identities and prerogatives are negotiable, and hence access based on social identity is far from being a timeless and secure right (Berry, 1993; Moore, 1986; Shipton and Goheen, 1992). One cannot help wondering about the coincidence that the chiefs were the key sources on customs when these were first recorded by the colonial authorities, and that these customs generally forbid the sale of land while placing it under the control and authority of the chiefs. It would seem that Belloncle’s perspective is rather one-sided and at best, when generalised, only partially reflects the situation.

Concerning the idea that land is inalienable in Africa, there is evidence of processes contradicting this (Mathieu, this volume). Privatisation processes have been unfolding in many parts of Africa for a long time (Shipton, 1989a). Land tenure denotes certain rights to land. Basically, these may range from short-term use rights, to permanent rights, to the right to complete alienation. Various writers have tried to distinguish between different types of land tenure (Place et al., 1994: 19–28; Le Roy et al., 1996: 59–76; Hanna et al., 1995; Schlager and Ostrom, 1992). These approaches agree that there are different degrees of command over the resource which they term tenure security. Generally, the weakest right is considered to be simple use right; shared use rights being weaker than exclusive use rights; and temporary and short-term use rights being weaker than long-term or permanent use rights. A stronger command and hence a higher degree of security is assumed to prevail if, in addition to the use right, the holder enjoys the right to transfer the land to someone else. Again, rights of permanent transfer represent stronger command than temporary transfer. Finally, concerning permanent transfer rights, the right to sell is considered to represent a stronger command over the land than the right to give, which in turn is superior to the right to bequeath. In addition to this, Shipton operates with ‘rights of administration’ (Shipton, 1989a: 8).

By conceptualising land rights in terms of degrees of use and control, it is possible to see privatisation as a process rather than a situation. Privatisation may thus signify an increase in the right of the right-holder to restrict others’ access to, use of or control over land or to transfer rights over it (Shipton, 1989a: 13). Just as rights can be graded, so can right-holders ranging from large groups to the individual, and the process of privatisation seems to be paired with the process of individualisation. This approach enables Shipton to identify reports on processes of privatisation of land in much literature on Sub-Saharan Africa. He argues that population pressures, high-value cash cropping and privatisation of land are closely connected. What is particularly interesting in this context is that Shipton observes that these features of privatisation often occur regardless of legislation. That is, undirected, ‘autonomous’ and directed forms of privatisation seem to differ more
in speed and degree than in kind. In these observations, Shipton is largely in line with the Property Rights School, which I shall return to in the following section.

As population densities rise, certain anticipatory measures are taken such as the symbolic cultivation of fallowed land or the lending of land to kin while living temporarily away. Individual and group claims tend to sharpen. This often leads to more frequent and bitter conflicts over land, and at the same time it challenges the capacity of the dispute management institutions such as chiefs, local administrators and the legal system. Shipton (1989a: 30) suggests that their direct control over land tends to erode, but his and other studies also point out that the increase in land litigation widens the scope for exacting payments (fees and bribes) in dispute resolution and brokerage (see Vedeld, this volume; Lund, 1998).

The increasingly exclusive private holding is, of course, also reflected in the character of the transfers. Transfers may take many forms, as Shipton points out:

for instance by loan, swap, inheritance, devolution *inter vivos*, gifts, barter, pledge, share contract, encroachment, rental, or sale. These English terms do not reflect the variety, the flexibility and inventiveness, and the possible re-negotiability inherent in land dealings in many parts of rural Africa. Terms like “market” can become cognitive straightjackets for the analyst. Across the continent, local people do engage in land deals, whether by sale or not; and frequently these fail to show up in survey results because researchers are not asking the questions in the right way, or in enough different ways. (Shipton, 1989a: 58)

In some societies, rural land sales are forbidden by law and custom alike. Either the law simply does not allow it or does so in the most complicated and cumbersome way, and customs as interpreted by chiefs may be used to prevent people from asserting themselves as owners. People’s practices may, nonetheless, undermine, circumvent and neutralise legislation and reified customs. Not forcibly through organised and well-prepared actions but through the daily pursuit of interests by individuals and a common-sense negotiation of their situation. Thus, loaned, rented and pledged land may become un-redeemable (see Reenberg and Lund, 1998; Platteau, 1995: 13); land may be *de facto* mortgaged for a loan and hence alienable; and ‘pledges are sometimes disguised forms of sale, where sales are more strictly prohibited’ (Shipton, 1989a: 67). Such practices have been observed as far back as the 1920’s in Ghana. Another process of privatisation and individualisation reported from Nigeria is triggered off when the custodian of the family estate mortgages it in times of financial stress.

He may become unable or unwilling to redeem it, in which case any member of the family is free to redeem it and to retain it as his personal property until the custodian or his successor(s) reimburses him ... In very many instances such reimbursement is never made. Rather, the custodian may borrow additional money from the redeemer with that same piece of land as security. The reimbursement price on the land may then become so high that succeeding custodians let their claim rest and the redeemer retains the land indefinitely. (Mbagwu, 1978, quoted in Shipton, 1989a: 69)
This case from a densely-populated corner of Nigeria should not lead us to believe, however, that individualisation and privatisation are the preserves of the high population density areas. Benjaminsen’s research from southern Mali (this volume) as well as Bolwig’s (this volume) and my own research (Lund 1999) from the Seno province in northern Burkina Faso illustrate this.

A brief example: Two groups primarily occupy the area: the Fulbe and the descendants of their slaves, the Rimaïbe. Historically, a particular division of labour evolved between the two groups: the masters, the Fulbe, owned cattle and controlled the land, and while the Fulbe tended the cattle, their slaves, the Rimaïbe cultivated the land. However, the Rimaïbe became emancipated during the first decade of the 20th century with the French colonisation. While social ranks were formally levelled, relationships of affection between former masters and slaves persisted and still exist to a significant degree. Every Fulbe knows ‘his’ Rimaïbe and every Rimaïbe knows ‘his’ Fulbe. However, the emancipation of the Rimaïbe freed them to migrate and sell their labour, and especially in the wake of the Second World War both younger and older men travelled to Ghana and Côte d’Ivoire to work. On their return, many of them bought the land they had cultivated from their former masters and became absolute land owners despite the fact that the existing legislation did not accommodate such arrangements. Thus, land locally recognised as sold is as unredeemable as ‘a goat sold on the market place’.

In the words of Paul Mathieu, these practices take place at the margins of the law. That is, they do not conform to the legislation but are tolerated and at times legitimated by government institutions. In Côte d’Ivoire, for example, government personnel sometimes act as witnesses, and at other times they validate and confirm informal land transactions like sales which the law does not cover. In Rwanda (before 1994) Mathieu reports that illegal land sales between farmers were verified, recorded, and subsequently recognised in a ‘formally informal’ way through an ‘attestation de notoriété’ (notary’s declaration). In such cases, one could argue that people’s practices are ahead of the law; a law which does not correspond to the actual circumstances (Mathieu, 1997: 40–41, and this volume). Bruce complements these observations from countries with a French-inspired legal and administrative system with observations from Ghana and Nigeria:

A striking aspect of the west African experience, particularly in Ghana and Nigeria, has been the role played by the courts in developing new legal concepts to facilitate tenure change. Through lawmaking by decision in the specific case, in the classic common-law mould, the courts have recognized the shift of control of land from larger kinship groups to the more immediate family and defined a tenure called “Family Land”. (Bruce, 1988: 33)

Clearly, the privatisation process is somewhat ‘fuzzy around the edges’, it is not clear cut and once-and-for-all but rather a continuous negotiation. As Breusers (1998) observes in his study of Mossi land holdings in Burkina Faso and Côte d’Ivoire, contrary to the argument that individualisation and privatisation are inevitable and ‘natural’ processes, it may well be that what nowadays is the private
property of the buyer in Côte d'Ivoire will be transformed into corporate property in the future because the ‘owner’ will be unable to refuse his kin’s ‘legitimate’ claims to have access to his land. Moreover, privatisation processes coexist with many other forms of tenure:

Pledging, rental and other locally acceptable African forms of land transfer can turn, in time, into customs of outright sale. But an increase in sales never fully eliminates other forms of land transactions, such as gifts, loans, share contracting, or barter. These other forms of exchange remain more convenient than sales in many situations. Barter remains important where these losing land rights prefer compensation in illiquid forms to guard against inflation or claims from other family members. (Shipton, 1989a: 61)

Obviously, many of these transactions do not take place as ‘village events’; they may involve individuals or groups (from the same or different villages) and not be the object of village consultation. This does not invalidate community-based development efforts as such, but it should limit the scope of what is defined as an object of village-wide negotiations. Let me now turn to the other influential assumption.

Assumption 2, ‘Private Property Creates Security and Leads to Investment’

One of the approaches which has exerted most influence over the politics of African land tenure is the so-called Property Rights School. Its ideas and assumptions have received much qualified criticism over the years. I shall not deal with the Property Rights School or its critique in its entirety here, but merely focus upon two elements. One is the problem of its sweeping assumption that property and investment are causally connected when it is used to frame policy; and the other is the problem that different concepts are often conflated, resulting in unwarranted simplification. I am thinking here in particular of the concepts of tenure security and tenure certainty.

This theory has a series of important adherents, amongst which Demsetz (1967) may be considered as one of the central ones. Platteau has summarised their contributions on the issue of land in Sub-Saharan Africa and termed it the Evolutionary Theory of Land Rights (ETLR). As the name suggests, it is a theory of changes in land tenure, and it combines two fundamental assumptions: 1) social and economic institutions adapt to circumstances in order to be as economically efficient as possible; 2) the property form which generally implies the lowest transaction costs (in terms of addressing ‘free-rider’ problems and the like) is private ownership. Broadly, the theory argues that increasing population pressure and the commercialisation of agriculture create a need for investment in agriculture and land development and hence profound pressures for changes in property regimes. It is argued that the absence of legal land titles reduces the value of land as collateral and thus increases the price of capital and reduces the value of investments. With
an increasing need for investment there is therefore a pressure (the character of which is not described, see Vedeld in this volume) for a change in property regime towards something which provides a higher degree of tenure security. Then the farmer will be able to balance a higher rate of return over time from a slowly-maturing investment in the farm against possibly lower-yielding but quick-turnover investments and to balance appreciation in the value of his capital assets against immediate income. Security of tenure is, according to the Property Rights School, generally best secured through private ownership with formalised, government-sanctioned private titling. Strictly speaking, the theory itself argues that this change will be produced by the system itself; that population pressure and/or market conditions will bring about private rights independently of policy. Policy makers, on the other hand, use this line of thinking to justify that by legislating for private property and titling they are merely accelerating the inevitable (see Bruce, Migot-Adholla and Atherton, 1994). This produces a reasoning where private land ownership increases tenure security and hence investment (and thereby productivity):

\[ \text{private property} \rightarrow \text{security} \rightarrow \text{investment} \]

As mentioned above, there is evidence of a coincidence of higher population density, commercialisation and privatisation, as pointed out by Shipton (1989a). However, the interpretations of the Property Rights School go one step further, arguing that a specific and dominant causal relationship exists between property form and investment. It is this unsophisticated line of reasoning which has found its way into policy, including in the Sahel.

Policy

The best-known reform based upon the chain of assumptions that private property leads to security which in turn leads to increased production/investment/protection is the Kenyan one (Shipton, 1989a, b), but the same line of reasoning can be found in and around the most recent version of the Burkinabé Réorganisation Agraire et Foncière and the Nigerien Code Rural.

Burkina Faso – Réorganisation Agraire et Foncière

In Burkina Faso the reasoning behind the land reform has changed from 1984 when only the state could assure the rational use of the nation’s resources, to 1996 when individual private property was only gradually being rehabilitated. The benign effects of ‘private property’ are therefore not (yet) used to justify the reform. The interesting point is, however, the firm linkage between security and productivity/protection. At a national seminar preparing the reformulation of the land law in 1993, the Minister of Planning stated:
The land tenure reform, RAF, aims among other things at the rational use and management of the national space; protection of the environment; increasing productivity, in particular in the rural zone with the objective of food self-sufficiency, ... The reform operates with the aim of achieving justice in access to land and the security of landed property in order to increase agro-sylvo-pastoral production as well as the construction of housing, while respecting natural resources and the environment. (Government of Burkina Faso, 1993: 45)

This line of reasoning is reiterated in project documents preparing for donor support to the agricultural sector and preparing for the implementation of the RAF:

Securing landed property in Burkina Faso is recognized as an issue of the utmost importance in order to halt the degradation of natural resources and in particular the diminishing of arable land. It is, thus, generally recognized that land tenure security is crucial in order to motivate resource users to invest in the protection and development of natural resources. (DANIDA, 1997: 13)

For Niger, however, the entire chain of assumptions (private property-security-investment) has only just begun to manifest itself in line with the reform’s precepts.

**Niger – Code Rural**

A range of observations had been made by the Nigerien state concerning the stagnating rural development, the degradation of the physical environment and the deterioration of long-term productive capacities; and tenure insecurity was judged to be a central contributing factor. Hence, a clarification of the modes of tenure and transfer of natural resources – in particular land – was considered an important step towards reversing some of these unfavourable trends (Government of Niger, 1986). The people drafting the reform were very conscious about the importance of its applicability; they recognised the risk of drawing up something very coherent and elaborate but impossible to implement. The ambition was to avoid changes in the actual distribution of land while clarifying the conditions under which land was held. In order to appreciate the different forms of land tenure a series of regional seminars were conducted and a – somewhat sketchy – idea of the complexity of the tenure situation emerged. One important element was the overwhelming desire among the various respondents for private property. It is worth noting here that rural élites generally claimed customary ownership over wide tracts of land. It is therefore not surprising that the élite should prefer private property to be the recognised principle of tenure, since they would become the recognised owners. Hence, it was decided that agricultural land could become the private property of an individual (Lund, 1998). And, as a World Bank consultant stated some nine years after the initial considerations about security and its consequences:

In this situation [competition over land between farmers and herders and among farmers themselves] the new land tenure reform, the Rural Code, insists throughout on a preference for property. By contrast, the reform seems almost to ignore the
concept of use right, despite the fact that this is among the ways of accessing natural resources and plays a part in agricultural growth. Thus, land tenure security may just as well be the result of a use-right as the result of ownership. (Gastaldi, 1995, 14)

Thus, while insecurity was initially seen as uncertainty to be remedied by providing clarity, in the process of preparation and initial implementation insecurity became synonymous with insufficient rights to be remedied by strengthening the rights of some (at the detriment of others). It is interesting to note how Gastaldi reproaches the Code Rural administration for being very one-sided and not paying attention to other property forms, however he himself goes on to reiterate another assumption from the same line of argument:

Another factor in this development is the land market which assures an optimal distribution of land. In particular if it is linked with a property tax and increasing investment. In effect, investment presupposes land tenure security ... . (Gastaldi, 1995: 15, my italics)

However, the causal links between private property, tenure security and investment that justify these policies are more complex than they appear.

Some Evidence Concerning Causality

First, evidence of the link between private property and investment is far from conclusive. In a much-quoted article, Feder (1989) examines the relationship between these factors in three provinces in Thailand and argues that private property increases security and investment in two out of three provinces. This is not supported by African evidence, however. Studying several regions in Ghana, Kenya and Rwanda, Migot-Adholla et al. (1993:269) found that, in general, agricultural productivity did not vary under individual land rights regimes, suggesting that factors other than land tenure are more constraining for agricultural development. The areas researched are relatively densely populated with commercial farming among the areas where Shipton would expect privatisation processes to occur. Most of the fields in the study were ‘acquired through non-market channels such as inheritance, gifts, government allocation, and allocation (initial clearing and use of part of the pool of communal land)’ (Migot-Adholla et al., 1993: 275). And the land was held under a variety of tenure forms ranging from temporary use-rights, to permanent use-rights, to transfer rights. Their results are quite interesting. People were inclined to make more improvements on their land if their use-rights could be bequeathed or inherited by their children than if the use-rights could not be transferred. However:

there is no difference in the incidence of land improvements between “preferential transfer” [i.e. rights to transfer to kin] and “complete transfer” [i.e. the right to sell
to whoever they wanted (full alienation)] land, nor does the requirement of prior approval matter. (Migot-Adholla et al., 1993: 281)

Concerning productivity, the arguments for private property grows even slimmer. “We found no relationship between land rights and plot yields in Kenya and Ghana. ... we also found that the mode of acquisition had no effect on plot yields” (Migot-Adholla et al., 1993: 282).

Recent studies from Burkina Faso generally support these observations. Ouedraogo et al. (1997: 232) argue that differences in land productivity ‘depend on factors other than property rights, mainly the natural fertility and climate conditions.’ In Rwanda, Migot-Adholla et al. even found that:

“short-term use rights” parcels were more productive than parcels in all other land rights categories. ... farmers who rent land may generally be in dire need of land resources and apply greater amounts of labour in order to provide subsistence for their families. (Migot-Adholla et al., 1993: 281)

Atwood makes a similar argument, referring to Bruce (1986) when contending that:

if potential purchasers tend to see land as an investment with a high potential for appreciation or as a hedge against inflation, rather than as a factor of production, reducing their transaction costs and risks may lead to poorer land use and reduced production as land is held idle or used in a non-intensive way after its transfer. (Atwood, 1990: 663–64)

Sjaastad and Bromley (1997) even suggest that ‘security-leading-to-investment’ can be turned on its head:

‘The common assertion that tenure security is necessary to promote investment may – in many cases – be reversed. That is, investment is necessary to obtain security. Investments in trees, irrigation furrows, buildings or other fixed structures may provide a litigant in a land dispute with an unassailable case. Thus, although insecurity of tenure is a disincentive to invest, it is – paradoxically – often also an incentive because investment in itself increases security ... If one accepts that certain types of investment in land are a legitimate way of claiming more secure rights to land, and that investments may be recovered even when land is lost, the assertion that insecurity of land rights in indigenous tenure systems is a serious impediment to investment seems less convincing. (Sjaastad and Bromley, 1997: 553)

These few examples suggest that the causal links between increasing privatisation and increasing investment and productivity are not immediate and simple and that we should look into the concept of ‘security’ which supposedly links them.

What are Tenure Security and Tenure Certainty?
Bruce and Migot-Adholla, who support the idea of tenure security as something which must be understood in terms of degrees, propose the following definition: land tenure security exists when:

an individual perceives that he or she has the right to a piece of land on a continuous basis, free from imposition or interference from outside sources as well as the ability to reap the benefits of labour and capital invested in that land, either in use or upon transfer to another holder. (Migot-Adholla and Bruce, 1994:19)

This definition is appealing in its comprehensiveness, since it encompasses extent, duration and certainty, but herein also lie sources of misunderstanding and short-circuiting. Decomposing the concept of tenure security makes some of the weaknesses in standard argumentation more obvious. It is problematic that tenure security is used in several different senses if sufficient attention is not paid to the distinction between them. Security is used as a measure of command over the resource, i.e. to what extent may the right holder use and transfer the resource and for how long are these rights valid. However, tenure security also means the opposite of tenure insecurity, i.e. the degree of certainty of the extent and duration of rights. The meaning is not identical so let me call this kind of tenure security tenure certainty, and discuss them both in turn.

The problem with the concept of tenure security (the extent and duration) is that it confuses the concept of ‘private property’ (implying the right to alienation) with high tenure security (implying ‘full command’). This makes it rather futile to correlate the two, since ‘private property’ is by definition ‘high tenure security’. The high degree of correlation has already been ‘assured’ by the way the concepts are defined. Moreover, most African tenure systems are characterised by the existence of multiple tenures, i.e. several users may have access to different resources on the land, one may farm, another gather fuel wood, a herder may be entitled to dry season grazing, and so on. What is often neglected in this type of argument is that while increasing exclusivity may produce more tenure security for the excluding party, the opposite must be the result for he or she who is being excluded. Thus, when we talk about increasing tenure security, there is most of the time a corresponding aspect of increasing tenure insecurity as well, something which has a much less benign ring to it.

If we then turn to the links between privatisation and tenure certainty, I dealt with one aspect of this above, namely ‘autonomous privatisation’, which is occurring in many places in Africa. As mentioned, this process often seems to be accompanied by land litigation and to evolve at the margins of the law as well as of customs. One could argue that not only is uncertainty an integral element of the privatisation process, but ‘autonomous privatisation’ actually depends upon it evolving. Only a certain measure of ambiguity in rules and norms allows people to manoeuvre at the margins and take advantage of ‘open moments’ and appropriate land under more private forms (see Mathieu in this volume). The causal link be-
tween ‘autonomous’ privatisation and increased tenure certainty thus seems dubious.

If we then look at the efforts of ‘directed privatisation processes’, tenure uncertainty seems even less likely to diminish. On the contrary, it seems that uncertainty is significantly amplified. ‘Directed privatisation’, including land titling, is ideally a way of clarifying the tenure situation. However, most titling programmes aim to issue exclusive rights to the primary right holder, while secondary right holders’ rights are formally extinguished (see Atwood, 1990: 661 and 663). Whether their use-rights (rights to dry season pasture, wood collection, access to water points, etc.) may still be enjoyed under a tenure regime sanctioning the primary right holders’ rights as private and exclusive is most uncertain. Furthermore, as Platteau argues,

in a social context dominated by huge differences in educational levels and by differential access to the state administration, there is a great risk that the adjudication/registration process will be manipulated by the elite to its advantage ... The fact of the matter is that, insofar as it encourages the assertion of greedy interests with powerful backing and is likely, wittingly or not, to reward cunning, titling opens new possibilities of conflict and insecurity that can have disastrous consequences for vulnerable sections of the population at a time when their livelihood crucially depends on their access to land. (Platteau, 1996: 43–5)

My research on the Rural Code in Niger fully supports Platteau’s observations. The mere announcement of a titling programme not only unleashed potential and old disputes but also generated new disputes and transformed the ways they were dealt with, in particular since the reform was introduced in conjunction with the advent of multi-party democracy (Lund, 1998).

An aspect which might seem quite banal is the management and maintenance of a land register. The most ‘advanced’ titling programme in Sub-Saharan Africa is the Kenyan reform. However, its maintenance is very poor and subdivisions, sales and other transfers are not recorded and the land register not kept up to date. As a consequence, proof of private ownership and its enforcement is often unlikely to gain support from the land register, and uncertainty may increase with the result that tenure security is hollowed out. This evidence gives us cause to re-examine the assumption that private ownership provides more certain use-rights than other tenure forms.

The idea that property is a ‘thing’ seems often to prevail; either you have it alone as exclusive private property, or it is shared in some obscure way, or it is not yours at all. Consequently, common sense would dictate that one is more sure to reap benefits from privately-held property than from resources held otherwise. It would be more secure. Such reasoning contains at least three erroneous assumptions. First, property is not a thing but a social relation or contract determining how rights to use and duties not to use a specific resource are distributed among people (Hohfeld, 1913; Goody, 1962; MacPherson, 1978; Moore, 1998; Lund, 1999b). Property can be seen as a social convention that defines the relationship between people vir-à-vir things backed up by the sanctions and administrative struc-
tures of society. Thus, property is not merely a question of either having it or not. It is more useful to talk in terms of extent of rights ranging from no rights to (the theoretical) all rights. Consequently, several social actors may hold (different) rights to the same resource simultaneously. Considering that property and property relations are aspects of social relations and thus are defined as society’s (i.e. other people’s) approval of certain rights, it seems paradoxical that tenure security or property should be measured in terms of the absence of social relations (or ‘interference from outside sources’ as argued by Migot-Adholla and Bruce (1994: 19)) which can secure or challenge such a right. This leads to the second problem.

People often measure African tenure forms by their ‘distance’ from complete private property, implying that this is the characteristic property form in the developed world. They often neglect what they know very well, i.e. that what is termed private land in Europe is more often than not subject to a whole range of restrictions (concerning the land’s development, its use, its division, zoning, construction on it, etc.). It is often forgotten that productivity and investment may actually be quite high under other tenure forms if other factors (such as market access, credit access, etc.) allow it. Conversely, as Ribot (1998: 336) argues, control over the resource without benefits because of insufficient market control will neither lead to maintenance of the resource nor productivity increases.

Third, while the wide variety of African tenure forms may seem obscure and irrational observed from a distance, these forms of tenure generally make sense to those for whom they really matter: namely, the immediate stakeholders. To paraphrase Sjaastad and Bromley (1997: 551); ‘the appropriation of a good, and the subsequent assignment of a right, does not materialise in an institutional vacuum; a “social contract” – an agreement, tacit or explicit, on the legitimacy of the specific form of land holding – must precede individual appropriation of resources.’ Platteau argues, in the same vein: ‘The point is that, if property has no social legitimacy, it is no property because it lacks the basic ingredient of property, recognition by others’ (Platteau, 1995a: 46).

In other words, it is not being ‘private’ which makes a land holding certain. Private holding may be more or less certain depending on the prevailing social contract. In the ‘developed world’ the social, institutional and legal consensus in favour of specific private forms of ownership is so strong that we often do not perceive the distinction between them and they become one; private equals certain. However, this is not generally the case in most African societies, and it may explain why in Kenya it has often happened that buyers of land are not able to take possession of it. The local community simply does not accept that land is sold to a ‘stranger’. In such cases, ‘private’ is not very certain, and in many places in Africa other types of tenure than ‘private’ are more certain for the right-holders. Of course, social contracts may evolve and change, and private forms of land holding may become more generally legitimate and hence certain, but evidence does not support a thesis that it will become the exclusive form.
Conclusion. Land Tenure as an Empirical Question

In questioning the two lines of reasoning concerning land tenure I am not suggesting simply reversing them. I am not arguing that land is becoming private on a general scale in the Sahel or in Africa for that matter (for various forms of common property see Thébaud; Jul-Larsen and Kassibo; and Vedeld in this volume) or that land tenure insecurity is a general result of privatisation and individualisation or titling as such. Nor am I arguing that titling cannot under certain circumstances be a reasonable measure helping to pre-empt and scale down conflicts. What I am suggesting is, however, that processes of privatisation occur and have a long history in many places without government initiative. In a significant number of situations this causes increased tenure insecurity, uncertainty and conflict. Any effort to influence rural development should take account of these eventualities. This constitutes a challenge considering policy authors’ partiality for general and sweeping statements. There is little doubt, I believe, that property matters. The amount of time, energy, social, political and economic resources people employ in order to secure, entrench and extend land rights indicates that property is a significant preoccupation amongst ordinary people in the Sahel and Sub-Saharan Africa. It is much more difficult to predict systematic causal relationships between various forms of property and land tenure and economic, social and political behaviour. While theories may direct our attention to interesting hypotheses, this still remains a largely empirical challenge.

Moreover, since rights seem intrinsically negotiable and conflicts integral parts of the transformation of land tenure systems, maybe more attention should be paid to ways of institutionalising negotiations and managing disputes than to illusory solutions of clear-cut reforms which put an end to social conflict and transformation.

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Droit de Communage ("Commons") et Pastoralisme au Sahel: quel avenir pour les éleveurs sahéliens?

Brigitte Thébaud

English abstract

Common property and pastoralism in the Sahel. What is the future for Sahelian pastoralists?

The study describes the specific use of pastoral resources in the Sahel and how this is based on a complex mix of use rights, access rights and reciprocity constituting an economy of sharing of resources. Following an analysis of the legal basis of 'common property' the author examines whether the Sahelian states have accommodated this particular form of land tenure in their legislation. Through the examples of the land tenure reforms of Niger (le Code Rural) and Burkina Faso (la Réorganisation Agraire et Foncière) the author points to the countries' difficult choices in terms of legislation and in particular in terms of the mediating role of the state. The author suggests that a careful analysis of the character of 'common property' is a key to the understanding of the profound changes witnessed by the pastoral societies of West Africa since the 1950s.

Introduction

Au moment où plusieurs pays sahéliens – en particulier le Niger, le Mali et le Burkina Faso – s’engagent dans la décentralisation de certains pouvoirs de gestion des ressources auprès des collectivités locales, la question du statut des ressources pastorales et de leurs conditions d’exploitation est plus que jamais d’actualité. Depuis le début des années 80, en effet, de nombreux événements ont fait ressortir la précarité des droits pastoraux1 et le rôle déterminant de l’État colonisateur, d’abord, puis de l’État indépendant, dans l’instauration progressive d’un climat d’incertitude entourant les droits fonciers des pasteurs. Conséquence d’une politique d’aménagement du territoire aux conceptions souvent très éloignées de la réalité pastorale et de législations foncières souvent peu favorables à l’élevage, cette incer-

1 Un exemple particulièrement frappant de la situation très précaire des pasteurs au Sahel a été fourni au début des années 90 par les événements survenus dans la réserve sylvo-pastorale de Mbeggué, au centre du Sénégal (Freudenberger, 1991).
titude foncière touche autant les zones typiquement pastorales que de nombreuses régions agropastorales du Sahel, où les pâturages, au statut foncier ambigu, résistent mal à la pression des défrichements agricoles.

L’analyse des problèmes liés à la gestion des ressources pastorales au Sahel ouest-africain constitue toutefois une tâche délicate. En règle générale, les ressources en eau, en pâturages et en minéraux (cures salées) ne constituent pas, au sens strict, des biens privés faisant l’objet de droits d’usage exclusifs détenus par des individus. Ainsi, plusieurs usagers exploitent ces ressources au même moment ou à différentes périodes de l’année, une zone de pâturage et les points d’eau qui s’y rattachent étant souvent fréquentés par des communautés différentes selon les saisons. Les utilisations qui sont faites d’une même ressource peuvent également varier : en saison sèche, les champs s’ouvrent à la pâture animale, après avoir été cultivés. Cette pluralité d’usages peut faire l’objet de règles très diverses, notamment dans le cas des contrats de fumure.


**Mobilité, flexibilité et accès négocié aux ressources : des solutions foncières originales**

Qu’il soit associé ou non à la pratique de l’agriculture, l’élevage dans le Sahel ouest-africain repose sur l’accès à diverses ressources formant un ensemble cohérent : aires d’hivernage et pâturages de saison sèche, mares naturelles et points d’eau profonds, cures salées, champs récoltés, espaces de repli… À l’inverse de l’occupation agricole, davantage circonscrite dans l’espace et individualisée, l’activité pastorale fait donc appel à un vaste éventail de ressources dont l’exploitation est généralement ouverte à un ensemble d’individus et de communautés.

Ce mode particulier d’occupation de l’espace résulte d’un impératif de mobilité des animaux – une mobilité aux formes multiples, la plus connue étant la transhumance. En milieu pastoral, se déplacer en saison des pluies permet aux bergers de s’adapter constamment à l’évolution de la biomasse et de profiter des mares naturelles, véritables relais jalonnant la brousse. Bien que limitée par l’obligation de
se rapprocher des points d'eau profonds, la mobilité de saison sèche permet de compenser les déficits localisés de paille et de mieux répartir les charges animales, lorsque l'hivernage précédent a été médiocre. En période de sécheresse, c'est en migrant temporairement dans des zones de repli et en y négociant l'accès aux pâturages et aux points d'eau que les pasteurs réussissent à limiter les pertes d'animaux et à préserver les noyaux reproducteurs qui permettront de reconstituer plus rapidement le troupeau familial, une fois la crise passée. Les mouvements pastoraux tiennent ainsi compte d'une multitude de facteurs: nature des sols, rythme de croissance et composition de la strate herbacée, distribution des mares, proxi- midité des marchés, emplacement des couloirs pour la vaccination du bétail, espaces de cueillette, relations sociales, accès aux résidus de récolte... Pour toutes ces raisons, la mobilité pastorale repose sur des pratiques pensées et réfléchies, que l'on retrouve tout autant dans des régions agropastorales, où l'extension des superficies cultivées contraint souvent à une mobilité au moins saisonnière des animaux à l'extérieur des terroirs, pendant la période des cultures (Thébaud, 1995).

Un trait fondamental des ressources pastorales réside ainsi dans la difficulté de les morceler, afin d'en individualiser l'usage. D'une part, un tel morcellement risquerait d'entraver la mobilité animale et, par là même, l'efficacité pastorale. Dans le cas de ressources en pâturages très aléatoires d'une année à l'autre, il est en outre préférable de faire parcourir aux troupeaux un espace ouvert plutôt qu'un espace subdivisé, car cela permet d'entretenir un plus grand nombre d'animaux, et ce, indépendamment des déséquilibres annuels (Sandford, 1983, Behnke et Scoones, 1993).

D'autre part, diviser les terres de parcours et les points d'eau s'y rattachant en sous-unités serait coûteux et contraignant. La dispersion et l'hétérogénéité des ressources rendent malaisée leur répartition équitable d'une sous-unité à l'autre, surtout en ce qui concerne les bas-fonds, les mares naturelles, les cures salées et les dépressions, où la richesse floristique est plus grande. En outre, “au plan pratique, morceler un vaste parcours annuel collectif en autant de bandelettes nord-sud, est-ouest ou plaine-montagne que de propriétaires d'animaux pour leur permettre de suivre leur route de transhumance n’a pas de sens en raison de la mobilité et de la flexibilité que requièrent de la part de l'éleveur les fortes variations interannuelles de la qualité des pâturages résultant des aléas climatiques” (Rojat, 1991).

En fonction des saisons, des années ou des sécheresses, chaque ressource revêt une importance différente. Sur de vastes aires pastorales où les pâturages annuels sont hétérogènes et aléatoires, la mobilité des troupeaux est vitale, et la flexibilité des mouvements doit être préservée. Par conséquent, un mode d'appropriation trop formel par une communauté pastorale au détriment des autres serait non seulement dangereux, mais vraisemblablement contre-productif: la surveillance des pâturages absorberait beaucoup de temps et de man-d’œuvre, pour des profits en fin de compte marginaux. De tels coûts ne seraient justifiés que s'il en résultait une amélioration substantielle de la production animale (Scoones et Wilson, 1989). Or, les pasteurs tirent peu d'avantages à maitriser parfaitement l'usage de territoires étendus et à la productivité incertaine. Dans des systèmes pastoraux pouvant diffi-
clemment opérer en état d’équilibre, la meilleure façon de gérer l’espace est, en effet, de s’adapter aux changements constants du volume et de la localisation des ressources plutôt que de chercher à tout prix à optimiser leur utilisation en maîtrisant parfaitement leur accès.

Il est essentiel de disposer également de solutions de rechange pour les mauvaises années en se ménageant l’accès à d’autres territoires pastoraux. L’échange régulier ou occasionnel de droits d’accès aux ressources constitue un autre trait marquant du pastoralisme sahélien, ce qui rend d’autant plus difficile l’instauration de droits exclusifs sur ces ressources.1 L’économie de partage suppose la réciprocité, sans laquelle la mobilité des troupeaux et la fluidité des mouvements pastoraux seraient compromises (Behnke, 1994). C’est en s’offrant mutuellement l’accès aux ressources que les pasteurs peuvent changer de zone de pâturage lorsque les circonstances les y obligent. Cette stratégie est appliquée en particulier dans les régions à forte densité de puits pastoraux traditionnels, dont l’accès peut faire l’objet de règles subtiles. Ainsi, au Niger oriental, la présence d’une vaste nappe phréatique située à faible profondeur (nappe du Manga) permet aux éleveurs Peul d’entretenir un maillage serré de puits traditionnels au fond des cuvettes pastorales qui jalonnent les zones de parcours d’élevage. L’accès à ces puits et, indirectement, aux pâturages environnants repose toutefois sur une hiérarchie complexe de droits et d’obligations. Le groupe de familles résidant autour de la cuvette, et qui a initié la construction du puits, détient un accès prioritaire, mais non exclusif à l’eau, l’accès au puits est aussi ouvert à des éleveurs de passage, sous forme d’ententes, aux modalités très diverses. Ces ententes peuvent être conclues pour une durée définie chaque année ou seulement à la pièce, dès l’arrivée d’un berger. Si l’état des pâturages est médiocre, le nombre de jours accordé sera restreint, permettant alors de limiter le nombre d’animaux en surnombre par rapport à la capacité de charge du pâturage, capacité que l’éleveur connaît par expérience. À l’échelle de la région, la dispersion de points d’eau à faible débit dont l’accès est “socialement contrôlé” permet ainsi une meilleure répartition des charges animales et une exploitation optimale des pâturages, indépendamment de ses variations d’une année à l’autre.

A cause de leur valeur stratégique, certaines ressources font naturellement l’objet de droits d’accès plus restreints, bien définis et mieux maîtrisés. Ainsi, un réseau de mares d’hivernage ou de points d’eau profonds de saison sèche, un bassin, un puits traditionnel ou une bourgoutière peuvent devenir des points d’ancrage dans l’espace, des “terroirs d’attache” que l’on peut être contraint de quitter, mais où l’on finit par revenir (Akilou, Marty et coll., 1990).1

1 La notion de droits exclusifs sur une ressource est d’ailleurs difficile à cerner chez les pasteurs. Ainsi, chez les Maasaï du Kenya, la notion qui s’en rapproche le plus serait celle de aker, soit, au sens propre la portion étroite de pâturages adjacent au campement familial où sont gardés les animaux malades ou fatigués et, au sens figuré, le fait de déceler un comportement égoïste chez l’homme (Sarone Ole Sena, 1988).
L’occupation pastorale procède ainsi d’une dualité nécessaire entre de vastes territoires de parcours et des points d’attache où l’empreinte foncière est déterminante, puisqu’il s’agit de lieux d’appartenance, de repli et de sécurité. Ces ressources font parfois l’objet de droits prioritaires au profit d’une communauté et peuvent même évoluer vers des formes d’appropriation plus formelles au profit d’un nombre restreint de familles ou d’individus.

À l’inverse, les ressources moins stratégiques ou qu’il est plus difficile – et plus coûteux – de maîtriser efficacement peuvent faire l’objet d’un accès plus large, ce qui nécessite toutefois des ententes quant aux modes de partage. Lorsque les ressources sont éloignées ou qu’elles échappent à toute possibilité de maitrise de la part des pasteurs, la négociation devient un élément intrinsèque au système pastoral, en particulier s’il s’agit de pâturages de décrue, de résidus de récolte ou de zones méridionales de repli utilisées seulement de façon conjoncturelle.

Cette dualité reflète ainsi la nécessité de disposer à la fois de noyaux et de marges, le besoin constant de souplesse et l’acquisition “de l’ordre du centre par l’établissement du désordre à la périphérie” (Gallais, 1984). Dans ce contexte, l’appartenance territoriale s’accompagne avantageusement de contours délibérément flous. Cette absence de limites territoriales rigides n’est pas l’héritage d’une période ancienne où les densités démographiques auraient été plus faibles, mais procède d’une nécessité absolue, celle de maintenir l’imprécision sur la définition physique et sociale des parcours pour permettre une fluidité maximale dans l’utilisation pastorale qui en est faite (Behnke, 1994). Dans des milieux pastoraux où les ressources sont très déséquilibrées d’une année ou d’une saison à l’autre, la répartition spatiale des peuplements humain et animal doit être constamment modifiée. Selon les circonstances, les marges de manœuvre requises sont plus ou moins grandes, et aucun territoire ne doit être étanche.

Les ambiguïtés qui entourent avantageusement les limites des territoires de parcours exploitées par différentes communautés n’excluent en aucun cas l’existence d’un sentiment d’appartenance à une région plutôt qu’à une autre. Pour les Peul nomades du Niger oriental, par exemple, c’est le ngamdi, “zone d’attache” matérialisée par le réseau des puits profonds de saison sèche habituellement fréquentés. Cette trame foncière peut apparaître tout autant dans des régions pastorales où les eaux de surface prédominent. Ainsi, dans le nord du Burkina, où un chapelet de mares permanentes traverse de part en part la région de l’Oudalan, Barral emploie le terme d’”endodromie” pastorale – du grec endon et dromos, qui signifient respectivement “à l’intérieur” et “course” ou “parcours” pris au sens de déplacement – pour désigner les aires pastorales à l’intérieur desquelles s’effectuent, selon un cycle annuel, les déplacements d’un nombre à peu près constant de troupeaux et de la population qui les accompagne.

Même dans les régions très arides, où l’amplitude des mouvements pastoraux est généralement grande, l’accès aux territoires de parcours peut faire l’objet d’un contrôle. Ainsi, au Niger oriental, malgré un peuplement humain très lâche, l’emprise foncières des Toubou Teda et Daza se fonde sur “des droits de priorité dans l’usage” pouvant prendre de multiples formes: fonçage d’un puits traditionnel
ou cueillette de graminées sauvages (Chapelle, 1957). En outre, les marques de bétail fournissent constamment des repères quant à l’occupation des aires de parcours par les différents clans: pour les Toubou, les marques ont pour fonction, entre autres, de “quadriller l’espace” et d’en délimiter les contours (Clanet, 1994).

Le pastoralisme repose ainsi sur l’existence d’un faisceau de droits s’exerçant sur des ressources généralement dispersées, hétérogènes et aléatoires. Selon les circonstances ou selon la nature de la ressource, ces droits peuvent aller de la fréquentation occasionnelle d’aires pastorales proches ou lointaines jusqu’à l’instauration de mécanismes plus stricts de gestion lorsqu’il s’agit de sites stratégiques. L’accès aux ressources peut être solidement acquis ou, au contraire, soumis à une négociation chaque fois renouvelée, par exemple pour les contrats de fumure ou pour l’usage temporaire d’un espace de repli en situation de crise. En dépit des apparences, l’accès à l’espace et aux ressources n’est pas ouvert, mais il fait l’objet de diverses formes de contrôle. En toile de fond, des liens économiques et sociaux se nouent et se dénouent continuellement (Baxter, 1990, Potkanski, 1994). Compte tenu des contraintes dont les pasteurs sahéliens doivent s’accommoder, il s’agit véritablement “de solutions foncières originales à un problème apparemment inextricable” (Le Roy, 1994).

**Droit de communage (“right of common”)**

Le fait qu’une même ressource soit exploitée par plusieurs personnes qui doivent par conséquent se concerter et s’entendre sur son usage n’est pas le propre des pasteurs sahéliens, ni même africains. Ainsi, pendant plusieurs siècles, l’accès aux pâturages a revêtu en Europe un caractère communautaire encore vivace dans certains pays et qui a fait l’objet de règles particulières.

En France, on appelle ainsi “biens communaux” les biens laissés à la jouissance commune des habitants d’un village et “droits sur les communaux” les droits permettant de profiter de ces biens (Planiol et Ripert, 1926). En matière d’élevage, les droits d’accès sont de natures diverses. Le “droit de pâturage” autorise à faire paître toute espèce animale sur le fonds soumis à cette servitude, tandis que le “droit de pacage” est réservé aux bêtes à cornes. Le “droit de vaine pâture” est celui qu’ont les habitants d’une commune de faire pacager leurs animaux sur les fonds les uns des autres lorsque les terres sont en jachère ou dépouillées de leurs récoltes. Ces terres sont situées à l’intérieur de la paroisse et ne sont entourées ni de haies, ni de murs.

Enfin, le “droit de parcours” autorise deux ou plusieurs communes à s’envoyer leurs troupeaux à certaines époques de l’année sur le terrain l’une de l’autre. D’une certaine façon, il s’agit d’une vaine pâture dépassant les limites de la commune et s’exerçant “de clocher à clocher”. Les dispositions concernant l’exercice du droit de parcours varient d’une région française à l’autre. Dans cer-
tains cas, le nombre de bêtes pouvant en bénéficier n’est pas limité, tandis que, dans d’autres, ce nombre doit être en rapport avec l’étendue des terres soumises à cette servitude (Brissaud, 1904). Le principe d’un bien communal s’applique aussi aux ressources sylvicoles: le droit d’affouage – dérivé de l’ancien mot “affouer”, faire du feu – permet aux habitants d’une commune de prélever du bois pour la construction ou pour le chauffage dans une forêt appartenant à autrui.

Se pencher sur les interprétations auxquelles le principe de l’usage partagé d’un bien a donné naissance présente un grand intérêt. Cet examen permet en effet de mieux en saisir le champ juridique, surtout en Angleterre, avec les commons dont on retrouve l’existence dans la législation foncière des anciennes colonies britanniques d’Afrique de l’Est et d’Afrique australe, très influencées par la common law. Ces pays témoignent ainsi d’un large éventail des configurations qui revêtent les commons et des façons dont les États modernes se sont accommodés ou non de leur existence.

Le terme anglais common désigne le statut particulier d’une ressource qui est utilisée par une communauté de producteurs ou de consommateurs sans pour autant faire l’objet d’une possession individuelle (Oakerson, 1986). Le régime particulier des commons est antérieur au régime seigneurial. Du fait du système de rotation des cultures, les habitants des villages détenaient en commun le droit de faire pâturer leurs animaux sur les terres en jachère, de même que dans les prés et les terrains incultes. Les parties non cultivées avaient le statut de common property: le droit de pâturage constituait un “profit à prendre” par des individus sur des terres détenues par la communauté (Cheshire, 1972). Quant à la personne se prévalant de ce droit, elle est désignée du nom de commoner.

Dans la common law, le terme de common a deux significations. Il a commencé par désigner un “profit à prendre en commun”, c’est-à-dire le “droit de prendre une part déterminée des produits du sol ou des immeubles d’une autre personne”. Employé dans ce sens, le terme common a pour synonyme l’expression right of common. Avec le temps, cependant, le terme common a fini par désigner seulement le bien-fonds sur lequel “le droit de profit à prendre” peut s’exercer.

Le régime juridique des commons recouvre une multitude de droits: droit de pêche (common of piscary), droit d’extraire de la tourbe (common of turbar) et droit d’estouviers (common of estovers), lequel consiste à prélever sur les arbres qui poussent sur le fonds une quantité de bois suffisant aux réparations et au chauffage de la maison d’habitation à laquelle l’édit droit se rattache (Jenks et coll., 1923, Cheshire, 1972).

1 «En français, le terme ‘common law’ ne s’écrit ni en italique ni entre guillemets. La graphie et le genre sont normalisées» (Association du Barreau Canadien 1997).

2 “Common is a profit which a man has in the land of another. It is a species of profit à prendre” (Jowitt, 1977); “A right constituting a profit à prendre that may be enjoyed by one person in common with others including the owner of the land is known as a profit à prendre in common, right of common or common profit” (Anger & Honsberger, 1975).
Le droit de pâturage in common consiste à user de l’herbe du fonds en y faisant paître des animaux – avec le possesseur du fonds servant et avec ou sans d’autres personnes. Lorsque ce droit est appendant, seuls sont admis les animaux dont le profit est commun (commonable cattle), c’est-à-dire les chevaux et les boeufs (parce qu’ils servent au labour), ainsi que les vaches et les moutons (parce qu’ils donnent à tous de la fumure). Lorsque le droit est appartenant, il est permis de faire pâter d’autres animaux, tels que les porcs, les chèvres et les oies (Jenks et coll., 1923)

Le nombre d’animaux bénéficiant de la pâture peut être illimité (common sans nombre) ou, au contraire, prédéterminé (stinted common). La règle voulait que le droit de pâturage en commun ne s’applique qu’au bétail levant et couchant sur le fonds – en d’autres termes, au nombre maximal de bêtes pouvant être nourries durant l’hiver au moyen de la nourriture produite l’été précédent par le fonds.1

Il est malaisé de trouver des équivalents à ces termes anglo-saxons du droit des biens dans le vocabulaire juridique francophone, influencé par le Code Civil napoléonien. Toutefois, au Canada, en élaborant une terminologie bilingue de la common law,2 les juristes canadiens sont parvenus à établir des équivalences après de longues recherches historiques et linguistiques (Association du Barreau Canadien, 1997).

Afin de marquer la distinction entre ce droit et l’objet qui s’y applique, ces juristes ont opté pour la solution suivante: ils traduisent par “droit de communage” le terme common dans sa première acception (profit à prendre) et par “communage” le terme common dans sa seconde acception (bien-fonds auquel ce droit s’applique). Enfin, ils traduisent par “bien commun” l’expression common property et par “communier” le commoner (Association du Barreau Canadien, 1997).

Pour toutes ces raisons, nous retiendrons donc ici l’expression “droit de communage pastoral” – et, par extension, celle de “communage pastoral” – pour désigner le droit d’utiliser commun de ressources pastorales. L’équivalence “commons” utilisée fréquemment pour traduire l’anglais commons n’est en aucun cas satisfaisante. Dans l’ancien français, il est vrai, le mot “commun” pouvait désigner l’ensemble des habitants d’une “ville de commun” (c’est-à-dire une ville ouverte, par opposition à un château ou à une place forte) et, par extension, l’ensemble des pâturages et des bois étant exploités en commun par les habitants d’un village (Godefroy, 1968). Toutefois, ces usages sont tombés en désuétude, et le terme “communs” tend plutôt à désigner de nos jours l’ensemble des dépendances d’une propriété: cuisine, écuries, habitations du personnel de service (Fenelon, 1991).

1 Après plusieurs siècles d’usage, la règle de levancy et couchancy fut abolie par le Commons Registration Act de 1965, loi qui prescrivait l’enregistrement de tous les droits de pâturage et limitait le nombre d’animaux susceptibles d’en bénéficier (Commons Registration Act, 1965, Ministry of Housing and Local Government Circular 20/70, Londres ; Jenks et coll., 1925).

2 Cette terminologie française normalisée de la common law – la seule qui existe à notre connaissance – est le fruit de plus de dix années de recherches de la part d’une équipe canadienne composée de juristes et de juri-linguistes.
Plusieurs traits propres au “droit de communage” de la common law méritent de retenir l’attention. Tout d’abord, ce droit s’étend aux produits naturels du sol (res naturae) tels que l’herbe, les plantes, les pierres, le sable, le gravier, le poisson, la tourbe, le bois et le gibier, et non pas aux récoltes obtenues par le travail de l’homme ni aux produits manufacturés (Jenks et coll, 1923). Il s’agit donc plutôt d’un droit de prélèvement d’un produit brut de la terre, utilisé tel quel ou transformé ultérieurement.

Ensuite, en présupposant un intérêt commun liant le possesseur du fonds et les “communiers” (commoners), une procédure légale peut être entamée par l’une ou l’autre des parties lorsqu’elle s’estime lésée (Jowitt, 1977). Ainsi, le droit d’estouffeur en commun autorise les bénéficiaires de ce droit à intenter une action en dommages-intérêts contre le propriétaire du fonds si celui-ci a prélevé trop de bois et n’en a pas laissé une quantité suffisante.

Enfin, le droit de “prendre un profit en commun” n’entraîne pas l’accès à la propriété du fonds; il tend même à exclure cette possibilité. Cependant, nous l’avons vu, le terme common a évolué pour ne plus désigner aujourd’hui que le bien-fonds sur lequel le droit de communage s’exerce (Halsbury, 1973). A cette source de confusion possible, s’ajoute le fait que l’expression anglaise common property a été parfois traduite dans la documentation en français sur le pastoralisme africain par “propriété collective”, ce qui laisse entendre à tort qu’il s’agit de la propriété commune d’un bien-fonds (ownership in common).1 Il serait donc plus exact de parler de “bien commun”, ou, mieux encore, de “tenance commune”,2 qui peut exclure la propriété et désigne davantage la mise en commun d’un profit.

Est-il pertinent de recourir à la notion de communage (“commons”) pour traiter du pastoralisme en Afrique et, plus particulièrement, dans le Sahel ouest-africain?

Force est de reconnaître que les ressources pastorales au Sahel et leurs modes d’exploitation possèdent des grands traits marquant d’un régime de communage: pâturages et points d’eau sont exploités de façon simultanée ou successive par plusieurs communautés ou individus; ces ressources étant généralement aléatoires et dispersées dans l’espace, il est très malaisé de les fragmenter ou d’y instaurer des droits d’usage exclusifs; enfin, le rythme de consommation de ces ressources dépend du nombre d’usagers, chacun d’eux privant les autres d’une part de son “profit à prendre” dans l’immédiat ou ultérieurement (Williams, 1998).

Parce qu’il reflète mieux la réalité pastorale que ne le fait le régime de la propriété privée, le système conceptuel qui sous-tend le communage est devenu tout naturellement un outil d’analyse des stratégies d’occupation de l’espace et de gestion des ressources partagées (pâturages, mais aussi territoires de chasse ou de

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1 tel que défini par la notion de ownership : “a person having ownership has the fullest group of rights that a person can legally have, including at least some of the rights to occupy, possess, use, abuse, use up, let out, lend, transfer, sell exchange gift, bequeath and destroy” (The Oxford Companion to Law, 1980).

2 Common Tenancy – tenance commune : “Type of tenancy in which tenants hold property in common without right of survivorship. May be holding of unequal shares among tenants” (Association du Barreau Canadien, 1997).
pêche, forêts communautaires etc.) et ce, non seulement en Afrique, mais dans le monde entier.

Dans le cas particulier des pays francophones d’Afrique de l’Ouest, très influencés par le Code civil napoléonien, le recours au concept de communage pour traiter des questions pastorales présente d’autres avantages. En permettant d’examiner ces questions sous une lumière différente de celle du régime de la propriété privée, il confère une légitimité juridique aux systèmes pastoraux : le communage pastoral n’est ni un anachronisme, ni un régime éphémère d’exception destiné à être remplacé par la propriété privée.

Il va de soi, cependant, que la spécificité et la diversité des pastoralismes africains exigent de manier avec précaution cet outil de réflexion et d’analyse. Dans le Sahel ouest-africain, par exemple, le partage des ressources pastorale répond à des impératifs particuliers – mobilité, flexibilité, réciprocité – liés à la nature même de ces ressources pastorales, qui sont dispersées, aléatoires et dont la productivité fluctue d’une année à l’autre. L’exercice du communage pastoral y revêt ainsi de multiples formes, qui imposent des limites évidentes à tout effort de construction théorique d’un régime de tenance commune uniforme et codifiable. Sur le terrain, l’occupation pastorale se fonde en effet sur un chevauchement continu de revendications territoriales entre différents usagers et sur un processus de contestations, de négociations et d’accords temporaires quant aux conditions d’accès à ces ressources (Scoones, 1994). Le champ est ainsi ouvert à une multitude d’ententes, de convenances foncières et de hiérarchies de droits dont une typologie, même détaillée, ne parviendrait pas à rendre la richesse, ni la complexité. Loin de déboucher systématiquement sur la violence, le conflit – et la négociation à laquelle il donne lieu – constitue d’ailleurs un facteur indispensable de changement et de redéfinition des frontières spatiales entre communautés d’usagers.

Dans le contexte africain, l’étude du communage pastoral ne peut être que pluridisciplinaire, ce qui enrichit le débat et permet d’aborder les questions fondamentales des comportements collectifs et individuels, des conditions d’émergence ou de maintien de systèmes de communage, du rôle de l’État et des enjeux économiques et politiques entourant les ressources pastorales. En effet, le fonctionnement d’une tenance commune ne s’explique pas seulement par la somme des comportements individuels des usagers de la ressource, mais aussi par la dimension sociale et politique que revêt cette tenance et, donc, par l’évolution des rapports de force entre les usagers, ainsi qu’entre eux et l’État (Peters, 1987). Dans un régime de tenance commune, chaque situation mérite alors d’être examinée au cas par cas, en tenant compte de la valeur changeante de la ressource et de la capacité du groupe de s’investir dans l’exercice d’un droit sur cette ressource. Il faut donc également replacer le droit de communage pastoral dans le contexte plus large des systèmes d’exploitation des ressources par les communautés qui se prévalent de ce droit et de l’évolution historique de ces systèmes (Cousins, 1995).
L’Etat et le communage pastoral au Sahel


Ces réglementations se sont révélées inefficaces, du fait, entre autres, de leurs nombreuses difficultés d’application pratique. En théorie, ces réglementations obligaient les administrateurs à assurer une présence presque continue dans les zones pastorales. En outre, toute fermeture arbitraire d’une station de pompage par un Commandant de Cercle était très difficile à faire admettre par les populations. Rapidement, l’accès aux points d’eau modernes devint de facto public, ce qui engendra de nombreuses perturbations du milieu pastoral, surtout dans les régions exploitées à partir de points d’eau traditionnels, dont les règles d’accès coutumières permettaient auparavant aux pasteurs de gérer au mieux les pâturages (Thébaud, 1990).

Après la sécheresse de 1973, les politiques de développement de l’élevage ont surtout visé à mieux “organiser” l’espace pastoral et à en “rationaliser” l’utilisation, les démarches adoptées pour ce faire étant très diverses: stratification des zones selon une vocation naisseuse (zones pastorales), d’embouche (zones agropastorales) et de finition des animaux (régions agricoles); découpage des parcours d’élevage en unités pastorales affectées à des communautés et faisant l’objet de

1 L’approche fondée sur la stratification de l’espace s’est soldée par des des succès mitigés, notamment au Sénégal, avec la mise en place, en 1975, de la Société de Développement de l’Elevage en Zone Sylvo-Pastorale (SODESP). Le système mis au point visait la reconversion du troupeau sahélien actuel (31 % de mâles, 69 % de femelles) en un troupeau de type naisseur intensif à très grande dominance de femelles (88 %), (...). Cet objectif suppose que, contrairement aux pratiques actuelles, les jeunes mâles soient commercialisés peu après leur sevrage, mis en réélevage durant 20 à 24 mois dans des structures appropriées puis en embouche de finition avant l’abattage» (Deramon et coll., 1984).
plans de gestion;1 mise en place d’institutions rurales chez les éleveurs (coopéra-
tives, groupements pastoraux etc.); ranchs para-étatiques visant à promouvoir au-
près des éleveurs “des techniques modernes de gestion des pâturages et du
cheptel”.

Au terme de plusieurs décennies de développement pastoral, le bilan reste
toutefois très mitigé: les tentatives successives menées par les pouvoirs publics
pour définir et faire appliquer des modes alternatifs de gestion des ressources pas-
torales ont connu des succès limités, et ce constat n’est pas propre au Sahel ouest-
africain. Les essais d’affectation collective des parcours d’élevage ou de privatisa-
tion des pâturages, en particulier, ont fait ressortir les conséquences néfastes, sur
les plans social, économique et écologique, d’une restriction de la mobilité pas-
torale, d’un contrôle des charges animales et de l’instauration de droits exclusifs sur
les ressources (Thébaud, Grell et Miehe, 1995)

A bien des égards, ces approches ont également permis de mesurer pleine-
ment la complexité des systèmes d’élevage au Sahel et d’apprécier leur bien-fondé.
En effet, compte tenu du caractère disséminé, imprévisible et hétérogène des res-
sources naturelles, le recours prédominant à la mobilité pastorale comme stratégie
de base reflète la nécessité constante, pour les pasteurs, de compenser l’alternance
de périodes de bonne et de mauvaise productivité des pâturages en tirant parti de
l’hétérogénéité des ressources plutôt que de miser sur leur stabilité ou leur ho-
mogénéité. Qui plus est, la mobilité des troupeaux permet une gestion des res-
sources qui est la moins dommageable pour l’environnement et tire un parti
optimal de la biomasse disponible annuellement (Behnke et Scoones 1993). Par
ailleurs, l’étude de la dynamique de la végétation sahélienne sur de longues périodes
tend à montrer que la production primaire est davantage influencée par des fac-
teurs exogènes (tels que la pluviométrie et les sécheresses) que par des facteurs en-
dogènes comme la charge animale. En fait, le piétinement et le brotage par les
animaux auraient des effets plutôt bénéfiques sur la strate herbacée et sur sa stabili-
ité (Thébaud, Grell et Miehe, 1995). En fin d’analyse, la végétation sahélienne
démontre une grande résilience, face à la pâture et aux variations climatiques
(Hiernaux, 1996).

En légiférant dans le domaine foncier, l’État s’est également prononcé sur le
statut des pâturages et des points d’eau. Au cours des années 80 et 90, en particu-
lier, certains pays sahéliens ont conçu des réformes foncières importantes – tels le
Burkina Faso, avec la Réorganisation Agraire et Foncière (RAF), et le Niger, avec
son Code Rural.

Adoptés en 1993 à l’issue d’un long processus consultatif, les Principes
d’Orientation du Code Rural reconnaissent aux pasteurs deux droits fonda-
mentaux: le droit “d’usage en commun des parcours” (Art. 24 à 27) et le “droit

1 Le concept d’unités pastorales a été appliqué au début des années 80, entre autres, au Sénégal, avec
le Projet de Développement de l’Elevage dans le Sénégal Oriental (PDESO) et, au Niger, avec le
Projet de Développement de l’Elevage dans le Niger Centre-Est (PDENCE).

Très différente, la Réorganisation Agraire et Foncière promue en 1984 par le Capitaine Thomas Sankara s’appuie sur une démarche volontairement aménagiste. Dans chaque région, des Schémas d’Aménagement du Territoire (SAT) délimitent les zones à vocation pastorale et établissent les modalités de leur aménagement (Art. 54. L’exploitation de ces zones est soumise à la délivrance, par l’administration, d’un titre de jouissance réservé aux groupements, aux coopératives, aux associations et aux fermes publiques (Art. 159). Chaque zone pastorale donne lieu à l’élaboration d’un Cahier de Charges par une Commission Interministérielle (Art. 147 et 160). En outre, le mode de gestion de ces zones par les pasteurs est prescrit par la loi: exploitation par rotation de parcelles délimitées et mises en réserve ou en défens (Art. 54 à 58).

Finalement, le législateur ne reconnaît aux pasteurs que des droits très partiels, sans intégrer pour autant le principe d’une tenance commune des ressources. La RAF au Burkina, ainsi que le Code Rural nigérien – malgré son approche apparemment en faveur des pasteurs – confèrent à l’Etat des pouvoirs qui sont, en théorie, considérables. Entre autres, l’étendue du mandat consultatif et décisionnel qui est confié à l’administration se vérifie dans tous les domaines, surtout dans la définition et le contrôle des modalités de mise en valeur.

Du fait de sa démarche éminemment aménagiste, la RAF burkinabé confère à la “mise en valeur” le sens d’investissements physiques, en particulier, sous forme d’infrastructures: “parcellement, délimitation de pistes à bétail, création de points d’eau, construction de parcs à vaccination, de marchés à bétail” (Art. 55). De manière détournée, cette vision de la mise en valeur pastorale peut entraîner la plupart des effets pervers liés à la privatisation des pâturages: ceux qui détiennent une influence quelconque ou des capitaux à investir sont automatiquement favorisés, au détriment des autres.

Au Niger, l’article 27 du Code Rural aborde la mise en valeur pastorale par le biais de la protection des ressources et de leur exploitation durable. Ces notions étant très floues, le Comité national du Code Rural fut contraint d’introduire en 1997 un recueil de textes complémentaires destinés à préciser, entre autres, la position de l’Etat quant à la mise en valeur des terres rurales. En milieu pastoral, il est
étalé que "la mise en valeur des ressources pastorales consiste en toutes actions ou activités matérielles par lesquelles un éleveur exploite les pâturages et l'eau pour accroître ou améliorer la production et la reproduction du capital-bétail tout en favorisant et en respectant le cycle de renouvellement de ces ressources". La mise en valeur est périodiquement contrôlée à travers les Commissions Foncières, à leur propre initiative, ou à celle d'un tiers (individu ou communauté). Ces Commissions Foncières peuvent également déterminer pour une période donnée le contenu et les critères de la mise en valeur rurale. L'obligation de mise en valeur touche surtout les espaces sur lesquels les pasteurs jouissent d'un droit prioritaire. Les communautés pastorales qui ne respectent pas les obligations légales ou réglementaires de mise en valeur peuvent être privées de ce droit de jouissance (Comité National du Code Rural, 1997).

En fin de compte, la volonté des États sahéliens d’intervenir dans la gestion des ressources pastorales au Sahel émane d'une vision négative de l'élevage et des éleveurs, dont la célèbre "Tragedy of the Commons" annoncée par Hardin (1968) n’a fait que capturer l’essence, ce qui explique en partie l'influence, encore aujourd'hui de cet article sur les politiques de développement pastoral au Sahel (Vedeld, 1993, Thébaud, 1999):

le pastoralisme est un facteur important de dégradation de l'environnement et, par conséquent, de désertification, à cause de systèmes d'exploitation inadéquats qui entraînent inexorablement la surexploitation des pâturages. Afin d'empêcher une telle tragédie de se produire, il faut alors privatiser les pâturages ou en réglementer l'utilisation pour obliger les éleveurs à limiter leur nombre d'animaux, chaque éleveur étant contraint d'adapter la taille de son troupeau à l'espace qui lui est affecté.

Dans tous les cas, l'intervention de l'État est juridiquement nécessaire et justifiée (Roe, 1988): la gestion durable des ressources par les pasteurs ne pouvant être prise pour acquise, l'État s'estime donc contraint d'en définir les modes d'utilisation.

Au Niger et au Burkina Faso, la législation foncière repose ainsi sur une politique s'exerçant de haut en bas, même si, à certains paliers, pasteurs et agropasteurs sont, en principe, consultés. En dépit d'une politique officielle de gestion décentralisée des ressources par le milieu rural, l'État légifère, décide des modes de mise en valeur et établit les critères de déchéance des pasteurs de leurs droits.

Certes, ces législations ne sont guère appliquées. Ainsi, au Burkina Faso, la RAF burkinabé se présente comme un recueil de dispositions qui sont généralement méconnues des communautés ou des administrations locales et ne fournissent toujours pas un cadre favorable à la gestion des conflits fonciers. Toutefois, malgré leur apparente neutralité, ces textes contribuent à entretenir la confusion régner quant au statut des ressources pastorales et à mettre les pasteurs en situation de précarité, face, notamment, aux agriculteurs, dont les droits sont plus solide et débattus. Du fait que les instruments prévus par la RAF (Schémas d'Aménagement du Territoire) ne sont toujours pas en place, le statut des terres pastorales au Burkina demeure dans un flou complet. Au Niger, malgré une démarche conceptuelle apparemment en faveur du pastoralisme, le Code Rural
remet à l’administration le pouvoir d’affecter les ressources, de définir leurs modalités d’exploitation et de contrôler cette exploitation.

Parallèlement à ces réformes foncières, l’État s’immisce depuis longtemps – par d’autres moyens – dans la gestion des ressources pastorales. Au Niger, l’implantation d’ouvrages hydrauliques modernes a considérablement affaibli le degré de maîtrise que les pasteurs détenaient auparavant sur les ressources en eau.

En fin de compte, en s’appuyant sur un corps imposant de mesures législatives, institutionnelles et réglementaires inadaptées – voire franchement hostiles – au pastoralisme, l’État a tenté de se substituer aux pasteurs dans la gestion des ressources sans pour autant apporter d’améliorations techniquement, économiquement et socialement viables. Ce faisant, l’État a restreint les marges de manœuvre dont disposent les pasteurs sahéliens dans le domaine foncier. Dans certains cas – notamment par le biais de l’hydraulique pastorale moderne – son action a même eu paradoxalement tous les effets pervers de l’accès public aux ressources que l’on attribuait en général au communage pastoral (Wily, 1998), et que l’État a fini par substituer aux systèmes d’accès contrôlé qui prévalaient auparavant.

Conclusion

Le pastoralisme sahélien traverse une crise foncière aux racines profondes et anciennes que les sécheresses de 1973 et de 1984 n’ont fait qu’exacerber et dont les manifestations sont très diverses: tensions et conflits entre communautés pastorales au sujet du contrôle des pâturages et des points d’eau, mobilité des troupeaux handicapée par la mise en culture des couloir de passage et par la réduction des aires de pâture dans les régions méridionales, difficultés croissantes d’intégration de l’élevage dans les zones agropastorales et agricoles où les pâturages cèdent le pas aux nouveaux défrichements agricoles, conflits entre agriculteurs et éleveurs, préjudices grandissants causés aux pasteurs et à l’élevage par chaque nouvelle sécheresse.

Le rôle joué par l’administration coloniale, puis par les États modernes dans la gestion des ressources pastorales a notamment constitué un facteur important de perturbation, dont l’on commence seulement à mesurer les conséquences (Thébaud, 1999).

Plusieurs arguments militent donc en faveur d’une véritable décentralisation des pouvoirs de gestion des ressources au profit des pasteurs et des agropasteurs: diversité extrême des configurations foncières, limites évidentes des administrations à se substituer aux communautés dans la gestion des ressources et difficultés de concevoir une législation parfaitement adaptée à la diversité des situations pastorales sur le terrain.

Amorcée depuis la fin des années 80 dans la plupart des pays sahéliens, cette décentralisation soulève toutefois plusieurs questions de fond. Tout d’abord, le principe même d’une dévolution des pouvoirs d’affectation des ressources aux
communautés contredit souvent les lois foncières en vigueur, qui confient ces pouvoirs à l’État. Ensuite, dans bien des cas, la faiblesse des capacités institutionnelles des pasteurs et des agropasteurs constitue un handicap difficile à surmonter à court terme: face à l’administration, ils sont peu organisés, leur représentation est souvent faible, et leur poids politique rarement déterminant. Dès lors, “les processus de décentralisation en cours risquent d’entraîner une aggravation des distorsions induites par les politiques antérieures de développement” (Toure, 1998). Enfin, l’État garde le privilège de déterminer la taille et les limites territoriales des nouvelles collectivités locales décentralisées, même si en principe, ce découpage devrait s’appuyer sur un long processus de consultations à la base – exigence particulièrement importante dans des contextes pastoraux où l’occupation de l’espace par les communautés est fluctuante et où les aires de parcours se chevauchent (Marty, 1996b).

Les enjeux posés sont d’une importance capitale, car, à bien des égards, la pratique du pastoralisme au Sahel se fonde sur la capacité des communautés pastorales et agropastorales d’utiliser en commun les ressources, et selon des règles qu’il revient avant tout aux usagers eux-mêmes d’établir et de modifier au besoin.

Dans ces conditions, au delà d’une nécessaire redéfinition juridique des droits fonciers des pasteurs et des agropasteurs, “seules des décisions négociées entre les parties concernées sont en mesure de sécuriser les droits et les usages” (Marty, 1996b). Dès lors, on ne peut se pencher sur le foncier pastoral sans s’interroger également sur le rôle fondamental d’arbitrage que l’État doit jouer dans la gestion des ressources pastorales et dans le maintien de la paix civile. Il s’agit là d’un rôle délicat. D’un côté, l’État doit s’affirmer en tant que promoteur et garant de règles d’accès et d’usage aux ressources qui soient mutuellement satisfaisantes et acceptables pour les usagers concernés (Rojat, 1991). De l’autre, il lui faut éviter de trop s’immiscer dans la définition de ces règles par les communautés concernées. Plutôt que de constituer des prescriptions imposées par le législateur, les règles qui régissent l’occupation de l’espace et l’exploitation du milieu doivent alors se présenter comme des cadres de référence visant en premier lieu à faciliter les négociations entre les usagers de ces ressources (Requier-Desjardins, 1998).

Depuis la fin des années 80, les questions liées à la gestion de l’espace et à l’accès aux ressources pastorales s’inscrivent aussi dans un processus complexe de transformation des Etats sahéliens: programmes d’ajustements structurels axés sur la libéralisation des prix et des marchés, émergence du secteur privé, désengagement de l’État de certaines fonctions, en particulier de la santé animale et de l’entretien des infrastructures hydrauliques (Toure, 1998). C’est dans ce contexte, également, que les pasteurs et les agropasteurs devront dorénavant faire valoir leurs droits.

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Tuareg Notions of Space and Place in Northern Mali

Gunnvor Berge

Introduction

Tuaregs do not only live in and make a living from the Sahara Desert and its shores. They have their own ways of understanding, interpreting and relating to these surroundings. In the following, I attempt an analysis of the ways in which Tuaregs in the Adagh in Mali construct their place, the way in which the assessments of places are expressed through the thriving of humans and animals, and how place and water are transformed into the values “milk” and “health”.

Different cultural and social groups see and interpret the landscape in different ways. The same environment does not look the same to a cultivator as to a pastoralist, even physical features such as rain or vegetation are interpreted and understood in relation to contrasting uses and experiences. Such cultural realities inform the practices of day-to-day life (Young, 1992:270–271), and the ways in which resources or assets are seen and handled. I follow Rodman (1992:643) in defining a place as a unique reality whose meaning is shared and thus links experienced place to culture and to the past.

Among cultivators, the work undertaken to maintain the materiality of a place is visible; fields are prepared, sown and harvested, fences are maintained and houses, granaries and roads are constructed and then in need of repair. What I try to argue is that Tuareg production and maintenance of place is social rather than material. The way in which Tuareg living moulds the surroundings leaves few material traces, and thus their “place” needs to be constantly made and remade, created and negotiated. People’s attachment to place expresses itself in a feeling of familiarity, in health and thriving, not in territorial exclusivity or material manifestations of identity. Moreover, their produced “localities” or places are only to some extent localised. The nomads’ attachment to place, I maintain, is obtained through the perpetual but predictable movements of people, of water and of animals.

Tuaregs live in an environment where the only thing that is predictable is the unpredictability of rainfall and pasture from year to year and area to area. Rather than talking about risk, uncertainty, variability and unpredictability, they talk about luck. Through a discussion of luck I conclude by suggesting some connections
connections between Tuaregs’ creation of the world as they know it and the ways they act in it.

Aman iman: “Water is life”...

*Aman iman* – “water is life”. This first part of an oft-repeated Tuareg proverb stresses the importance of water to Tuaregs. The Adagh lies in the Sahara. No permanent rivers run through the Adagh, no permanent lakes exist. No place merits the associations of luxuriance evoked by the term “oasis”. To people of the area, however, the Adagh does not merely enable them to eke out a simple living.
The Adagh is also imbued with qualities making them feel that their lives are most fulfillingly lived there. An *eruj* – in English often referred to as a wadi – is a water catchment into which higher-lying areas pour water when it rains. In July/August, when most of the rain falls, a wadi can become a veritable river for a short period of time. A water catchment is a relatively fertile area compared to the dunes, rocky stretches and mountainous areas surrounding it. A wadi contains herbs for grazing and trees for shade. Often, small annual wells, 2–4 m. deep, may be dug in the bottom of the wadis as the temporary pools and rainfed lakes dry up. Small wells allow people to extend the period of grazing independent of the labour-intensive, deep, dry-season wells.

“Water is life”. Tuaregs map their surroundings in relation to wadis, to water catchments. By knowing which wadi “pours” water into which other, nomads relate one catchment to another. Such knowledge gives an idea about the relative amount of water received by different wadis. The lower the catchment, the more wadis pour water into it or its tributaries, the more water it receives, and the more substantial are its pastures.

Many parts of the Adagh are less mountainous than the name Adagh – “the Mountains” – suggests. Distances are often great, changes in altitude limited. It was not always obvious to me which wadi would receive water from which others, and into which they, in turn, would pour water. The knowledge of how each wadi is connected to the others can be learned by observation, but only during the very short period when water actually flows. Usually, the older people teach the younger about these connections while the pastoralists are travelling.

Some wadis extend over long distances. They twist and turn among the dunes and rocky hills. People identify a part of their surroundings as a wadi by referring to it by the same name. Smaller wadis lose their names to the bigger ones when they “give” their water to these. Smaller wadis are talked about as the more central wadi’s “arms”. Finally, all the wadis of western Adagh “give” water to Tilemsi, a large wadi that runs all the way from Kidal to Gao. During a short rainy season, Tilemsi gives water to the Niger River. In the old days, people say, Tilemsi flowed not only during the rainy season. It was a river all year long, as the Niger River still is.

Mountains or slopes are connected to wadis through “giving” water to certain catchments. If one climbs a hill or mountain from a wadi, one finally reaches what in Tamasheq is designated as *eghab* – the head. The “head” is the water divide between the catchment areas of two separate wadis. Knowing how water flows also enables people to pinpoint places with accuracy. For instance, while drawing my attention to some distant barely discernible protrusions, the man with whom we were travelling explained: “Over there is where the wadi Tasingit gives water to Alket”.

Water is, thus, pivotal to the way in which people talk about their surroundings. A focus on water permits people to see their surroundings as connected. Water flows link slopes, hills, mountains and wadis. The movement of water ties great
areas together and serves as a common denominator with which to talk about both valleys and mountains. That people conceptualise their surroundings in this connected way is expressed in phrases like: “The mountains of the wadi Ejjerer give water all the way to the Tilemsi”, and “That is an arm of the wadi Ejjerer”. For nomads, the number of days a wadi flows after a rainfall, the number of subsequent flows and the period of time that elapses between each flow are the central indicators informing how much pasture that wadi will offer the following year. This is because not only total precipitation but the amount of rain falling and the timing between rains determine vegetation growth (Gallais, 1967:220; Bernus, 1974:14–15; Berge, 2000: 266–268).

Ax isudar: “milk is the food”

For Adagh Tuaregs the wadi is a source of life. But more than that, it provides the essence of the good life. At akasa – “the green period”, “the period of abundant pasture” – in our time reckoning between July and September, life is at its easiest. Water and pasture are at their most plentiful, allowing people to live closest together. Much socialisation takes place, people visit, talk and exchange news, and enjoy each other’s company. At night the young gather to sing and amuse themselves.

The proverb by which I started the previous section continues: ax isudar – “milk is the food”. When interpreting this proverb, Tuaregs would often point to the fact that iman refers not only to life but to “spirit” or “soul”. As I understand it, the saying is commonly interpreted to mean that water is the basis for all life, while milk is the transformation of water (with the help of pasturing animals) into the good life.

During akasa there is more milk than during any other period. While we know that nomads have exchanged animals and animal products for dates and cereals for centuries, many nomads hold that by preference they consumed only milk. The strong preference for milk as a basic food among nomads has often been commented upon in the literature (e.g. Bovin 1988 concerning the particular value of milk among Fulani pastoralists). For Tuaregs the basic diet was fluid; solid meals were not sought, cherished nor deemed necessary. Meals, as this concept is understood in English, did not exist. According to Adagh Tuaregs themselves they lived basically on a milk diet until the 1973 drought; the drought created a habit of adding grain to milk. Today, people have grown accustomed to complementing their milk/butter consumption with cereals and pasta even when milk is plentiful.

Tuaregs consume milk from camels, cows, sheep and goats. Camel’s milk is considered particularly “warm” and more fit for consumption by men than by women or children in particular. Everybody can consume the other forms of milk without falling sick, but goat’s milk is considered particularly appropriate for children. Although Tuareg food habits increasingly include cereals, milk still has a par-
tic particular place in people’s minds, in poetry and in children’s songs. Through poetry, Tuaregs celebrate the good life and express their appreciation of what they find beautiful. A beautiful camel, a brave man or an attractive woman, as well as a wadi to which one is attached and milk from one’s animals, may be praised in songs.

Making sense of the wadi

Tuaregs tend to emphasize that what is good for one person or group may be bad for others. Tuaregs say they prefer the wadi because that is the place they know. Intimate knowledge makes them able to see the existing possibilities offered by the wadi. They may gather wood, wild-growing plants and fetch water without compensating anyone. Therefore life in the wadi bestows a feeling of liberty on those who know it well. “Our love for the wadi is tied to liberty, to our love for the animals, and our love for milk. Nature exhales pure air. Nature exhales air that is pure. The wadi belongs to everybody, and money does not enter into life”, a middle-aged man explained.

Tuaregs who live in the village of Kidal or have moved to far away towns on labour migration, join their relatives in the wadi during the rainy season if possible. They do so, I was told, because they are happy when in the wadi. A woman who left her house in the village for the tent of relatives in the wadi every year, said: “We leave the village because of milk; that’s all”.

Life in towns requires domestic work; life in the wadi during the period of plenty requires little other than milking. Some mentioned the refreshing cold nights, the feeling of strength and fitness with which they awoke in the mornings, the pleasant smells in the wadi. “We are so attached to the wadi”, a middle-aged man put it, “simply because life there pleases us. Life there is healthy. The stars are beautiful. They are important to us. It is always important to look far ahead, to see as far as possible”.

Life in the wadi during the rainy season allows Tuaregs to maximise what they most love, and to minimise what they most despise. It allows them to amuse themselves with relatives and friends. It allows them to reduce work to a minimum. Life in the wadi during the period of plenty allows people to eat well and drink well without much effort. It alleviates the feeling of poverty that predominates during periods of scarcity. If it were not for the feeling of hunger, people repeatedly told me, life in the Adagh would surpass life anywhere else.

In the Adagh, every nomad has one or a few wadis to which he or she feels particularly attached and which s/he will name when asked about her/his akal. The term akal is often translated as “earth”, “land” or “country”, but it was also said to connote “landscape” or “environment” in a less territorial way. If pastures, water or wind at a particular place are experienced to have a favourable influence on a body, Tuaregs referred to this by the term esghhat (or azelijelu/amezileju). French-speaking Tuaregs translated the term by such varying words as “health”, “climate”
or “milieu”; esegbat-\-n-\-akal is the health or milieu of the ground; esegbat-\-n-\-aman is water with a good “milieu”; esegbat-\-n-\-adu is wind that brings health.

Dry season wells are man-made, and property rights to wells are clearly defined and exclusive. Rights are accompanied by a feeling of attachment to the water of that particular well. Nomads claim that their animals feel the same attachment. Tuaregs explained this by pointing to the fact that water from different wells tastes different. It is to the taste of one’s particular well that people feel attached, an attachment manifesting itself as a longing to return year after year. In the Adagh, people explained why camels found their way home, after having been sold as far away as in Algeria, by referring to the strength of their yearning for their habitual well or wadi.

This longing, when satisfied, translates into good health. The idea is widespread that a body, whether human or animal, thrives on water or pasture to which it is accustomed. Thus water that has health for one being may not necessarily be healthy for others. A sickness, referred to as amgharas, may result from having to drink water to whose “climate” one’s body is not accustomed.

If at all possible, then, people prefer to stay around the wells to which they and their herds are accustomed during the dry season. Then as soon as word reaches a camp that their particular wadi has “flowed”, they start preparing to return. And in the wadi itself, particular families tend to camp at the same place. Particular tents and camps have no exclusive right to a particular site, but hope to find their habitual site unoccupied.

The term *ihan\-\-\-zagh* has been described as the yearly itinerary a camp prefers to follow if circumstances are favourable (Bourgeot, 1981). Ag Mahmoud, describing Tuaregs living in the Gourma south-west of the Adagh, uses *ihan\-\-\-zagh* to refer both to the itineraries a camp or a tent habitually follows and to the preferred camping grounds that punctuate the itinerary (Ag Mahmoud, 1992:52). In Kidal, *ihan\-\-\-zagh* was defined to me as the places at which one is used to pitching one’s tent and those to which one prefers to return if conditions permit. Two elderly brothers, who, upon moving their camp, had found their habitual camping ground occupied, exchanged ideas about their conceptualisation of the term *ihan\-\-\-zagh*:

1. It is the place where one prefers to be. The only reason to leave one’s *ihan\-\-\-zagh* is lack of pasture. If there is gold somewhere else and pasture there, one does not leave it.

2. In every wadi one has one’s *ihan\-\-\-zagh* – “the best place”. It is the place where one is used to living, and to which one returns. Our *ihan\-\-\-zagh* is somewhat further on, but now others live there. Those living there have another *ihan\-\-\-zagh*. If they move on to their *ihan\-\-\-zagh*, we move to ours. We can’t drive them away. Now we will stay here until the next rain falls, to see if they move after that.

Both in the Gourma and in the Adagh, nomads prefer to move from one place they know to another. In the Adagh, the term *ihan\-\-\-zagh* was used to emphasize the punctuations of the itineraries, the habitual places of staying on the preferred orbit. In the Gourma “[ihan\-\-\-zagh] refers to] the area where one habitually comes to ma-
ture during one’s life, and the construction of the term indicates an idea of habit, of repetition”, according to Ag Mahmoud (1992:53).

In the Gourma emphasis was placed on the circuit of movements between punctuations (Bourgeot, 1981) or on both the orbit and the camping ground (Ag Mahmoud, 1992). Both in the Adagh and in the Gourma, *ihanxzagh* evokes a feeling of attachment and belonging. Whether the emphasis is on the camping ground or on the circuit, *ihanxzagh* denotes habit in relation to space: turning space into place.

Apart from *ihanxzagh*, other terms are also attached to places where one has camped previously, to designate a specific relation between that place and a tent. *Tamaxert*, implying “here we’ve been before”, was used to designate a camping ground used once earlier. A *tamaxert* has not yet become *ihanxzagh*, and the attachment to the place is not yet considered significant. Sometimes particular camping grounds are left because vermin are too numerous, or because of a particular event of which one does not want to be reminded. People will choose not to return to a camping ground where a death occurred. *Timxar* — “an old place” — refers to a place, which was previously used as a camping ground but which has been abandoned as *ihanxzagh*.

I find it instructive to distinguish between Tuareg nomads’ emotional attachment in space to wadis on the one hand, and camping grounds on the other. Their attachment to a wadi increases with time, with their increased knowledge of its possibilities. Camping grounds within these wadis are commonly changed, and nomads never become fixed to a particular place to the extent that cultivators do. Whereas attachment to wadis seems strong and enduring, attachment to particular places is experienced as strong but floating, and people discontinue their attachment to a particular camping ground and create new attachments for several reasons.

**Making sense of the waste**

Tuaregs in the Adagh conceptualise the space in which they live and which we refer to as desert as being divided into two major categories, the wadi and the waste. Outside the wadis, encircling the wadis, is *tenere* — “the emptiness”, “the wide open spaces”, “the waste”. *Tenere* or *essuf* (cf. Spittler, 1989:274), which people said was translated as *Sahara* in Arabic and which I will refer to as “the waste”, is perceived to have an antisocial quality. It is the experienced manifestation of the notions of emptiness and solitude. Life cannot be sustained in the waste, but humans and animals have to traverse these wide open spaces to go from arm to arm of the life-supporting wadis.

There is no recognised right of ownership in the *tenere* today, no ties of attachment. Wastes are spaces to traverse, not places in which to linger. Wastes are voids through which paths cross as thin lines of sociality. Today, no particular
rights exist to these paths that criss-cross the waste, although in pre-colonial times, when trans-Saharan trade was flowering, certain Tuareg groups gained an income from controlling trade routes. But income was derived from the ability to offer protection and not attached to ideas of rights in ownership to these paths (Berge, 2000).

Other researchers have also analysed Tuareg notions of tent, wadi and waste as central for the way in which they conceptualise the world, but with an emphasis that differs from mine. Hawad and Claudot (1982) and Claudot-Hawad (1993) argue that the central dichotomy by which Tuaregs experience and conceptualise their society is that between the ebawel, the shelter or tent – the interior, and essuf, the emptiness – the exterior, the anti-social, the male, and the uncontrolled. Claudot-Hawad (1993) argues that the Tuareg concepts “interior” and “exterior” are best understood as an opposition. Casajus (1987), in his analysis of Kel Ferwan Tuaregs in Niger, similarly stresses the dichotomy between “tent” or “inside”, on the one hand, and “outside the tent” on the other. While agreeing with these researchers in seeing the tent as the centre of a Tuareg’s social universe, I find it a simplification to argue that Tuaregs’ social world is based on the dichotomy “tent” as opposed to “outside the tent”. In order to understand how Tuaregs create place, I argue that pastoral space may be separated into waste and wadi, where life can be lived, and that the tent, pitched in the wadi, represents the utmost concentration of the social. Thus, in my view, a more appropriate analysis of how Tuaregs conceptualise their surroundings would be that the anti-social and the social, the waste and the tent, form the two poles of a continuum. The distinction between waste and wadi is blurred: rain flows from dunes and mountains to form wadis, and the antisocial, in the form of jinns, constantly threaten to invade wadis and disturb human life.

**Wadi and waste as opposed to town and village**

Both wadis and waste form part of the universe of pastoral nomadism. In the context of town dwellers and farmers they both form an opposition in relation to towns and villages. Both towns and villages function as important points of reference to which Tuaregs contrast nomadic life.

So many of those who left for the towns during the droughts could not stand their lives there and died. In towns the smells are bad, and it is dirty. Our physical constitution does not permit town life. Even during the droughts you would find people who went back to the wadi, without a single animal. At least they were not hassled there. (Middle-aged Tuareg man, the Adagh 1988)

When they visit towns and villages, Tuaregs unaccustomed to this form of life find that they cannot attain the well-being possible in the desert. Apart from the dirtiness of towns, different factors contribute to create this feeling. When in town, Tuaregs find themselves having to negotiate relationships that they do not master
and over which they are not in control. Nomads rarely leave the wadi unless they have something to arrange elsewhere: the sale of an animal, the payment of taxes, the purchase of cereals, cloth and medicine, or the acquisition of an identity card.

When in town, many nomads say that the feeling of poverty becomes excessive. They not only have to part with animals to settle different transactions; they have to pay to eat, to drink water, to find shelter. In the wadi “money does not enter into life”. While in the town, nomads find themselves at the mercy of state bureaucrats and money transactions; both create a feeling of dependency and poverty in the nomad. The town is not their place. Contrary to the wadi, the town is a place where they experience constraints but do not see – or are not able to take advantage of – the existing possibilities.

Their attitude to towns is not one-sidedly negative, however. Tuaregs also express a certain admiration for towns, because towns represent gravitational points where power, merchandise and learning meet. Certain towns, or cities rather, are surrounded by an aura of sanctity, Timbuktu being a primary example.

Whereas towns are both admired and detested, villages are only looked down upon. Tuaregs define themselves as “Those of the Herds” in opposition to “Those of the Village”. The villages known by most Tuaregs are populated by black cultivators, whom Tuaregs dominated at the onset of colonisation. Most villages are too small to function as important points of attraction for nomads, except as places to be dominated. The limited scope and narrowness of mind that many free Tuaregs ascribe to cultivators is, in part, nomads claim, caused by the agriculturalists’ attachment to and concentration of efforts in one particular bounded place: their fields. Their bounded fields are the focus of their main interest. This hampers the cultivator in “looking far ahead”, “to see as far as possible”, and hence to seek challenges that enhance the mind.

**Attachment or ownership?**

A major point in the discussion so far is the argument that people may well be strongly and emotionally attached to particular places on which their subsistence depends, without having developed concepts of ownership or rights of exclusivity (territoriality) to prevent others from exploiting the same places.

Individual camps and tents develop itineraries and preferences for particular camping grounds through notions of habit, attachment, longing, health or climate, and albaraka. Albaraka is a word derived from Arabic, and implies notions of “bliss”, “heavenly virtue”, or “blessing”. Tuaregs hold that albaraka may manifest itself through particularly health-bringing rain or pastures, shared assets that benefit all who pasture their animals in the same area. There is nothing in the previous description that suggests that concepts of property, ownership or appropriation of land adequately convey the relationship between Tuareg groups and the places in which they live.
I am not alone in having been struck by the lack of spatial or even social boundary control and ensuing territoriality among Tuaregs. Gallais (1976:34) refers to “the lightness of spatial institutions” when referring to spatial resource control in the Gourma; Clauzel (1962:7) utilises the term “ex-territorialised” to refer to pastoralism, camel raising in particular.

Pre-colonial sources rarely contain conceptualisations of the relationship between Tuaregs and land. Colonial sources support the proposed view that the relationship to land, at least as far as Tuaregs in Mali are concerned, was not territorial in the sense that it implied boundary control. Post-colonial social science analyses, however, more often employ both the concept of territoriality and concepts of ownership and property rights to describe the relationship between Tuaregs and land.

I will use Nicolaisen’s analysis of Ayr as an example. In Ayr, the leader or amenokal (often referred to as “the sultan of Agadez” in western literature) is a man who by tradition is a sedentary non-Tuareg (Nicolaisen and Nicolaisen, 1997). Ayr Tuaregs hold that the title amenokal is unrelated to the Tamasheq term for land, akal, and that his rights are not derived from rights over the land. Tuareg chiefs heading different groups of Tuaregs were entitled to levy taxes from subjects and from caravans passing through Ayr. The Kel Ferwan, a central Ayr group were, the Nicolaisens state, explicit about the fact that their chief did not own land. Still, the Nicolaisens still find the most plausible explanation for his right to levy taxes that the land did, in fact, belong to him (Nicolaisen and Nicolaisen, 1997:542–551).

Among the Iwellemden Kel Dinnig, where noble Tuaregs are said to have had all political rights, the Nicolaisens do not mention whether nobles were considered to possess land. But the fact that they received no land rent (Nicolaisen and Nicolaisen, 1997:568) may indicate that they did not conceive of, nor exercise rights over subordinates concerning control over land.

As far as the Gourma is concerned, the relationship between pastoralists, pastures and wells shows a strong resemblance to my findings from the Adagh. Researchers have argued that in the Gourma, particular areas have been ascribed to particular groups. This, Cissé (1983) argues, should not be translated into “property rights”. Habitual use may limit the exploitation of pastures by others through the “control” (inverted commas in original) of water points, but never prohibit such exploitation.

Ahaggar seems to be the only example of Tuaregs who anchor rights in others’ production in rights over land. Ahaggar was, according to Keenan (1977) undisputedly Tuareg territory until the French conquest. Keenan further states that Kel Ahaggar assumed rights of ownership over much of northern Niger as well – in particular the plains of Tamesna. This region the Kel Ahaggar considered merely as an extension of their rights in Ahaggar. The leader of the noble dominant group in Ahaggar traditionally received what has been referred to as a land-rent, ebeer-n-amaadal, “from all tenants of the sub-areas of vassal tribal territories” (Nicolaisen and Nicolaisen, 1997:513, Swift, 1975:448). The land-rent was specified for each group. Of the twelve groups from which Nicolaisen obtained specifications, most
gave either one or two donkeys or two goats a year, while two gave two water bags and one rope of goat’s hair (Nicolaisen and Nicolaisen, 1997:513). In this case, the view that rights in land could translate into rights in production seems well founded.

What I have tried to show is that analysis of how different peoples conceive of the relations between assets and themselves often become obscured, or informed, by western concepts of ownership and property (Scott, 1986). In my view, the Nicolaisens are a case in point as far as Tuaregs are concerned. Despite Ayr Tuaregs’ assertion of the contrary, they raise the question of whether the Ayr amenokal did not, in fact, own land after all, because he received tax both from salt-caravans and from cultivators. I would suggest that the amenokal received these taxes because he could guarantee travellers security when travelling on the paths under his control, not because he had legitimate territorial claims resulting in tax collecting. In fact, I think that Ahaggar may constitute a major exception among Tuaregs in their legitimising control over people through control over land. Both Ayr, Iwlemeden, Adagh and Gourma Tuaregs’ relationships to space seem flexible, non-exclusive and pragmatic, in contrast to exclusive, territorial or boundary oriented.

Considerations influencing itineraries and the attachments to places

Why do specific nomads, tents and camps develop attachments to particular itineraries or nomadic circuits? The fact that particular nomadic groups have a tendency to develop attachments within limited areas must be understood as an outcome of what different groups take into consideration in their movements. These considerations are of a few basic kinds: sociability; security – including relations to other groups and the state; the composition of the herd; the suitability of pasture; water courses and saltlicks in keeping with the composition of the herd and herding capacity; seasonal, annual and inter-annual fluctuations in rainfall and pasture; and trade routes and markets. The relative importance of each consideration in influencing the movements of each camp has varied considerably over time.

Security, including relations to other groups and the state

During the first two decades of the twentieth century, the French pacified Tuareg and other nomadic groups with considerable violence. Pacification drastically changed the extent to which nomads had to take security into account. Defence against raiding was probably the central duty of noble tiwsaten in relation to their vassals in pre-colonial times. The foundation of the vassal-noble exchange relationship (in some areas referred to as tamezlayt) was the nobles’ ability to defend dependants. With the probable exception of Ahaggar (Nicolaisen, 1963; Klute,
1995) it was for reasons of defence, not for rights of access to land, that submissive groups paid taxes to dominant groups. When defence was no longer necessary, vassals also started questioning the tamezlayt relationship (Nicolaisen and Nicolaisen, 1997).

The last Tuareg rebellion (1990–1995) rekindled the importance of tiwsaten for belonging and defence in the Adagh. Prior to the rebellion, many Tuaregs who had been cut off from nomadic life at an early age through schooling expressed the view that tiwsaten were a matter of the past. The rebellion showed this to be wrong. The first rebel movement that developed – the Mouvement Populaire de l’Azawad – was led by men from the dominant tawset of the noble Ifoghas Kel Afella, and embraced members from different areas and different tiwsaten. Soon, however, the MPA split. The different “tendencies”, as French-speaking Tuaregs referred to the various rebel groups, recruited members on the basis of their tiwsaten affiliations, attachment to particular areas, and hierarchy (cf. Boilley, 1994; Klute, 1995; Maïga, 1997).

It is easy to demonstrate that the itineraries of Adagh Tuaregs, and the development of attachments to particular places, corresponds to social groups and kinship relationships. In times of peace, other considerations may be allowed to have a stronger influence on choices of itineraries, but in times of unrest, the correspondence between tiwsaten and geographical core areas is demonstrated. According to Tuaregs this is not a fact only of the past; camping patterns changed during the rebellion. The different rebel movements not only fought the Malian state but also had violent confrontations among themselves. This led members of the same tawset to concentrate territorially and led people with kinship relations to stay closer together for the sake of security than was usual in times of peace. Boilley (1994:476–479) shows that there is a clear correlation between areas of nomadisation and rebel movement affiliation among Adagh rebels.

The composition of the herd in relation to pasture and labour demands

In order to exercise their control, French colonial administrators carried out an enquiry on patterns of nomadisation in the Adagh (1944–1945). On the basis of studies of particular camps, they found three patterns to characterise nomadisation in the Adagh (Lagarde, 1993:113–120), depending on how rich or poor the camp was. General Jean Lagarde, who participated in the enquiry, is of the opinion that about 2/5 of the Ifoghas belonged to the poorest category, 2/5 to the medium category, and 1/5 to the richest one (Lagarde, 1993:115).

The nomadisation pattern of poor camps was exemplified by a camp consisting of only one tent of former vassals, having at their disposal one male camel, two donkeys, two cows¹ and 60 sheep and goats. In one year they moved their camp

¹ The keeping of cows in this area seems to have been introduced by the French. After the drastic loss of animals in general and cows in particular during the drought of the early 1970s, very few pastoralists chose to reconstitute their cow herds.
seven times, in all 280 km, in a square pattern covering 110 kilometres from north to south and 40 kilometres from east to west. In addition, the head of the camp once left with the small stock for salt licks 50 kilometres from where the tent was pitched.

The medium type consisted either of nobles or vassals. Camp sizes were small, a camp in this category consisted of six people, two male and six female camels, two donkeys, fifteen cows and calves, and 180 small stock. In all, they moved over 260 km but covered a larger area than the poorer camp: the north-south distance was 230 km and the east-west distance 50 km. The male head of the tent also left for a salt-cure at the sodium wells at Allelar with the camels, covering an additional distance of 300 km.

The third type, those rich in camels, had a more dispersed movement pattern. The family camp followed a more constrained itinerary, while the cows and particularly the camels were taken to optimal pastures by herders living away from camp. One group mentioned was the tawset Kel Tibaggatin comprising 60 tents, rich vassals of the leading tawset, Kel Affela. During the rainy season 15 different camping grounds were noted, as against 8 during the dry season. All were within a 30 km north-south and 160 km east-west band. A second example was provided by the wealthy and noble Ifergumesan tawset, comprising 173 tents. Twenty-nine camping grounds were recorded during the rainy season, thirty-one in the dry season; all these were within 450 km north-south and 300 km east-west.

The camp at which I stayed during 1988 would probably belong in the second category, being a camp of nobles with 5 adults owning 6 camels, 5 donkeys and around 40 small stock. At the onset of the rainy season the camp had moved 16 times since the onset of the previous rainy season. They found that they had moved quite often that last year, due to the fact that it had been a bad year. In good years they judged the number of moves to be as few as five. The distance between the 16 moves the previous year was estimated to be between 500 m and 25 km, while the total in km, about 130, is shorter than all the 1944 estimates.

What the examples show is that itineraries vary with camp and herd sizes. The richer and larger camps are, the more often they move. There is also a tendency for the richer camps to cover larger areas and have longer itineraries. When camps possess a substantial number of herds and herders, they also more often split up for periods of the year, which creates more than one habitual itinerary for the members of a camp.

**Inter-annual fluctuations in access to pasture and water**

Droughts generally increase the area a tent or camp covers in a year. Peaceful conditions and sufficient rain increase the possibility to follow the preferred *ihanza-

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1 Moves are conducted for a number of reasons in addition to the search for water and pasture, the occurrence of a death in the camp or having pitched the tents at a site infested with vermin (cf. Berge, 1999).
Pastures in the Adagh have been described as particularly open or “free grazing” (Swift, 1975:448). Prior to colonisation, Adagh pastures were frequently sought both by Ahaggaren moving from the north and Iwllemeden arriving from the south, a practice that the French colonisers for a number of different reasons sought to impede through the elaboration of conventions. Even among Kel Ahaggar, where “pastures were allocated to specific clans in return for payments to the Amenokal”, and which I described as the most territorial of the major Tuareg confederations, each group could not keep others out in time of need (Swift, 1975:448).

Trade routes and markets

Trade routes and markets are recognised to influence the orbits of nomadic camps to varying degrees (Kerven, 1992). To some extent, nomads have always bartered or sold animals against sedentary products, and markets where sedentary and nomadic populations meet are characterised by seasonal fluctuations in the animal/grains exchange ratio. The problem for nomads in northern Sahel and the Sahara has been that pastures far removed from markets were best during the time of the year that livestock prices were highest. During the colonial period, the annual collection of head-tax on animals put an additional constraint on nomads in their choice of itineraries. During this period, Fulanis chose to optimise pasture conditions rather than market prices of animals (Dupire, 1962). Hence, they chose to move to good pastures irrespective of whether these were close to markets and whether the prices at a particular market were high or low at that time of the year. After independence, herding has become even more integrated into the market, and Fulanis have tended to let market prices influence their choice of pastures at the cost of moving to good pastures far from markets (Kerven, 1992).

In the Adagh, production is directed towards subsistence, and milk continues to be a central product (Swift, 1975:444–445; Berge, 2000). The need to sell or barter has, to a much lesser extent, influenced itineraries in the Adagh than those described from more southern Tuaregs and Fulanis, who daily offer a considerable portion of the milk produced for sale. In Adagh, senior men leave the camp for a certain period of time to exchange animals for merchandise and agricultural products at distant markets, but neither markets nor trade routes are part of the influential parameters forming the itinerary of a camp.

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1 The reasons included a struggle for control over and pacification of nomads, and the objective of “civilising” the nomads through sedentarisation and schooling (Ag Litny, 1992; Berge, 1999).
Herding strategies and the concept of luck

The anthropologist, Arjun Appadurai, has argued that local knowledge is about producing reliably local individuals as well as about producing reliably local environments within which such individuals can be recognised and organised (Appadurai, 1995). For Sahelian nomads, I suggest that local knowledge does not as much search to produce reliably local environments as to explain the local environment’s unreliability and arbitrariness.

Adagh nomads depend heavily upon their herds’ reproduction for a living. This statement is not only an empirical description of Adagh Tuaregs’ relative remoteness from markets and their generally low market integration (cf. Swift, 1975). It is also an expression of a preferred state of living and being, an objective that their life as nomads to some extent permits them to attain. Being self-sufficient opens up for autonomous choices concerning movements as well as of attachment and detachment to other tents, it increases the flexibility of a tent and allows for a certain independence from others, an appreciated freedom. If, for a certain period of time, herding results in what is considered a surplus, this surplus is by many converted not into more animals but into sociability and rest, which are other esteemed values.

Herding is seen as a series of activities that rarely translates directly into increased herd sizes over time. People do not, for instance, agree that one particular herding practice necessarily leads to optimal results. Some persons are known to put more effort into the herding of their animals than others, always trying to conduct their animals to the best pastures available. Others put some effort into herding, but not to the point of trying to optimise pasture at the cost of rest and sociality. Yet others are even more lax, choosing to spend very little time and effort on herding their animals. A man explained his considerations when choosing herding strategies as follows:

You have those who herd all the time, thinking that their efforts bring more milk. And you have those who hardly herd, but count on their luck (azzahar). Those who always run after their animals and tire themselves out until they fall sick. You have those that push their animals as far away as 30 km. from the well now in the dry season. I do not think that one ought to go further away from the well than 10–15 km. You have those who choose what kind of pasture the animals shall eat as well. But goats like freedom. If you always force them to run to pasture that you choose for them, they become tired too. Do not underestimate goats. They are smart. They find what to eat on their own. (Man about 60 years old, Ibdaqan, the Adagh).

To some extent, varying choices were reflected in the composition of a camp’s herds and flocks. Sheep need more herding and supervision than goats. Sheep, unlike goats, are said to have difficulties finding their way to the well during the dry season, and they do not willingly return to camp at night. Cows and camels may be taken to pastures that are too distant for small stock to reach. Apart from that, the actual job of herding requires little attention.

The choice of different strategies is seen to reflect a herder’s personality or inclinations. The actual outcome of different strategies is seen to be not only the re-
sult of the efficiency of the strategy but also the result of “luck” or “chance”. People might be very knowledgeable and work hard to manage their herds, but this does not necessarily translate into thriving herds. Knowledge and planning may increase the probabilities of success, but all the work may be wiped out by a single stroke of bad luck. People who put little effort into their herds may still be rewarded with success, if they have luck. What is certain is that without either work or luck, things will go badly.

Tuaregs have different ways of designating luck. *Azzabar* is defined as a God-given movement that follows the person, just like the person’s shadow. As such, *azzabar* resembles *alkhal* (the character), which was also described as a God-given movement attached to an individual. But whereas God is seen to have bestowed *alkhal* on a person once and for all, *azzabar*, which may be bad or good, seeks a person out. It may stay for an unknown period of time, and it may leave the person. “It is not you that seeks luck; luck seeks you out.” To be offered a ride when planning to go to town is good *azzabar*. To find work when there is general unemployment is good *azzabar*. Not having to pay for a journey that you counted on paying for is good *azzabar*.

*Arramet* is very similar to *azzabar* in that it is attached to a person. The difference is that it rubs off on other people as well. Whereas people held contradictory views as to whether the *azzabar* of a person might help others in the lucky person’s entourage, they agree that it helps to be with someone having *arramet*. As an example, I was told that if a man has few animals, but still manages to feed and clothe his dependants without diminishing the herd, he has *arramet*. If you travel with a person with *arramet*, your voyage will succeed, and you, too, will have a problem-free journey.

*Tabaghort* is another related term used when talking about luck or chance, the difference being that *tabaghort* specifically designates having luck in herding and translates into “wealth”. When listing the qualities that, it is hoped, a child will receive from its namesake, Ag Litny (1992:52) mentions *tabaghort* – the ability to become rich – as one of seven central qualities.

If a person works hard but never seems to make ends meet and thus demonstrates lack of control over his or her life, this may be taken to indicate that the person is without luck. If a man works hard but sees no result in the form of his camel getting offspring, he is seen to have no luck. If a goat dies right after having been received as a gift, this might also be taken to show that the receiver has bad luck.

While a certain unpredictability exists in all environments, the scope and frequency of sudden change is extraordinarily large in the Sahel. Related to this, the consequences of decisions based on incorrect information are likewise considerable. The story of a man whom I encountered in a state of insanity, told by a fellow nomad, illustrates this:

That man, who is now drifting about, was known to worry much, always taking precautions, always herding his animals vigilantly. His herd showed signs of thriving, and grew. At one particular occasion, right after the first rains, he was told that a cer-
tain wadi had flowed. With his family and all his animals, he set out on the journey to reach that wadi early.

When he arrived, the information upon which he had based his move had proved to be faulty; the wadi had not flowed. He was so far from any other wadi that the decision to move turned out to be fatal. He himself and his family survived, but his animals perished from lack of water and pasture. The incident made him crazy. (Man in his 20s, Kidal.)

It was explicitly expressed that luck is more important than both knowledge and exemplary herding when working with animals. This is because God decides. The man described above was far from alone in having experienced that God wiped out everything he had worked for with one single blow.

I got the impression that luck in the form of azzabar or arramet as such was impossible to influence through acts. Atuitas, destiny, is seen as given by God and impossible to influence through human agency. To have luck was seen as part of a person's destiny. One achieves only what God wants one to achieve.

At least some, however, saw it as possible to influence something closely related to luck, and which I will translate as “fortune” – tillemaz. “It is possible to hunt for one’s fortune, one may make movements to search for tillemaz”, a man put it. To find something one had lost when not looking for it, to fall upon a gazelle when not hunting, to meet a relative in a camp without knowing about his or her presence, were all seen as examples of fortune.

One way to influence one’s fortune, in which many people believe and utilise, is to go to religious leaders. They are able to make amulets (tikardiwin) to be worn or stored somewhere. Such amulets contain Koranic suras written on paper, protected by small leather pouches or ornamental silver receptacles. People seemed more in disagreement as to whether fortune acquired in this way was actually obtained from God or from the jinns, than doubting that human acts could influence fortune.

What these notions of luck, chance and fortune have in common is that they are used to explain processes in which the relationship between input and output is unpredictable. I interpret Tuaregs’ emphasis on various forms of “luck” as an expression of experienced unpredictability, and as a cultural way of relating to the fact that the link between a particular input and its outcome is more unpredictable here than in more stable ecosystems.

In economic analyses focusing on modes of production, a major distinction is held to have emerged when land changed from being an object to an instrument of labour (Meillassoux, 1972), demanding organisation to handle delayed return as opposed to immediate return from labour (e.g. Woodburn, 1982). The distinction drawn between types of control has thus also been analysed within an evolutionary framework.

Godelier (1984:108–109) has refined this distinction between immediate and delayed return systems somewhat. He emphasizes that, whereas certain hunters and gatherers hardly hold exclusive rights in any central productive assets and cultivators hold exclusive rights both in land and other productive assets, pastoralists
have developed elaborate systems of rights in animals whereas land is still considered a public or shared good. My description of Tuaregs’ well-defined system of rights and residual rights in animals and animal products as opposed to their emphasis on the wadi as less regulated is a good illustration of Godelier’s point.

Having chosen in this chapter to emphasize how Tuaregs construct place and locality and how this construction influences the practice of everyday life, I have decided not to analyse their construction in the light of common property right theories.\(^1\) I would, however, like to draw attention to a couple of points.

The first point derives from the fact that common property theory debates have been very influenced by Hardin’s seminal 1968 article on “the tragedy of the commons”, an effort to explain the dynamics underlying the degradation of pastures with reference to ownership systems. In this article, Hardin introduces two central terms used in the following discussion: “private property” and “commons”. Much of the debate came to circle around the question of exclusive rights to resources, and Hardin’s rather simplistic dichotomy laid the foundation for the development of a number of more sophisticated typologies of resource ownership. These typologies were derived from or tested out on a number of empirical cases. They all, however, tended to emphasise values and constructs external to the situation analysed, such as “resources”, “ownership”, “exclusivity”, “access” and “boundaries” (cf. Cahsdan, 1983; Ingold, 1986; Orstom and Gardner, 1993).

In the case of the Adagh, I have tried to show that explicit cultural ideas of health and thriving are important elements conserving the movement patterns of nomads, attaching habit and knowledge of an area and its shifting “climates” to those of animals and people. Not even the Kel Ahaggar, whose leader collects land-rent from those he has given access to pastures, have the right (or the possibility) to exclude others from his pastures in time of need. The meaning of place, of particular pastures, wells and wadis among Tuaregs is shared to an extent that creates guidance as to how and by whom these assets are to be accessed, and it forms and informs choices of movements creating a pattern that is neither random nor “open access”. Thus, past practices are perpetuated by values expressed in terms such as *ihanzzazagh*, the preferred itinerary, and in the “health” of pastures and wells to which one is accustomed.

The second point I wish to make is that the distinction between delayed and immediate return in relation to investments is not only a theoretical issue in this case; it also makes sense to Tuaregs. I have tried to show that these ideas of “health” and “climate” not only tend to regulate and organise movements because they are seen to be connected to thriving and reproduction, but because they are held to be morally right. While people plan and work in order for their herd to increase and their animals to circulate, they do not conceptualise what they do as cardinal. Health and thriving result not as much from personal choices and sound herding practices as from the bestowing of God’s blessing, abundant rainfall and pasture that brings fecundity.

\(^1\) For a discussion of common property concepts and Adagh, see Berge, 1997.
At the same time, Tuaregs do not only assert that the wadi is for everyone, they share outlooks that motivate (re)actions against exclusive claims to land. They find it sinful to restrict access to God’s blessings and may, when provoked, act with violence upon efforts to do so. What makes them accept more exclusive rights in wells, as well as cultivators’ claims to land as legitimate, is that human efforts have been vested in creating the asset. Concerning cultivation, the fact that humans invest labour at an early point to harvest at a later point, Tuaregs find to legitimise appropriation. But simultaneously the time delay between labour input and harvesting is felt to be one of the most loathsome aspects of cultivation, an aspect fundamentally differentiating agriculture from pastoralism. To settle down and engage in delayed return production is felt as a basic change.

Whereas the common property resources theory debate has been very useful in broadening the range of concepts available to analyse and understand property right systems, the Adagh example amply demonstrates that the theory at present gives precedent to some explanatory factors that are central for organising space and creating place in western societies, while neglecting or excluding factors that organise and pattern access to and use of assets among groups such as the one studied here. In the following, attention will be drawn to another similar construction, western ecosystem paradigms and Tuareg notions of luck.

Western ecosystem paradigms and the notion of luck

The most influential ecosystem model applied to understanding ecological issues in Africa was developed on the basis of knowledge about fields cleared for crop production in North America (Gowles, 1899 and Clements, 1916 in Behnke and Scoones, 1991:2). The model places a particular ecosystem on a time scale depending upon the plant communities present at a particular time. Moreover, it makes it possible to predict the ensuing changes in community structure (“successions”) until the system becomes “an equilibrium climax community with no further changes” (Deshmukh, 1986:193). When this model was applied to the study of processes in African drylands, it made it possible to see dryland ecosystems as potentially stable (or equilibrium) systems that had become destabilised (Ellis and Swift, 1988) because:

[i]rreversible, sudden or unpredictable changes in vegetation are difficult to reconcile with conventional notions of range succession as an incremental response to grazing pressure. (Bartolome, 1984, in Behnke and Scoones, 1991:13)

Words like “destabilisation” and “imbalance” left the impression that the functioning of these ecosystems was disturbed.

To explain why drylands had become destabilised, pastoralists came under attack. The view that pastoralism is inefficient and an ecologically unsound way of utilizing natural resources in drylands was used by the French to restrict nomads’ access to particular territories from an early date (Benjaminsen and Berge, 2000),
and has later been shown to have had “a lot of influence on government policy and
development work in a number of African countries” (Helland, 1990:2).

Neither is the counter-argument new, namely that the blaming of nomads is
empirically weakly founded and that nomadism is in fact ecologically sound in ar-
 eas characterised by low and variable rainfall, low predictability and a scattered re-
 source base. De Gironcourt, who led a scientific colonial mission covering the
Gourma in 1908–1909 and who published a number of documents on the mis-
 sion’s findings (cf. de Gironcourt, 1912), argues explicitly against both the com-
 mon view that nomads are particularly destructive of their surroundings and
against the view common already then that the Sahara desert was spreading due to
human activities, especially overgrazing and deforestation.1 He builds his argument
on observations as well as on Songhay and Tuareg memory. Members from both
groups agree that they have not noticed any regression in rainfall or a decline in the
flowing of wadis; neither do nomads remember having had to abandon water
points because of their drying up (de Gironcourt 1912:162).2 Concerning the de-
forestation said to take place because of pastoralist practices, his view was that,
with some noteworthy exceptions, “their moderation in the use of firewood is to
preserve relative to the squandering of which we are compelled by the needs of the
hearts of our machines” (de Gironcourt, 1912:171).

Despite good arguments and empirical evidence to the contrary, the view per-
sisted that nomads were to blame for environmental degradation. The view was
later formalised through Hardin’s “the tragedy of the commons” model (1968),
which popularised the view that resources held in common will invariably become
overexploited (Berkes et al., 1989:91).

The 1983–1984 drought invigorated the concern that the vegetation in Af-
rica’s drylands was being degraded. The ecological model applied explained degra-
dation as a result of imbalance between biotic factors within the system,
particularly the lack of balance between herds and pasture. Hardin’s model ex-
plained why such an imbalance occurred. According to Folke and Berkes (1995:3)
the model became very influential in explaining overgrazing, and has been used to
argue for the necessity of privatising rangelands, for the sedentarisation of nomads
and to argue for agricultural development as against pastoralism. The influence the
model has had is an excellent example of the paradigmatic force that a master-
narrative may have when transformed into a logical, scientific, and simple fram-
work.

During the last fifteen years, a new ecosystems model has been gaining
ground (Sandford, 1983; Ellis and Swift, 1988; Behnke and Scoones, 1991, 1993).
Ellis and Swift (1988: 453) propose that rather than to see Sahelian ecosystems as

1 Rapport à Monsieur le Gouverneur du Haut Sénégal et Niger au sujet du déboisement des environs
de Tombouctou. Archives Nationales, Bamako, Fonds Anciens, 3R 34, Rapports des agents locaux
des Eaux et Forêts 1909–19.

2 It is worth noting that the period that de Gironcourt covered when collecting information from
elderly people (about 1850–1900), has been recorded as “wet” (Webb, Jr., 1995:5).
faulty equilibrium systems, they ought to be conceptualised as non-equilibrium dynamic systems. The dynamics of such systems are more affected by abiotic than biotic factors. This model would emphasize rainfall as the central parameter for understanding the dynamics of the system. The variability in available pastures would be seen to result more from unpredictable rainfall than from overgrazing and a surpassed carrying capacity (cf. de Leeuw and Tothill, 1993; see also Bartels et al., 1993). To understand ecological processes, the model would thus de-emphasize the human motivation for increasing herds and the relationships between animal numbers and pasture.

A prolonged drought might cause total livestock extinction, and a long period of good years might lead to overgrazing in areas of high pressure. However, most Sahelian pastoralists groups have lived in these marginal areas for centuries. This empirical fact has been taken to indicate that Sahelian grazing systems ought to be conceptualised as “persistent”, in the sense that they operate within a limited range of variation, rather than “fragile” (Ellis and Swift, 1988:456).

There is growing evidence that this model has a stronger explanatory force concerning processes in Sahelian ecosystems than the equilibrium model. Recently, ecologists have argued that the Gourma is best understood as an open system (de Leeuw et al., 1993). Under such conditions, rangeland management is said to become opportunistic, a game of calculating probabilities the object of which is to seize opportunities and to evade hazards (Westoby et al., 1989:266; Behnke and Scoones, 1991:13). In non-equilibrium grazing systems, effective management is more a process of responding flexibly to stress than of preventing it (Behnke and Scoones, 1991:13).

In this study I argue that Tuaregs put a major emphasis on rain and water flows in order to define their surroundings. I also argue that when seeking to explain the relationship between herders, herds and surroundings, Tuaregs attach importance to ideas of God and luck, not only to management and planning. As I see it, both their emphasis on water and their emphasis on luck may be seen as local ways of expressing what the non-linear dynamic ecosystem model expresses in more scientific terms. The ways in which Tuaregs have adapted in the Sahel and conceptualise their influence on their surroundings may be seen as expressions of the fact that these systems are better conceived as open than closed systems. In such systems the influence of climatic conditions – or in the words of Tuaregs, God and his ability to cause rain, is more influential on environmental conditions and well-being than the human management of herds.
Locality, context and the colonisation of place

Appadurai (1986, 1995) maintains, as does Rodman (1992), that anthropologists have taken the way in which people relate to their surroundings as too much for granted, and too much explained by the material end result. He argues that most local people do not, and cannot, take locality as given in the same way: “rather they seem to assume that locality is subject to various forms of entropy unless hard and regular work is undertaken to produce and maintain its materiality” (Appadurai, 1995:205).

In Appadurai’s terms, the conceptually produced localities are contextual, in the sense that they are produced in opposition to something else – a context – often conceptualised as forest, wasteland, waste, swamp, river. Humans build on differences in their surroundings to form these contextual categories, often seeing the surroundings as the beginning of non-human, demonic forces (Appadurai, 1995; Croll and Parkin, 1992:28).

Tuareg categories of wadi and waste illustrate Appadurai’s generalisation. The conceptualisation of the wadi fits his definition of “locality” rather closely: the beleaguered, secure locality of sociality. Its opposition is the waste, the wide-open spaces where human life cannot be sustained. The waste is threatening and non-social, and its emptiness, populated by spirits, may disturb a person’s very sanity while at the same time being challenging and mind-enhancing to cross.

The categories of wadi and waste both form part of pastoralist space, and they are constructed in contrast to the city and the village. These may be acceptable places to live for those who have turned them into places where one both sees and can take advantage of the opportunities offered. But for the “broussards” – nomads living from their animals in the bush – these places are untamed context. Among cultivators, the regular work undertaken to maintain the materiality of a locality is visible; fields need to be prepared, sown and harvested, fences to be maintained and houses and roads to be repaired. On the other hand, there are the produced localities of pastoralists, which are only to some extent localised. Their yearly itineraries and camping grounds leave only a minimum of material traces and even the centre of their locality, the tent, is on the move. What I have tried to argue is that Tuareg production and maintenance of place is social rather than material. Among Tuaregs, place needs to be constantly made and remade, created and negotiated. People’s attachment to place expresses itself in a feeling of familiarity, in health and thriving, not in territorial exclusivity or material manifestations of identity.

Contrary to the colonisation and occupation metaphor that Appadurai evokes to describe ways in which humans turn space into place, I would argue that nomads produce place through focusing on flows and relationships: flowing water; tents on the move; flows of persons between tents and camps; the movements of animals between tent and water points; the movements of objects and animals among persons, tents and camps. Whereas both colonisation and occupation can be seen as terminology borrowed from the way in which members of the national territorial
state would find it natural to conceptualise place and attachment, the domain from which Tuaregs have drawn their cultural understanding of their surroundings is that of flow, movement, and flexibility. Their irreprehensible disregard for borders may be less foreign and offensive in a developing globalised world than it has been in the post-colonial one.

Bibliography


Fishing at Home and Abroad – Access to Waters in Niger’s Central Delta and the Effects of Work Migration

Eyolf Jul-Larsen and Bréhima Kassibo

Work migration, institutional change and access to resources

Work and trade migration from Mali is an old and widespread phenomenon among most population groups in the country and has become increasingly international during the 20th century. The main destinations are the neighbouring countries in West Africa. In Côte d’Ivoire alone there are probably as many as one million Malians. Researchers and politicians tend to estimate that as many as one third of the total population is engaged in international work migration at any time and a clear consciousness exists that migration represents an important factor in social change in Mali. This study aims to investigate how work migration among fishermen from Niger’s Central Delta generates institutional changes at local and regional levels in the home communities.

Recent anthropological studies of institutional change in sub-Saharan Africa have convinced us that questions concerning how access to vital resources is obtained and secured are far more complex than so-called ‘new institutionalist’ approaches in economy and political science tend to assume. By conceiving of institutions as simple ‘rules of the game’, the new institutionalists generally neglect the historical dimension in how rules have been constructed. The work of e.g. Berry (1989; 1993), Bierschenk and Olivier de Sardan (1998) and Peters (2000), argues convincingly that local institutions which are crucial in the regulation of people’s access to vital resources are often unclear and lack coherence. Through in-depth historical analysis, their research shows that so-called ‘local management

1 This article is a part result of the research project “International migration, institutions and access to resources in continental fisheries: the case of the Malian Fishermen”. The project is a collaboration between Centre National de Recherche Scientifique et Technologique, Institut des Sciences Humaines and Chr. Michelsen Institute and funded by the Norwegian University Committee for Development Research and Education and the Norwegian Ministry of Foreign Affairs.

2 Although recent data and estimations indicate that the share of people on migration may be significantly lower, there is no doubt that work migration today, and in all parts of the country, constitutes one of the most important strategies in order to cope with a difficult economic situation.
systems’ have often emerged as a result of negotiation and accommodation in long-lasting power struggles. Various actors, including a variety of external powers operating at different periods in time, have based their claims and legitimacy on different ‘logics’¹ and values. The lack of hegemonic power at the local level has facilitated their continued coexistence and has given rise to an institutional landscape where rules are characterised by ambiguity and sometimes even by contradiction. When people seek to legitimate their claims to resources, this situation allows them to draw on a number of different logics, and it easily leads to the introduction of new logics which do not replace existing ones, but merely add to the repertoire (Berry, 1989).

This analytical perspective leads to a conceptualisation of local institutions as something much more volatile and unstable than understood by the new institutionalist approaches. Contrary to ‘rules of the game’, Berry and others tend to view institutions

...not as the rules themselves, but as regularised patterns of behaviour that emerge from underlying structures or sets of ‘rules in use’. ... Rather than existing as a fixed framework, ‘rules’ are constantly made and remade through people’s practices. (Leach et al., 1999: 237)²

Studies from sub-Saharan Africa have shown that this perspective provides us with much better tools for understanding the huge variations in local transformation processes in a situation of increased ‘globalisation’ (where international work migration plays a role). It also helps us to understand important relationships between the local institutional landscape and prospects for economic development. The latter requires a certain level of predictability and mutual trust among the economic actors, and it is difficult to imagine how this can emerge in a situation characterised by institutional ambiguity and incoherence.

The first aim of the study is to investigate the major changes in access-regulating institutions in Niger’s Central Delta over the last fifty years. From a similar perspective to that of Berry, we analyse the reasons for the ambiguities and contradictions in these institutions as they appear today. We have chosen to focus on mechanisms regulating territorial division in the Delta. One reason is that the Delta is famous for its intricate and complex system of territorial division, but more importantly, access to fishing grounds has recently been identified as perhaps the most important problem people face in order to improve their living conditions (Quensièrè (ed.), 1994). Over the years, an impenetrable and highly contested ‘system’ of access regulation involving considerable financial transfers has devel-

¹ In this paper the term ‘logic’ is taken to mean a set of underlying values and norms that are coherently framed to support and legitimise certain behavioural rules. In this way the underlying principles for a certain type of agnatic descent used to legitimise access to resources may represent one ‘logic’.

² In a more recent article, Berry (1997) points at the paradox of how the ‘new institutionalist’ approaches tend to adopt the old conceptions of local institutions in the form they were constructed and conceived by the colonial administrators and the anthropologist who worked for them.
oped. Besides draining profits away from most of the producers, it also entails seri-ous and persistent social conflicts.

It is a weakness in Berry’s approach that it tends to be more fruitful in ex-plaining how institutional ambiguity has emerged and is being reproduced than in explaining how it may be overcome. By emphasising the volatility and instability of local institutions and the prevalence of a multitude of ambiguous logics, her analy-sis tends to ignore that, in certain empirical contexts, contradictory logics seem to merge into new and more consistent ones. Migration research from other parts of Mali – particularly the Senegal valley – shows that work migration has sometimes had a direct and decisive impact on the practices regulating resource access in the home communities, and that this has permitted widespread economic and social improvements (Daum, 1993 and 1998; Quiminal, 1991). Berry does not really pro-vide us with the means to explain how this happens, and it therefore becomes in-teresting to investigate to what extent the case of the Delta displays similar institutional developments to those that can be observed in other parts of Mali.

The second part of the article describes some of the main changes in migration patterns from the Delta. We analyse how the characteristics of long term work migration have changed with respect to destinations, migrants’ backgrounds, moti-vations, returns and who is in control of the migrations. Finally, we analyse how migration seems to affect existing practices related to the regulation of fishing grounds at home. We are particularly interested in investigating to what extent work migration creates a basis for stronger institutional coherence, altering the way people struggle and compete for access and the manner in which society handles territorial conflicts.

Like in the Senegal valley, work migration from the Delta is found to generate considerable flows of financial remittances and migrant returns. But, unlike in the Senegal valley, economic transfers to the Delta seem to generate only limited changes in the ways financial resources are invested at home. Neither do they seem to render access-regulating institutions any less ambiguous. On the contrary, they are found to reinforce some of the ambiguities and contradictions that characterise the underlying logics of how people seek access to fishing grounds. In other words, rather than creating new and improved institutional coherence which could solve common problems in the communities, work migration from the Delta seems to reinforce the conditions that cause many of the problems faced by these communities.
Access to waters in the Delta and the main changes over the last fifty years  

Niger’s Central Delta has, for centuries, been the location of a very productive fishery of importance for the people exploiting it as well as for the rest of the agricultural and pastoral populations in the Delta and in a large hinterland. Its considerable but variable productivity is determined partly by variations in rainfall in Central Mali, but even more by the varying hydrological levels and characteristics of the Niger river which floods as much as 20,000 km² of land when water levels are satisfactory. Variations are not only seasonal over the year, but also connected to changes from one year to another and over longer time-spans. Over the last fifty years or so, the hydrological status may be divided into two quite distinctive periods. The first lasted from the late 1940s until 1970 and was generally characterised by high water levels and high biological productivity. After 1970, this situation reversed and the Delta has been characterised by very scanty floods or indeed their complete absence (Quensière et al., 1994a). Since 1995, it seems as if we are witnessing an improvement in hydrological status in the Niger, but it is still too early to judge to what extent this represents the emergence of a new, long-lasting favourable period. According to the last available census in 1987, the Delta houses a population of approximately 800,000, mainly engaged in agriculture, pastoralism and fishing. The fishing communities are estimated to number around 200,000 people and annual catches have ranged from between 100,000 tonnes in the mid-1960s to 45,000 tonnes throughout most of the 1980s. Since 1995, catches have been on the increase, and have sometimes even exceeded 100,000 tonnes (FAOSTAT, 1998).

Over the centuries, production systems have been shaped by the perpetual mediation and articulation of interests among various local groups, reflecting the competition and continuously-changing relations of power among them. They are also the result of mediations between the local populations and a number of centralised political systems which, at various periods in history, have controlled the Delta and its populations more or less efficiently (Kassibo, 1994b). The production systems can also be seen as ecological adaptations based upon local people’s long-accumulated knowledge about the functioning of the ecosystem.

Historically, at least two local institutions have been crucial in structuring people’s access to territories in the Delta. One is a complex productive, technological and territorial division of resources according to ‘ethnico-professional’ groups (Gallais, 1967). Ethnic borders follow the main production activities: agriculture, animal husbandry and fishing. But within each of these categories, people’s

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1 For a general presentation of the social characteristics of the Niger’s Central Delta and its fisheries we refer to the basic works of Gallais (1967 and 1984), Leroy (1956–1957) and Quensière et al. (Quensière ed.), 1994). The content of this section to a large extent draws upon the results already published by researchers like Fay (1989a and b, 1990, 1994a and b and 2000) and Kassibo (1988, 1990, 1994a, b and c).

2 E.g. the duration of the flood, the speed of the flooding and the recession etc.
identity is also linked to production. In fisheries, it is still possible to identify at least four sub-groups, each defined with reference to the territories they occupy as well as to their technological practices and ecological adaptations. They also differ with respect to how and how much they engage in non-fishing activities such as agriculture, water transport and different artisanal activities. This system implies that fishermen from more than one sub-group may exploit the same waters either at the same time or in sequence. As institutions, the ethnico-professional groups have no specific organisations attached to them, although they often have a series of cultural attributes (language, clothing etc.).

The second institution is that of the agnatic lineages. Any water body or potentially inundated territory is associated with and managed by a lineage considered to be the original exploiter of its waters and who knows its secrets and can therefore mediate with its spirits. The leader of a lineage associated with a particular water territory is often referred to as the ‘master of the water’. According to ‘customs’ and the flood cycle, the master of the water decides when the territory is to be opened for a particular fishery and when it is to be closed. The lineage is also responsible for the internal distribution of fishing grounds to the production units within the lineage and those associated with it. Like in most rural contexts, a multitude of logics exist for how such associations are justified and established, the most important in the Delta being those of inter-marriage, foster-children and long term clientelism working for or with a household in the lineage. However, due to the logics of ethnico-professional groups the lineage is generally supposed to open its waters to be fished with other gear and methods by members of other sub-groups than themselves. In return, foreigners given this right were supposed to surrender a share of their catch (for certain fisheries considered very effective, this share could be as much as one third of their catches). This part, referred to as ‘manga dyi’ or ‘the part of the water’, was offered to the master of the water and redistributed among the production units of the lineage. The lineage is also in charge of regulating access to land for non-fishing purposes – mainly agriculture. This requires an intimate collaboration with lineages from other ethnico-professional groups in the same area, connected to agriculture and pastoralism.

The production units are ideally constituted by a leader, his wife(ves) and their descendants, including daughters in-law if any of their sons are married. Fission of the units is supposed to take place upon the death of the leader.¹ Historically, it seems that the production units had few territorial claims of their own; even when they operated in waters controlled by the lineage of another sub-group, negotiations and the creation of alliances were normally carried out at lineage level.

Even though these local access regulation mechanisms (presented here in an idealised and very simplified manner) have certainly been reproduced over centuries, it is important to keep in mind that their concrete content has always been

¹ Fishing households are often defined as units of production, consumption and investment. As will be discussed below the situation is far more complex, particularly with reference to accumulation and investment. We therefore prefer to use the term ‘production unit’.
subject to negotiation and modification according to the changing social conditions in the Delta. Just by viewing somewhat critically what has just been described and relating it to what we must expect to have been the realities and the challenges of everyday life in the past, we can see that these principles may easily become subject to various interpretations, to say the least. The principle of lineage originality, normally based upon myths and hearsay, is easily manipulated and contested. High mobility, inter-marriage or technological changes easily lead to difficulties in identifying people according to sub-groups which again may create differences in the interpretation of relations between these groups.

Furthermore, by confronting the idealised system with the various influences of centralised political powers in the Delta, we quickly see new contradictions in the system. If, as an example, we take the case of the Fulani centralised power (the Diina) which dominated the Delta during the first half of the 19th century we can observe how some of the access-regulating logics it introduced continue to exist in the present shaping of people’s territorial access. Based upon an Islamic rationale, the Diina sought to sedentarise the peoples of the Delta and this required a dramatic restructuring of the use and division of space. Settlements based upon bigger entities than single lineages were created, which in turn led to a policy where territorial management was to be based upon the new villages rather than upon the lineages. The management was to be supported by the Diina’s own administrative structure through their interpretation of the regulations and their function as judges and mediators in the case of conflicts. That the Diina, as well as assuring its religious objectives, also looked after and tried to secure the material interests of some of the great and influential pastoral families, goes without saying. To a large extent, the Diina succeeded in its political task of restructuring the whole demography of the Delta, partly because of considerable support among the population (most people wanted to become good Muslims). Today, almost 200 years and two or three centralised political systems later, many of the regulatory principles introduced by the Diina are still very much alive in the sense that people continue to refer to and invest in them.

Fishing boom and fishing crisis: changes in access over the last 50 years

Despite many previously centralised political systems, the French colonisation of the area probably represents the single most important factor explaining how present access-regulating practices have emerged. Like its predecessors, it introduced new access-regulating mechanisms, or reinforced old ones very much according to its own political and economic interests which were not necessarily consistent nor stable over time. However, the colonial influence was also more indirect. Through the introduction of new administrative structures, ‘modern’ production regimes (mainly irrigated rice), infrastructure development (roads and towns), improved trade and transport facilities, technological imports and forced labour, it led to the
emergence of new groups of actors in the fisheries and entailed major changes in
the structure and functioning of the production system, first through a fishing
boom, then through a crisis. This, in turn, has required the adoption by the pop-
ulation of new attitudes, new strategies and new solutions concerning how to secure
or improve one’s access to resources.

The favourable hydrological conditions do not in themselves constitute the
main explanation for the fishing boom which occurred during the same period.
Rather, they must be seen as having reinforced a process which had already started
as a result of the new social conditions under colonial rule. The boom also coinci-
ded with a renewed emphasis by the French government on the need for food
self-sufficiency within Afrique Occidentale Française (AOF). The results were notice-
able: catches are estimated to have tripled over a 20-year period after 1945, reach-
ing around 100,000 tonnes in the mid-1960s. Economically, fishery proved
extremely profitable. In the early 1960s, it was reported that average incomes from
fisheries were triple those in agriculture. This ‘miracle’ was caused by a series of
factors:

1. Despite the long existence of important and well-developed trade systems
in Mali, catches were, until the start of the colonial period, mainly bartered or sold
for consumption within the Delta or its immediate hinterland (which also included
urban centres like Ségou). Colonisation entailed the opening of new and external
markets. Processing and commercialisation were encouraged and improved both
directly and indirectly. Marketplaces were established, and in the town of Mopti
fish commercialisation was one of the main development strategies. The construc-
tion of roads improved distribution facilities within French Soudan as Mali was
then called and to its main urban centres, Bamako and Sikasso, far from the Delta.
Tax policies made it necessary to sell more fish than before. Export was facilitated
within AOF, mainly to Côte d’Ivoire and Upper Volta (now Burkina Faso). How-
ever, Ghana also proved an interesting market. In the late 1950s, annual exports
exceeded the equivalent of 30,000 tonnes of fresh fish.

2. Catch technologies became commoditised and changed. Cotton thread
(later nylon) and manufactured nets and lines were successfully introduced as
commodities. For the fishermen, this meant that less time was needed to produce
gear. The acceptance of the new materials led to considerable experimentation in
the application of new and more effective fishing methods. Old technologies, of-
ten associated with collective exploitation practices, were abandoned or reduced in
favour of more individualistic and stationary gear such as gill nets, cast seines and
lines. At the same time, one saw improvement in canoes as well as in fish process-
ing technologies.

3. The increased commercialisation of gear and fish meant increased depen-
dence on new groups of actors such as traders and transporters. Most of them were
foreigners to the fishing communities and belonged to other ethnic groups, but
individuals from some of the sub-groups – particularly those associated with the
exploitation of the main river beds – found new opportunities to diversify in the
growing fluvial transport. In some areas, women from the fishing communities
have tried to develop their own trading businesses. Their dependency did not only relate to outlets for fish; as always in fisheries, increased commercialisation entailed the establishment of various credit and economic security arrangements offered to fishermen by the traders.

4. The responses by the different sub-groups of fishermen to improved marketing opportunities were not the same. People of the sub-groups from the upper parts of the Delta, more than others, tended to specialise in fishing and develop and accumulate the new types of gear such as beach seines and other expensive nets. In the lower parts, we see the opposite tendency towards higher diversification. People there tended to develop and invest in cheaper fishing gear and simpler technologies and to use more of their acquired surplus to invest in agriculture and in cattle. In both cases, the changes implied a technological standardisation in fisheries compared to the previous adaptations which had been far more varied.1

5. Migration within the Delta has always been a part of fishing adaptations, but historically this meant following the fish in and out of the plains according to the flood cycle. The specialisation in and accumulation of gear by the upstream fishermen was only viable if the gear could be utilised over longer periods of the year and required a new type of mobility in addition to the old one. By following the flood cycle in the length axis of the river, sometimes for more than a hundred kilometres, it became possible to prolong intensive fishing campaigns based on a limited number of techniques to as much as 9 months of the year.2 This gave rise to an extensive migration where a high concentration of fishermen from the upstream areas found themselves in the lower parts of the Delta towards and beyond Lac Débo (see map), at the end of the flood and in the following dry period. The migration, in its turn, gave rise to improvements in canoe technology and the adoption of outboard engines. For the populations further downstream, diversification and investment in other modes of exploitation gave fewer reasons to extend their migration.

With regard to access-regulating mechanisms, the effects of these changes, combined with the management policies of the colonial administration and the independent Malian state which followed in 1960, have been considerable. As in the case of the Dîna, the introduction of a colonial administrative structure intervened in the logics of the lineages. The introduction of a hierarchical administrative system openly conflicted with the way the lineages sought to adapt and time their activities around each other and resolve problems of cooperation. In many cases, the French introduced new village chiefs, sometimes deliberately overlooking the principle of ‘originality’. Centralised service and enforcement structures like

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1 It must be emphasised that the technological standardisation did not at all imply that earlier and home made gear disappeared at the profit of the more catch effective ‘modern’ types. However, the increased commercialisation of the production system led to a high degree of dependency on the new gear.

2 In order to distinguish the two types we shall call them ‘lateral’ and ‘longitudinal’ migrations.
the Water and Forest Service established local representations and were alien to the existing system. Despite the direct administrative interventions, it should be noticed that the French administration also left a lot of issues to be resolved by existing local institutions. But, as already mentioned, local institutions were not always internally coherent and opened up for a lot of interpretation and conflict. This often forced the administration to intervene, whether it liked it or not, in the form of mediation and conflict resolution. Besides, the proper existence of a new administration offered people an opportunity to relate to these institutions when they saw a personal interest in doing so.

Most of the administrative structures were left untouched at Independence. However, it became important for the new socialist government to proclaim its supreme authority regarding the control of lands and waters. A new law was introduced in January 1963 (Loi N° 63/7 ANRM) which proclaimed that all waters in Mali belonged to the state and could be exploited by any of its citizens provided they paid a licence. Its rationale was said to be to abolish the traditional feudal systems (among other systems ‘les maîtrises d’eau’ considered to be archaic and aggravating inequality). For the first time, the principle of state ownership of waters was introduced in the Delta.\footnote{The principle of state ownership to natural resources in Mali had already been introduced by the colonial regime in the beginning of the century (Benjaminsen, 2000). However, it seems as if the French were reluctant to apply this principle in fisheries. Fay (2000) quotes the reaction of the Conseil Général du Soudan as late as in 1948 when the central authorities wanted to introduce ‘modern’ principles for fisheries management. They considered the existing regulation satisfactory through ‘local custom … an old institution which it is not the appropriate time to provoke’.}

Thereafter, the ambiguity of the access-regulating institutions increased even further. The licensing system gave the various state agents new opportunities to challenge the rights of local leaders. The result was that state agents at the local level came to accept many of the existing mechanisms of territorial distribution with the only difference that they now claimed to be or to represent the owners. They could therefore with some legitimacy argue that the manga dy\‘ was to be collected by them.

At the same time, the dramatic changes in the production systems made the old system of territorial division less adapted compared to what it may have been in the past. The technological changes did not follow the lines of the ethno-professional groups, and soon started to weaken established identity borders. Foreigners who had been fishing the waters of a lineage, maybe for centuries, suddenly arrived with new and more effective gear. This led to uncertainty and conflict within the lineages of origin over whether such technologies should be allowed in their territories. The increased presence of new groups of foreign fishermen in the lower parts of the Delta had the same effect and gave rise to new types of competition. So did the emergence of the new traders who often had a direct interest in who got access where and also who had the means of imposing sanctions through their control of credit.
This, in addition to the increased availability of money, led to the swift commodification of fishing rights in many territories, and the number of cases where those willing to pay the most to exploit a certain territory were actually given access are numerous. Not surprisingly, the increased sale of fishing rights entailed serious conflicts within the lineages over the redistribution of what increasingly became a fishing rent, and in some cases between lineage heads, village chiefs and state agents over who was entitled to collect and thereby control it. Furthermore, since the production units were the main institutions in control of money, this institution suddenly became an important actor in the struggle for territories.

The boom meant a proliferation of conflicts related to the allocation of water rights and the colonial and later the state administration had no choice but to try and deal with these issues, often seeking ‘solutions’ which added more conflicts to the scene than they resolved. Money could not only be used to buy territorial access directly; it could also be quite profitably invested in the mediating and conflict-resolving institutions in order to have one’s case ‘heard’. The characteristics of the boom, i.e. a high degree of monetarisation and the commodification of territorial rights, put the various government agents in a privileged and very strong position and various government agents became crucial actors in this struggle for territorial access. But given that the motivations of these agents were often more directed towards building up their own power than propagating the management principles of the state, it was not necessarily in their interests to create clearer and more coherent principles. Particularly their role as mediators and judges in conflicts indicates that ambiguity and inconsistencies in the underlying principles could be as profitable for them as increased clarity. In other words, an access-regulating situation where new and previously existing logics coexisted was not necessarily an inconvenience from their point of view.

For the lineage and village leaders, we see a similar, although not such a strong tendency. Historically, they had mainly relied on their own production units for their livelihood and as such they had an interest in the predictability and clarity of rules. However, the increased level of conflict as well as the emergence of the profitable rent, also led to a certain bureaucratisation of local offices and a change in economic strategies. Their own production gradually became less important compared to what they could earn as rent collectors and representatives of the local population, often in combination with new types of services such as transport. Like the agents of the state, they had an interest in keeping access principles ambiguous, and the emergence of the crisis has strengthened this tendency.

The beginning of the 1970s saw an abrupt worsening of the climatic conditions in the whole of the Sahel and a considerable reduction in hydrological and rainfall levels in the Delta. The climatic changes were also preceded in the late 1960s by a marked reduction in the demand for fish from the Delta, mainly in
Côte d’Ivoire and Ghana, but also in the main consuming areas within Mali.\(^1\) Total catches were reduced by 50 per cent over the twenty-year period starting in the late 1960s, and when catches went down this was not compensated by a similar increase in prices. The responses from the fishermen to this regression were multiple:

1. As a result of reductions in inundated areas as well as the general decrease in biological productivity, technological experimentation and adaptations continued. Although this also concerned locally produced gear, the dependency on commercialised equipment continued. The use of some of the most effective gear during the boom, like the big beach seines, was considerably reduced and many of the specialised upstream fishermen switched to types of gear similar to those used by the downstream populations. The upstream fishermen who, during the boom, had become known as the richest and most entrepreneurial witnessed a segmentation where only a fraction of them managed to remain in the type of fishing they had developed during the boom, while others had to give in. As a direct result of this segmentation, the number of longitudinal migrations fell. However, instead of returning to the home areas, many of those who gave up migration installed themselves in downstream areas on a more permanent basis (the upstream part was more severely struck by the drought than many of the lower parts). They continue to pay rent to the original lineages, but given that their technology has changed, their costs are more modest. Due to a very weak bargaining position in terms of access to land, they remain specialised fishermen.

2. But fishermen of the more sedentary sub-groups in the lower Delta, who during the boom started diversifying their commercial production, also faced problems. The diversification required yearly financial investments which became increasingly difficult to obtain and more and more of them returned to fishery for their main source of income. At the same time, the reduction in inundated areas forced large groups to abandon their own territories to go and fish nearer to the main riverbeds.

3. These responses and continued demographic growth in the Delta, resulted in a considerable increase in fishing efforts combined with lower catches. It has been estimated that total efforts grew by 50 per cent from the late 1960s to 1990 at the same time as catches were halved (Laë, 1992).

Although the territorial division changed as a consequence of the economic marginalisation of certain groups, and profits from fishing rent must have been reduced, the underlying principles and logics on which the distribution is based do not seem to have changed dramatically. The conversion by upstream fishermen to the fishing methods of those further downstream continued to reduce the importance of ethnico-professional identity. On the contrary, payment for territorial

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\(^1\) The reasons is largely to be found in two factors: first the increase of fish from other sources (marine as well as new continental water bodies) and later through the general reduction in purchasing power within the Malian population.
rights increased and it became increasingly difficult to get access to waters outside those of one's own lineage without some sort of financial contribution.

In this respect, it is interesting to notice that despite the considerable increase in fishing efforts there are no signs of biological overfishing in the Delta. A long-term research project undertaken by ‘Institut pour le Développement’, France and ‘Institut d’économie rurale’, Mali concludes in the following manner:

… it is clear that the very high increase in the total fishing effort in the Delta for the last 30 years has been accompanied by an important reduction in catch per unit effort, but this has not led to any type of biological overfishing (Quensière et al., 1994b:422, translation by the authors).

Hence, the crisis is not an ecological one; it is above all an economic crisis for the production units. They have experienced a dramatic reduction in income levels as a result of the reduction in catches which have not been compensated for in increased prices, and the steady increase in the importance of fishing rent has only added to their problems. It is therefore possible to say that the institutional developments associated with territorial access have reinforced the crisis rather than helped to solve it.

At the same time, the increased importance of rent did not prevent principles based upon descent and locality from continuing to be of importance in accordance with the interests of local leaders in particular. Since the results of the biological research referred to above were not known, the crisis occasioned an escalation in the rhetoric of ecological crisis and overfishing. This made the government increasingly concerned at the same time as it attracted international aid to the area. There was a marked increase in aid-initiated activities – governmental as well as non-governmental – in this period which entailed a multitude of new attempts to organise the fishermen. An important attempt came from the government in 1975¹ and implied the creation of a structure of ‘fisheries committees and councils’ at all administrative levels: village, arrondissement, cercle and région. The structure has been more or less operational since its creation and may still be observed in most places. The objective was to try and find ways of solving the escalating territorial conflicts in a sort of forum where representatives of all those concerned could try to reach solutions and compromises. The main result, however, has been a continued bureaucratisation of the local leadership to the extent that their reliance on rents and on payment from fishermen for conflict resolution has continued to increase. As a consequence, a marked economic differentiation is observed in places with many foreigners. In general, the local leadership has borne the crisis far better than the rest of the population. Even though they compete for power internally and with state agents, their position represents an important factor in explaining how ambiguities and conflicting principles in the access-regulating system are reproduced.

¹ Décret portant réglementation de la pêche au Mali, du 14 mars 1975.
Long distance migration

One last response to the crisis has not yet been discussed. In a situation of dramatic decreases in financial incomes and continued financial needs for survival in fishing, migration out of the Delta gained momentum. This is clearly illustrated in Figure 1 and based upon data from a survey undertaken in the Delta in 1998, including 432 cases of long distance migration where the year of departure is known. Long distance migration is taken to mean work migration for periods exceeding 6 months to destinations outside the Delta and its immediate hinterland. It may imply travels to other places in Mali or abroad.

We see how frequencies increased in 1973, which represented the first serious drought in the Delta. However, it is in the 1980s that the migration really started to increase and this coincides with a period of sharp and continuous hydrological deterioration, even compared to the situation in the 1970s (Quensière et al., 1994a: 47). But the figure also shows, as is confirmed by many earlier reports (Leroy, 1956–57, Gallais, 1967), that long-distance migration from the Delta was already taking place long before the crisis began.

Some authors have alluded to the increase in such migrations as a change of adaptation from ‘in-migration to out-migration’. But this comparison has several weaknesses, particularly since it ignores fundamental differences in the characteristics of the two phenomena. We saw how longitudinal migration in the Delta grew as a response by certain sub-groups of fishermen to improved market possibilities. It followed the flood cycle and the concentrations of fish and it generally involved all or at least the majority of the members of the production units. The long-
distance migration occurring today is different with regard to all these characteristics.

Some characteristics concerning long-distance migration are already known and referred to in the literature. It is a problem, however, that such descriptions are seldom followed by any quantitative substantiation, and since the data are normally collected in the Delta there is a lot of information connected to the activities abroad which remains unknown. The following is based upon several data collections: a survey undertaken by the authors in the Delta in February–March 1998 (Jul-Larsen et al., 1999), and field visits to Burkina Faso in 1999. We have made an effort to present quantitative data where they exist and although we do not consider them statistically representative for the whole of the Delta, they can be seen as indicative.

Destination, occupation and frequency patterns

According to the survey of 428 production units in 25 villages or camps in the Delta, more than 90 per cent of long-distance migrations are undertaken by younger men between 17 and 30 years of age. They are generally unmarried, and 60 per cent of those who had returned report having been away for less than two years. 10 per cent of them reported having lived outside the Delta for 8 years or more even if they may have returned to the home village on shorter visits during that time. Figures on age, civil status and duration are somewhat contested by data emerging from more than a hundred individual migration histories recorded among the migrants abroad. Here, the average age and duration seem to be considerably higher. More of them are married either to a wife remaining at home or to one who is together with her husband. This may indicate that migration journeys gradually become longer and, in some cases, even turn into outright emigration.

Unlike what we see among other groups of Malians, work migration among the fishermen has become increasingly standardised with regard to destination and occupation while in migration. Earlier, the whole of West Africa was reported to be their area of operation, but today almost 90 per cent of ongoing migrations are concentrated in Côte d’Ivoire and in the Sélingué and Manantali hydroelectric reservoirs in the south-west of Mali.\(^1\) Freshwater fishing has always been the main occupation of the migrants, although other activities like trade, transport, and religious services (maraboutage) seem to have been more common occupations before than they are at present. In more than 85 per cent of the ongoing migrations, fishing is reported to be the only occupation of the migrants and the various field visits confirm this picture.

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\(^1\) Other destinations of importance are Lake Chad and various water-bodies in Burkina Faso.
The geographical and occupational concentration may to some extent be explained by referring to national energy policies in Côte d’Ivoire and Mali. Since the 1960’s, Côte d’Ivoire has developed five relatively big man-made lakes and Mali has developed two. These new water bodies have become new opportunities for the fishermen from the Delta. In addition, Côte d’Ivoire has, since the 1970s, actively supported the construction of thousands of small and medium water bodies for agricultural and pastoral purposes and which are also being exploited for fishing by the migrants.

About 50 per cent of the production units report to have one or more members in migration at present. Patterns of frequency, occupation or destination show an extraordinary similarity for all the main ethnico-professional groups and it is impossible to establish any significant differences between them. But despite the similarity at sub-group level, we see considerable variations if we compare frequency or destination patterns in various villages and camps. In figure 2 we have selected 4 of the 25 agglomerations included in the survey, in order to demonstrate the range in variations.

Camp 2 and village 4 have much higher migration frequencies than the others. Thirty-three out of the total 43 production units have had more than one migration and only in 1 unit has no-one been on migration. In camps 1 and 3 the situation is the reverse: in 33 out of the 58 units constituting the two camps no one has been on migration, while only 8 of them have migrated more than once.

By looking at the characteristics of the agglomerations we discover that camps 1 and 3 both are permanent camps situated in the lower parts of the Delta. Camp 1 is almost exclusively constituted by fishermen from one sub-group who have been forced to give up in-delta longitudinal migration. Camp 3 is a mixture of people from 3 sub-groups who have established themselves permanently in the same area. They are all specialised fishing camps mainly relying on simple individualised gear. Although it is difficult to assess their relative economic wealth, their life stories tell us that they must be among the poorest segments of the fishing populations in the
Delta. Camp 2, situated in the lower part of the Delta, is a temporary camp. Only fishermen who continue to practice the in-delta longitudinal migration with capital intensive gear reside there and they are generally wealthier than the others. Finally, village 4 is situated in the upper part in an area where the population was forced either to specialise in agriculture or to move downstream in order to continue fishing. The population remaining there now mainly consists of the farmers who belong to the wealthiest units of the village. Hence, there are clear indications that the economic situation of the production units influences the frequency of migration of its members. The poorer the production unit, the less its members seem to go on migration.

Also internally in the villages differences seem to exist in frequency patterns according to wealth and social status. Without intimate knowledge about concrete local conditions it is very difficult to categorise people according to their relative economic or social status. Our data only allow for a comparison between the production units of village/camp chiefs and the rest of the population. There is a clear tendency towards higher migration frequencies in the production units of the chiefs compared to the others. Only 16 per cent of the units of chiefs had not sent anyone on migration and 52 per cent of them reported 2 migrations or more. For the other units the figures were 30 and 36 per cent respectively.

It is well documented that work migration in West Africa often excludes the poorest segments of the population, and this is often interpreted as a consequence of lack of financial means. But in the case of the Delta this interpretation does not seem valid. Minimum costs for sending someone on migration are very low and do not need to involve much more than public transport. Since the increase in long distance migration is interpreted as a response to the economic crisis, the positive correlation between economic resources and migration frequency is therefore somewhat surprising. One could have expected that the poorest would participate at least as frequently as the rest.

Relations between the migrants and the production units: who controls migration?

Until now we have uncritically considered the production units as the only decision-makers related to long distance migration. This is too simplistic and needs qualification. In fact, the literature dealing with work migration in earlier years emphasises that such decisions were often made by the individual migrant himself and not by the production unit. One day he would simply disappear without the consent of anyone only to return some years later with or without extra assets. From the point of view of the individual migrant, the motivation for going is clear. Be-

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1 Migration in village 4 is also different from the other villages/camps in that each migration generally lasts 9 months. The migrants then return to help in preparing the fields and sowing before they return abroad.
sides avoiding an often severe submission to the authority of the unit leader, migration also provides an opportunity to prepare for one’s own production unit when the existing unit splits, generally upon the death of its leader. It is of particular importance for younger brothers to get money for their own bride wealth in order not to have to wait for the older brothers to marry first. Delayed marriage can easily lead to a situation where unmarried men are forced to continue to work for one of their older brothers even after the fission of the production unit has taken place. Beside these types of concern, many of the young men also had ambitions and hopes to accumulate enough money to buy their own fishing gear.

While these motivations appear to be perennial, it seems as if the crisis established a new situation characterised by a stronger convergence of interests between the individual migrants and their production units. During the boom, securing enough labour for fishing at home constituted an important concern for the production units, but the crisis that followed changed this situation. From the point of view of the unit, migration makes sense as long as it provides extra resources to the unit that exceed those which the migrant would have produced had he remained at home. Decreased catches and low prices combined with opportunities offered in the new hydro-electric reservoirs made migration much more interesting for the units at home. Such a change of attitude explains, at least partly, the increase in migration frequencies and it is symptomatic that only very few of the 218 ongoing migration cases recorded in our survey were reported to have taken place without the consent of the unit leader.

Migrants speak relatively open about their personal agendas and projects: the great majority of them dream of generating enough financial resources to be able to leave the fisheries. Various types of trade, transport and commercial agriculture seem to be the most popular alternatives. In the families at home, such personal ambitions from the part of the migrant are accepted and seen as legitimate although they emphasise remittances as the most important reason for letting members go abroad. It is therefore easy to realise that from the viewpoint of the production units, work migration is a strategy full of dilemmas. Beside the insecurity connected to migration, the individual migrant cannot automatically be expected to respond to the collective interests of the unit. The question of controlling the migrants is therefore of crucial importance.

Direct control of migrants’ whereabouts and activities is a complicated project to say the least. The main control mechanism at the disposal of the production unit remains indirect and is related to the rights and position of the migrant if he returns. Despite their dreams of another and economically better life, the migrants are also well aware of the difficulties attached to realising them on their own. They generally accept that the success of their individual projects largely depends on some sort of ‘family’ support. Even during the migration we see that those who are supported by and collaborate with the unit at home are generally more successful.
than those who do not have this support.\footnote{Support of this kind may include initial financial aid to start production abroad or to expand various kinds of useful contacts as well as help in resolving problems due to internal conflicts among the migrants. When in Côte d’Ivoire we sometimes observed representatives from the family (e.g. an elder brother) who came to “help”.} So also from the point of view of the migrant, migration is full of dilemmas and requires a careful balancing of concerns related to accumulation for own purposes and investment in the institutions at home. The fact that very few migrants are known to have managed to enter alternative occupations at the expense of fishing, only strengthens their continued dependency on the production unit.

The control-dependency relationship between production unit and individual migrant varies according to the initial social and economic situation of the unit. The ‘richer’ and more influential a unit is, the more it is in the interests of the migrant not to break his relations with it, and the greater is the possibility of the unit to exercise some sort of indirect control. Migration as a strategy to improve the economic situation of the unit is less risky for wealthier and more influential units than it is for the poorest ones. From the migrant’s point of view this is not necessarily the case. He may even have a stronger incentive to get away (which he sometimes does with or without his father’s blessing), but the risks are higher. If he returns empty handed, he will be even worse off than he was before he left. This may explain the positive correlation between migration frequency and the economic and social position of the production unit.

Although impossible to quantify in a systematic manner and very difficult to double-check, information from the production units at home as well as from the migrants abroad is relatively consistent and documents that the financial flows from the migrants to the production units at home are relatively important and may in the most successful cases constitute as much as 800 US$ per migrant per year, even if the average probably lies between 200 and 300 US$. Remittances received by the production units are almost exclusively used for their own immediate reproduction and may include everything from purchases of food, clothing, gifts and fishing gear to payment of bride wealth, taxes and fishing grounds. The fact that very few returnees are able to fulfil their individual ambitions and leave the fisheries, as well as the size of the remittances clearly indicate that the production units and the local leadership at home have managed to establish a fairly good control of the work migration.

The unit’s increased control over migration is also supported by the way migrants are found to organise while abroad. Visits to the various destinations show several striking characteristics in this respect. We see a strong tendency of migrants from the same home villages or areas to live together. For instance, in many of the migrant fishing camps dominated by fishermen from the Delta at Lac Kossou in central Côte d’Ivoire, this is striking.\footnote{It is important to notice that in Côte d’Ivoire the fishermen from the Delta are not alone in exploiting the fisheries even if migrant fishermen are referred to as ‘Bozo’ which is what most of the Delta fishermen would call themselves. Recent reports from different water bodies in Côte d’Ivoire...} ‘Originality’ is also here found to be an im-
portant organisational principle, and the camp leader is crucial in determining newcomers’ access to a fishing camp. Although the contacts of the camp leaders with the production units at home may vary in intensity, there is no doubt that the production units at least try to exercise control over their migrants through these mechanisms. The reduced variation in destinations and occupations indicates that they may have had some success.

The integration of the Delta migrants into the framework of migrant associations is, with a few exceptions, found to be weak and not very effective. According to the migrant fishermen’s own stories, these associations – generally known as ‘les amicales’ – are dominated by Malian traders who mainly seek to use them for their own purposes. Most of the fishermen therefore remain marginal within the framework of the associations. In an internal report, the Conseil des Maliens en Côte d’Ivoire (CMCI, 1998), as well as in meetings with Malian Embassy and CMCI personnel in Abidjan, the causes of the expulsion and repatriation of Malian fishermen from Lac Ayamé are summarised to have been the lack of communication between the migrant fishermen and the CMCI/Malian Embassy. Despite a 6 month escalation of the conflict between migrants and young men from the Ayamé area (to some extent supported by high level Ivorian politicians), the CMCI and Embassy representatives in Abidjan were not informed about the conflict before 17 camps belonging to the migrants were set on fire between the 22nd and 24th of July 1998. The report concludes that quicker action by the representatives of the association would have prevented the escalation of the conflict to this level.

Since one of the main functions of the migrant associations is to provide security for their members against national and local authorities abroad, the result is that the migrant fishermen to a large extent have to seek, with or without success, to solve the problem of insecurity in their own ways. It seems as if the migrants themselves consider that their local communities at home safeguard their security to some extent. The weak links may also be interpreted as a strategy by the leaders of the home communities to exercise control over the migrants, and reluctance to give the migrant associations abroad too much influence in the organisation of ‘their’ migrants. However, we have no data to support that this is an explicit strategy.

**Effects of work migration on resource access at home: reinforcing the crisis**

The description and analysis of long distance migration from the Delta demonstrates changes in the strategies behind it. From mainly having been a reflection of strategies deployed by individual migrants, it must, at least since the emergence of show that the ‘real’ Bozo seldom represent more than between 5 and 40 per cent of the total number of fishermen (Kassibo, 1996; Nugent, 1997; CMCI, 1998). The rest are agricultural and pastoral people from the Delta or from other regions of Mali, but may also come from Burkina Faso and other countries. In Burkina Faso and on the reservoirs in Mali the Delta fishermen are more dominating.
the economic crisis, be considered as a combination of the strategies of individual migrants’ seeking to improve their own personal social and economic status, and strategies deployed by the production units aiming to cope with a situation characterised by a dramatic decrease in catches, low fish prices and high financial outlays needed in order to secure access to fishing territories as well as gear. It is this change in the underlying motivations combined with the ability of the production units to establish a certain degree of control over the migrants that explains the considerable increase in migration experienced since the beginning of the 1980s. The level of financial transfers from the migrants to their production units at home, the concentration in certain destinations and occupations, and the way migrants are found to be organised abroad are all clear indications of a certain success by the leadership at home in establishing control over long distance migration.

The strengthened control over migrants’ activities abroad complicates the realisation of the migrants’ individual intentions. Only to a very limited extent does work migration seem to create new economic and social opportunities for the returnees. Most of them manage to accumulate some funds for themselves which they use to strengthen their position within the existing social units, but not enough to establish alternative occupations. The great majority return to the fisheries unless, as some data may indicate, they choose to prolong their stay abroad. At the same time, the share of the remittances appropriated by the family is almost exclusively used for reproduction of the units within their already existing modes of operation. Work migration today does not really seem to create new, alternative investment patterns at home.

This does not imply that there are no immediate effects of the work migration in terms of social changes at home. At certain levels, changes are not difficult to observe. The production units which successfully include and pursue the long distance migration strategies improve their access rights, even if money (or the market), as has been shown, is far from the only principle regulating territorial access. Since the possibility of success seems closely related to the initial wealth and social status of the units, work migration undoubtedly reinforces the processes of economic differentiation that started as a result of increased commercialisation and the subsequent economic crisis. Therefore, long distance migration may also imply a further weakening of the role of ethnico-professional identity as a principle in structuring access to fishing grounds.

However, concerning the causes of the crisis in the Delta, long distance migration does not, as far as we can see, change very much. We demonstrated above how the crisis developed as a result of increasing production costs related to a virtually uncontrollable system of fishing rent and that this is due to ambiguous and contradictory access regulating mechanisms. The local distribution of power is crucial in understanding how these ambiguities and contradictions are reproduced. Work migration does not lead to new economic opportunities for the returnees, and the remittances controlled by the production units are generally utilised in the same manner as before. Without changes in people’s investment patterns it is difficult to foresee how migration could lead to alterations in local power relations.
On the contrary, home community relations as they have developed in Delta over the last 20 years seem to reinforce the present distribution of power between various types of state agents and a selected number of lineage, village and household leaders. Many of the financial resources generated through migration are channelled into the wealthiest production units, which utilise them to secure their access to fishing grounds according to the various logics for the type of fishing rent established during the boom and which imply considerable transfers to the already existing leadership. As one fisherman remarked, the only change as a result of the increased migration was the price he had to pay for his fishing grounds. In order to access as much of the remittances as possible, it is in the interest of these leaders to maintain the institutional ambiguities and contradictions within the access regulating system. If work migration can be said to have an effect on the economic crisis, it seems to reinforce some of its causes rather than to create alternative solutions.

These findings concerning the effects of the work migration appear in sharp contrast to what has been found elsewhere in Mali. In the Senegal valley, work migration seems to have improved on the communities’ collective capacity to handle what emerge as essential problems for their livelihood (Daum, 1993). It is therefore of some interest to highlight the major similarities and differences characterising the patterns of the work migration as well as migrant – home community relations.

Although the migration (mainly to France) periods from the Senegal valley are considerably longer than from the Delta, the level of remittances and migrant returns are also very high (remittances are considerably higher in the case of Senegal valley). But the major differences lie in how the remittances are utilised. Instead of using them for simple reproduction of the production units according to established social practices, remittances to the Senegal valley are mainly channelled into various communal projects. Typical projects are the construction of mosques, health dispensaries, school buildings and wells. Facilities and equipment for irrigated agriculture are also common. To some extent, these differences may be explained by practical factors such as the size of the remittances and differences in location patterns. But there are also interesting differences in how migration and the migrant – home community relations – are organised. Contrary to the migrant fishermen, migrants to France are strongly integrated into the network of migrant associations through self-established associations based upon village or region of origin. Remittances are mainly channelled through these organisations, but not towards the existing local leadership. Instead, the associations operate on a parallel basis abroad as well as at home, where they have established their own leadership in charge of implementing the various projects. This does not mean that the existing village leadership is without influence in the management of migrant resources, but an analysis of power relations between the “village power” and the “association power” as Daum calls it clearly illustrates the importance of this division of power in understanding how many of the projects are successfully implemented (Daum, 1998, Chapter 6). It seems as if the new type of power sharing has led to
the construction of new, more stable and more coherent organisational rules and that this has weakened the potential of many logics as a basis for realistic repertoires of action with regard to how remittances are negotiated and utilised. As we have shown, this is completely the opposite of what can be observed in the Delta.

We started this study by demonstrating the explanatory potential of Berry’s analytical perspective in interpreting the development of access regulating practices in Niger’s Central Delta and the problems this development represents for an improvement of people’s livelihoods. To a large extent, the economic crisis in the Delta fisheries may be seen as a result of a highly unclear, ambiguous and contradictory system of access to fishing grounds which drain much of the potential profit away from the producers. This situation may be fruitfully explained with reference to how different norms and values underlying access regulating practices have manifested themselves through history, and how conflicts of interests and lack of hegemonic power reproduce and strengthen the problem. Furthermore, we have analysed the effects of work migration in order to show that migration from the Delta does not seem to alter the fundamental ambiguity and contradictions in the norms and values underlying resource access practices. Rather, it seems to reinforce them, and this tends to strengthen the economic crisis even further. Also in this respect, Berry’s perspective proves fruitful.

However, the same approach proves far less suited to explain why similar types of work migration seem to have the opposite effects elsewhere. It is fruitful in order to show that differences in effects are connected to the level of institutional ambiguity and contradiction, but it proves unable to explain why migration in some places reinforces institutional ambiguity while in others it seems to favour stronger institutional coherence. Given that migration from the Senegal valley has given rise to new forms of leadership in the home areas, if Berry’s approach is applied to the case, this would indicate further institutional proliferation and increased institutional ambiguity also there. This does not seem to be the case, and the same tendencies also apply in many of the migrant marine fisheries in West Africa where similar dynamics to those observed in the Senegal valley are present (Chauveau and Jul-Larsen, 2000; Jul-Larsen, 1994 and 2000).

As we see it, the problem is connected to a tendency of putting too much emphasis on the absence, in rural areas, of hegemonic leadership and power which force people to continue to invest in all types of existing access regulating logics and which even promotes the construction of new ones. According to Berry, the lack of hegemonic leadership, caused by the particularities of African history, becomes in many ways the crucial explanatory factor for the reproduction of institutional ambiguities and contradictions. But given that the same lack of hegemonic power must also be assumed to exist where the institutional changes take other directions, there is a need to introduce a more dynamic element into the analysis. The absence of hegemonic leadership and power does not necessarily prevent the existence of considerable differences and fluctuations in power, or that some leaders are more important than others in the processes of institutional change. One of the reasons why migration from the Senegal valley seems to reverse the process of
increased institutional ambiguity may be that the “association power” has been able to enforce its own logics with regard to the negotiation and utilisation of the remittances. We therefore think that more emphasis on the interests of various types of political leaders and to what extent institutional clarity and consistency are compatible with their interests or not, may improve the explanatory value of the approach.

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Overcoming Variability and Productivity Constraints in Sahelian Agriculture

Michael Mortimore

Introduction

The West African Sahel is vast in size and diverse in character (Raynaut, 1997). It is subject to severe bio-productivity constraints which are linked directly to aridity (both past and present). It is changing in the longer term and highly variable in the short term (inter-annual, seasonal, and intra-seasonal). Two major parameters of long term change are the average annual rainfall, which declined from the 1960s to the 1990s by up to a third, depending on location, and the human population, which grew throughout the 20th century at rates of natural increase often exceeding 2.5 per cent per annum. Short-term variability in rainfall, soil moisture, and plant bio-productivity imparts uncertainty to the management of natural resources, and at times has threatened the lives and well-being of tens of millions of people.

The Sahel Drought of 1969–74 intensified the debate on the correct ways of managing natural resources and securing the livelihoods of its many millions of people. This debate has hung between authoritarian solutions and participatory approaches, and between neo-technical and indigenous solutions. It has not been concluded.

The term ‘Sahel’ has come to include both the grassland, scrub and thorny bush of the Sahel proper and the semi-arid Sudanian savannah woodlands. The area of north-eastern Nigeria which is referred to in this chapter is properly a part of the Sahel (Figure 1), though excluded from the geopolitical definition based on the Francophone countries which is often used. It contains, in the Kano Close-Settled Zone, higher population densities than any of those countries. It is regarded, both by the Nigerian Government and by aid donors, as a region facing environmental degradation. Perhaps because of the relative wealth of its government, its high population densities and level of urbanization, the responses of its smallholders to environmental and economic change may offer a foretaste of the future for other parts of the Sahel.
Reference is also made in this chapter to the former Machakos District in Kenya (Tiffen et al., 1994). It differs from the Sahel in important respects: there are two rainy seasons in place of one; average rainfall has not declined, though seasonal rainfall is subject to cycles; and there are small areas of high potential hill country. However in terms of aridity and rainfall variability, its drier areas pose a comparable challenge to those of the Sahel.

The constraints

The rainfall

Rainfall in the Sahel, during the past four decades, has been scarce, declining, and erratic. A lengthening dry season from south to north, and a corresponding gradient in the average rainfall, provides Koechlin (1997) with a basis for identifying four bioclimatic sub-zones (Table 1). This chapter, however, is not concerned with the first of these (sub-desert), where it is too dry for rainfed farming. This intensifying scarcity of moisture is the principal defining constraint in natural resource management.
Table 1. Bioclimatic Zonation of the Sahel

<table>
<thead>
<tr>
<th>Sector</th>
<th>Annual Rainfall (mm)</th>
<th>Dry Season length</th>
<th>Vegetation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-desert sector</td>
<td>200–250</td>
<td>10 months or more</td>
<td>dry steppe</td>
</tr>
<tr>
<td>Sahelian sector</td>
<td>250–550</td>
<td>8–10 months</td>
<td>dry steppe</td>
</tr>
<tr>
<td>Sub-Sahelian sector</td>
<td>550–750</td>
<td>7–8 months</td>
<td>transitional steppe/savannah</td>
</tr>
<tr>
<td>Northern Sudanian sector</td>
<td>750–1000</td>
<td>6–7 months</td>
<td>Sudan savannah</td>
</tr>
</tbody>
</table>

Source: Koechlin (1997)

The World Meteorological Organisation’s data allow rainfall over two thirty-year standard periods (1931–60 and 1961–90) to be compared in sub-Saharan Africa (Hulme, 1996), and in north-east Nigeria, where a decline in annual rainfall, if averaged over the thirty years 1961–90, amounted to 8 mm per year (Hess et al., 1995). There was also a reduction in Sahelian rainfall in the agriculturally critical months of June, July and August, with declines in places of 0.4 mm per day (up to 30 per cent) between the two 30-year periods (Hulme, 1996). The impact of this long-term decline in rainfall is felt primarily in an increased incidence of agricultural droughts.

Rainfall variability occurs on three different dimensions, all of them important for farming and livestock operations: (1) coefficients of the variability of annual rainfall increase from south to north, reaching over 30 per cent, dramatically changing the conditions for plant growth from year to year; (2) actual rainfall varies in space over quite a short range, even between different plots farmed by the same family, as the distribution of showers is erratic. Furthermore, an intense shower may contain quite a large proportion of the year’s rainfall; and (3) rainfall is distributed very unevenly during a single season, so that a satisfactory total may nevertheless be poorly timed with regard to the growth cycles of plants.

To illustrate the impact of variability on farming operations, Figure 2 shows labour use in relation to rainfall at Dagaceri (north-east Nigeria), in seven-day periods during 1994 and 1996. In this farming system, labour use in 12 households was monitored during the farming year, and weighted according to age and sex. In the first year, rainfall was adequate and well distributed, and this was reflected in high labour inputs in weeding/thinning and in two strong peaks during the harvest (reflecting early and late maturing crops). By contrast, 1996 had a drought in July, which had the effect of reducing labour inputs during the weeding period to little more than a half of the level achieved in the earlier year. This reduced effort was, nevertheless, unavailing, and harvest labour – which is an indicator of output – tailed off at only a third of its earlier level.
Bio-productivity

Many rainfed arable soils are low in organic carbon (<0.5%), nitrogen (<0.05%), phosphorus (<30 ppm), potassium (<0.2%) and some trace elements such as boron (Jones and Wild, 1975; Pieri, 1989). They have high sand fractions, little clay, and retain little moisture in the surface horizon. It is immaterial whether their poverty results ‘naturally’ from a sparse vegetation under low and erratic rainfall or from management. For practical purposes, it defines the limits of bio-productivity.
on farmers’ fields, unless they can concentrate nutrients through grazing animals or inorganic fertilizers. It also defines the limits of bio-productivity on rangelands under a given rainfall (Penning de Vries and Djitèye, 1982).

The exceptions to this generalisation are the lowlands where groundwater may be within the reach of annual plants, where irrigation is sometimes possible, and where soil texture and nutrients are more favourable than on upland sites. But such areas are scarce. At four sites representative of the range of ecologies found in north-eastern Nigeria, moist or wooded lowland (fadama), a small proportion of it irrigable, declined between 1950 and 1990 (Table 2). Much of it dried out under the influence of declining rainfall (Turner, 1997). Irrigation, therefore, does not offer a general solution to low bio-productivity in the Sahel.

**Table 2. Moist or wooded lowland at four sites in north-east Nigeria, 1950–1990**  
(per cent of area)

<table>
<thead>
<tr>
<th>Site</th>
<th>Rainfall Average 1992–96, mm</th>
<th>t1</th>
<th>t2</th>
<th>t3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tumbau</td>
<td>533</td>
<td>7.0</td>
<td>2.9</td>
<td>1.2</td>
</tr>
<tr>
<td>Dagaceri</td>
<td>360</td>
<td>1.9</td>
<td>1.3</td>
<td>0.1</td>
</tr>
<tr>
<td>Futchimiram</td>
<td>326</td>
<td>&lt;0.1</td>
<td>&lt;0.1</td>
<td>&lt;0.1</td>
</tr>
<tr>
<td>Kaska</td>
<td>301</td>
<td>24.4</td>
<td>10.6</td>
<td>7.9</td>
</tr>
</tbody>
</table>

t1 1950 (Tumbau, Dagaceri, Kaska); 1957 (Futchimiram)  
t2 1969 (Dagaceri, Kaska, Futchimiram); 1971 (Tumbau)  
t3 1981 (Tumbau, Dagaceri); 1990 (Futchimiram, Kaska).*

**Labour**

Shortages of labour occur in Sahelian farming systems which, although short-lived, can have a major impact on critical operations (planting, weeding/thinning) and thereby on output and on household food sufficiency. In a year of good rainfall, farming families use a high proportion of their available labour – defined demographically – at such peak times (Figure 3). Estimates of available labour are optimistic as they take no account of cultural barriers to women’s working in the fields, or to making use of small children’s labour, or sickness and disability, or labour needs outside farming. Figure 3 does not show livestock labour used (on milking, feeding, tending, grazing) which, when included, puts Tumbau on a par with the other sites.

For a greater part of the year, available labour may be ‘in surplus’ to farming requirements. This ‘surplus’ offers its own challenge to household viability, especially when crop output has been low and incomes must be sought elsewhere in the economy.

**Investment capital**

Raising the productivity of primary production systems depends on investment – not necessarily in the form of exotic or high cost technologies, but (more relevant
to resource-poor smallholders) in modest and incremental changes in land use and implementation of known technologies, which together contribute to a process of intensification. However, any investment is risky on account of the variability in rainfall. Given a high frequency of crop failures, farm investments need a long period in which to bring benefits (estimated at >5 years in semi-arid Kenya: Gichuki, 2000). These benefits are always subject to the limitations imposed by soil and moisture constraints. Similarly, investments in livestock may quickly be lost during drought. The accumulation of wealth through animals, though a preferred strategy among most Sahelian populations, is nevertheless a long and unsteady process. At times donor agencies have questioned whether the Sahel is capable of bringing an economic return to external investment. However, there is evidence from certain areas that internal investment by indigenous farming families can stabilise – or reverse – declining productivity (Mortimore, 1993a; Tiffen et al., 1994). Their resilience in managing risk has developed from many centuries of experience.

Figure 3. Percentage of available labour used in farming in three villages in north-east Nigeria in 1994.

The peaks correspond to the major operations of planting (July), weeding/thinning (August), and harvesting (early millet and cowpeas in October; late millet, sorghum and late cowpeas or groundnuts in November).

Change in Sahelian agriculture: a view from above

Because of its environmental constraints, its poverty and dependency on external aid, the debates about the Sahel have tended to reflect an external perception, highly generalised notwithstanding much internal differentiation and political fragmentation. Reflected in the dialogues amongst donors, international organisations and professional cadres within national governments, this view is not necessarily representative of the perceptions of the users (managers) of the natural resources. But through repetition over several decades, it has assumed the status of an orthodoxy, which has been challenged in several recent studies of individual production systems. At some risk of caricaturing a complex reality, the following sketch attempts to identify the main ingredients of a conventional view of the Sahel – a ‘view from above’.

1. An equilibrium disrupted. Before the colonial interventions which hastened the transformation of West African inland landscapes after the middle of the 19th Century, population densities were in general lower than those of today, and many areas were unsettled by farmers. This much is certain; whether it is correct to assume that market exchange was insignificant, urbanisation slight, and subsistence production alone important, is more doubtful, even in areas remote from political centres or the coast. Most controversial is an assumption, often implied in accounts of environmental change, of production systems which, by shifting cultivation in space at regular intervals, maintained an equilibrium between population and resources, and between ecosystems and their managers. Such an assumption is most probably a myth (Fairhead and Leach, in press). Nevertheless, many recent changes have been understood as disturbances of such an equilibrium.

   The demographic transition to high rates of growth, high rural population densities, and urbanization has taken place on a dramatic scale in West Africa during the 20th century. If there was an equilibrium, it must have disrupted it. Many interpretations of contemporary change are based on the supposed loss of such an equilibrium (Mortimore, 1998). In some areas, such conclusions appeared to be justified on the basis of field investigations: in the Maradi Department of Niger, for example, Raynaut (1975) and his colleagues concluded that the system was in blocage or disequilibrium in the 1970s, a view which now requires some qualification (Bouzou, 2000).

2. A failure of export-led growth. The colonial governments promoted the production of export crops – groundnuts and cotton in particular – and livestock products (hides and skins) to generate revenues for the state and reduce dependence on metropolitan subsidies. Taxation policies, and sometimes even compulsory production quotas, were used to achieve this. Enormous increases in output were recorded by the purchasing and exporting agents. Such expansion could be achieved at the ‘extensive margin of agriculture’ by taking more land into cultivation, or by grazing larger herds and flocks on common pastures. Clearly, if there had been an equilibrium, such ‘extensification’ disturbed it. However, adjustments were made by migrating farmers, who moved from older settled areas (as they came under
Overcoming Constraints in Sahelian Agriculture

pressure) into new lands – in the _terres neuves_ of Senegal, for example, between the 1940s and the 1960s (Rocheteau, 1975; Dubois, 1975); or from Hausaland to Gombe in northern Nigeria, in the 1950s and 1960s (Tiffen, 1976). Livestock specialists, evacuating the newly privatised farmlands, shifted their grazing orbits, for example from north-eastern Nigeria into Cameroon in the 1960s and 1970s. Such movements were unregulated and poorly documented, notwithstanding their great impact on land use patterns and regional production.

However, the great days of Sahelian groundnut exports have passed, and will not be repeated. The Senegalese _bassin arachidier_ is indicative. Based on state credit for inputs and state control of marketing and processing, the expansion of groundnut production failed to generate farm investment on a scale sufficient to secure sustained productivity at current prices (Faye and Fall, 2000; Gaye, 2000). By contrast, the most dynamic sector today in areas formerly devoted to groundnuts is the production of food for internal urban markets.

3. _A 'mining' of soil nutrients._ Declining yields of export crops (less was known of ‘food’ crops), together with a realisation of the probable scale of nutrient exports from the systems, via the ports, led to the promotion of inorganic fertilizers (as early as the 1950s in northern Nigeria). Subsidies had to be used in order to make them more profitable for small producers, and their high cost – often made worse by their scarcity – has ever since dogged the footsteps of agencies promoting them. The dilemma was vividly exposed in Senegal, where the Programme Agricole (from the mid-1960s) used credit, via cooperatives, to promote improved groundnut seed and fertilization in an effort to stem declining yields per hectare, and improve output (and incomes) per capita. Meanwhile the stock of unused land declined rapidly and the national economy failed to reduce its dependence on groundnut exports, importing more and more food from abroad (rice, in particular). In northern Nigeria, the other world-class groundnut exporter in West Africa, the World Bank-funded integrated rural development programmes of the 1970s and 1980s distributed inorganic fertilizers on a large scale. The situation today is that farmers everywhere in the Sahel tend to identify one of their major constraints as inaccess to sufficient fertilizer. A new dependency has been created, while at current prices (taking account of structural adjustment policies, which remove subsidies), inorganics are only profitable for high-value crops.

4. _Carrying capacity exceeded._ When the Sahel Drought reached its climax in 1972–74, the assumption that food scarcity and famine were supply-driven (a view challenged by Sen, 1981) led many observers to find a scapegoat in ‘indiscriminate’ mining of natural capital in earlier decades – not only overcultivation (already noted), but also deforestation, overgrazing, soil erosion, and theorised negative feedbacks from land use to rainfall. Institutionalised in 1977 in a global Plan of Action to Combat Desertification, this diagnosis has since dominated the international efforts coordinated by the Desertification Branch of the United Nations Environment Programme. The scientific basis of this orthodoxy, which relies to a significant extent on global data sets and expert assessments (Oldeman and Hakkeling, 1990; UNEP, 1992) soon came under critical questioning, and spawned a
large literature (see Warren and Khogali, 1992; Thomas and Middleton, 1994; Swift, 1996). Furthermore, diagnoses of ‘excess’ human and livestock populations, which are thought to have been in existence for many years, are at variance with the empirical reality of their survival – indeed, enlargement – under severe climatic and other constraints. It is nevertheless reflected in the United Nations Convention to Combat Desertification (1996), to which nearly 150 countries are signatories (World Bank, 1998).

The ‘top-down’ perspective of such a global (or continental) assessment is ill-adjusted to the current priority of ‘participatory’ approaches to development.

5. Depending on food aid. Several Sahelian countries failed to recover from a persistent or recurring dependency on food aid after the Sahel Drought (Somerville, 1986; Giri et al., 1988). Given the prevailing orthodoxy on natural resource management, together with the decline in the rainfall (more widespread droughts occurred in 1983–84, and in 1995), it is easy to diagnose a chronic incapacity to produce, with negative consequences for the ever-increasing numbers of poor people. Improved cereal output, under better rainfall conditions in recent years, has not yet laid this ghost to rest (in Maradi Department of Niger, for example, a strong upward trend in the output of millet has occurred since 1988: Hamadou, 2000). The weakness of the state, under a conjunction of low commodity prices and structural adjustment policies, in sharp contrast to the interventionist possibilities that were uppermost in influencing the policies of the 1960s and 1970s, appears to worsen the implications of this scenario significantly.

Change in agriculture: a view from below

From a smallholder’s perspective, two fundamental challenges present themselves. The first is how best to manage the constraints – including those outlined earlier – which threaten the security of household and individual livelihoods. Therefore, an analytical focus on constraint management is appropriate. It must recognise the mix of resource endowments, incomes and managerial capabilities which is unique to each household. Every year presents a new challenge, its outcome defining the starting position for the next: in this sequential process, diversity of opportunities, flexibility in making decisions, and adaptability of strategies are critical (Mortimore and Adams, 1999:14–23).

The second fundamental challenge to smallholders (whether crop or animal producers) is how, in a context of acute capital scarcity, to invest in enhancing farm or livestock incomes. Such investments, moreover, must compete for funds with other priorities, which include consumption, off-farm activities, education, health, social commitments and emergencies. Only some succeed; others fail to do so. Yet analyses at the household level indicate that there is movement all the time, in both directions, between failure and success.
In Machakos District, Kenya, an interdisciplinarily study of long term change during the period 1930–1990 chronicled a turn-around in land degradation, and an increase in output by value both per hectare and per capita (Tiffen et al., 1994). A model was constructed of the positive linkages between population growth, environmental management and economic growth at the district level. The ‘Machakos hypothesis’ explored these linkages systematically. Critical debate has since focused on certain issues, one of which is the replicability of the Machakos model in other African semi-arid farming systems. West African parallels had already been documented, in particular, in the Kano Close-Settled Zone of northern Nigeria (Grove, 1960; Mortimore and Wilson, 1965; Mortimore, 1993b, c, 1998).

However, evidence for smallholders’ capitalisation of integrated crop and livestock systems, with low external inputs, must be sought at a micro- or district rather than global scale. Such a ‘view from below’ takes account of change processes, the local impact of the remote forces which have influenced these processes, and the differentiation among households or between individuals that may be the counterface of change at the system scale (Rocheleau, 1997; Murton, 1999). It is important to identify resources within the system which offer a prospect of beneficial change, rather than relying on external interventions.

In the following discussion, we return to the key constraints identified earlier and ask the question, ‘What can Sahelian communities do for themselves to better their management of constraints, and to invest in enhanced productivity?’

The rainfall constraint

Strategies for managing the rainfall constraint are built into farming and livestock production systems. Little can be done to remove the effects of rainfall variability on labour needs in farming (Figure 2), but something can be done – through adaptive technology – to minimise the variability in farm output. In crop production, cultivar biodiversity is maintained by selection, exchange, and experimentation among fast maturing or drought-resistant ‘landraces’. In the four Nigerian systems, crop inventories compiled in 1992–96 ranged from 23 to 76 varieties per village, and included from 3 to 12 varieties of pearl millet and from 6 to 22 of sorghum (Chiroma, 1996; Ibrahim, 1996; Mohammed, 1996; Yusuf, 1996). These inventories are adaptive to climatic change. That is, during the three decades after the Sahel Drought, late varieties of pearl millet and cowpea lost ground to early ones. Sorghum varieties suitable for exploiting late rain or residual moisture are skilfully matched to the rainfall pattern in a given year. A bitter melon which can grow throughout the long dry season on a couple of late showers was recovered from obscurity. Other examples could be cited. This purposive management of diversity in genetic resources (Busso et al., 2000) reflects the accumulated experience of the community and is not, of course, always successful for individual households, and in a drought year it may fail on a larger scale. But it contains the ‘best bet technologies’.
The contribution made to these genetic resources by research and breeding cannot easily be assessed because the adoption of new varieties is not monitored effectively, and outcrossing varieties (especially of pearl millet) can mingle with others and quickly lose their identity. In Kenya, quick-maturing maize varieties developed on government research stations (Katumbani Composite B; Makueni Dryland Composite) have achieved wide acceptance among farmers, but only as additions to ‘local’ varieties in established crop inventories (Mortimore and Wel-lard, 1991; interviews in Makueni District, 1998–99). Millet improvement efforts in northern Nigeria, such as they are, have failed so far to advance significantly on indigenous varieties in either yield or earliness. However, one of the favourites in the drier villages is believed to be a descendant of a promotion developed by the externally-funded Maradi Rural Development Project in neighbouring Niger. Such uncertainties underline the role which farmers assume in deciding what is best for their circumstances.

In livestock production, a diversity of fodder sources (crop residues, boundary plants, and tree browse as well as natural rangeland), together with herd mobility (whether daily local movements or seasonal transhumance over longer distances), have provided a dual strategy for coping with uncertain rainfall and bioproductivity. As rangeland diminishes and cultivated land increases, and more livestock pass into the hands of sedentary owners, the importance of fodder diversity increases relative to grazing mobility. The financial reward of livestock ownership has increased steadily with urbanisation and the growth of markets. So often condemned as inefficient and inherently degradational, these complex feeding systems have proved remarkably resilient, support more and more animals (de Leeuw, 1997), and are difficult to improve upon. In Machakos, where all rangeland is now privately owned, ‘zero grazing’ (stall-feeding with crop residues, other farm waste and purchased feed) has supported a switch to cross-bred and even pure-bred exotic dairy cattle, as the health risks have gradually been brought under control (Fall, 2000).

**The bio-productivity constraint: cycling and conserving nutrients**

Unlike the rainfall, the nutrient economy of Sahelian agriculture is susceptible to management. As shifting cultivation systems are assumed, in the ideal case, to be self-balancing, many perceive the challenge of nutrient management as consisting essentially of replacing nutrients exported from the system in economic crops and by-products under shortening fallow regimes (Breman, 1990; van der Pol, 1992), or removed from the topsoil by erosion and leaching. A doomsday scenario for the continent of Africa has been projected from negative nutrient balances estimated on the basis of tiny samples of farmers’ fields, or by comparing supposed nutrient exports with recorded distributions of inorganic fertilizers (Smaling et al., 1993). Is such a diagnosis reliable?

The difficulty of closing such a gap, if it exists, with inorganic fertilizers under present and foreseeable pricing structures, has been referred to above. In northern
Nigeria, the profitability of inorganics was marginal for lower value crops even in the buoyant conditions of the 1980s (Wedderburn, 1988). Low external input systems are necessary, which can enhance efficiency in nutrient cycling, whether they eliminate the need for inorganics or merely reduce it ('integrated fertilizer management'). Hence there is a surge of interest in the efficiency of nutrient cycling on small farm holdings, the role of animals in cycling nutrients, the integration of crop with livestock production, and methods of supporting intensification through intensive technologies such as composting (Scoones and Toulmin, 1999). The management of nutrients on cultivated land is closely linked to the management of recuperative fallows and of grazing land, from which nutrients are transferred to cultivated land, either directly by corralling animals, or indirectly through stall manure and compost (Turner, 1998).

The nutrient cycle has been quantified and budgets estimated for the smallholder farming system of the Kano Close-Settled Zone and for the less intensive fallowing system of Dagaceri (Harris, 1996, 1998, 1999). At Tumbau, nutrient balances on three farmers’ fields in two years (1993, which was relatively dry, and 1994, which was relatively wet) show clearly the micro-variability which results from differences in rainfall between years (more nutrients are harvested in a larger volume of biomass), in the resources that different farmers can mobilise, and in the fertilization strategies employed in a given year on different fields or plots (Table 3). The results are compatible with the possibility of an overall balance in the key nutrients carbon, nitrogen and phosphorus over time and in the farming system as a whole.

The farmers’ nutrient balances vary from field to field, depending on fertilization practices and crop rotations. This is to be expected, as farmers rotate the application of manure or use of inorganic fertilizer across fields over several years. Planting a legume crop ensures a large nutrient input to that field through nitrogen fixation. (Harris, 1996: 7)

At Dagaceri, analyses carried out in one year (1996, which was relatively dry) indicated that the system as a whole depends on nutrient transfers from grazing to cultivated land; but nevertheless, fields close to the village, whence manure and dry compost are supplied regularly, have been maintained under annual cultivation for many years. Elsewhere, farms belonging to Fulani cattle herders have been cultivated annually for 50 years (Ibrahim, 1996). Inorganic fertilizers are rarely used in these systems.

These findings for the intensive system at Tumbau are supported by inter-year comparisons of fertility indicators in 16 soil catenas on annually cultivated fields in the Kano Close-Settled Zone, between 1977 and 1990 (Mortimore, 1993b). During this 13-year period, average changes in organic carbon and in total nitrogen
Table 3: Sustainability of nutrient balances on 12 fields in Tumbau, Nigeria

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>Positive balance</th>
<th>Average (kg/ha)</th>
<th>Positive balance</th>
<th>Average (kg/ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrogen</td>
<td>3</td>
<td>-5.14</td>
<td>3</td>
<td>-20.90</td>
</tr>
<tr>
<td>Phosphorus</td>
<td>6</td>
<td>1.38</td>
<td>4</td>
<td>-1.55</td>
</tr>
<tr>
<td>Potassium</td>
<td>6</td>
<td>3.93</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Magnesium</td>
<td>8</td>
<td>4.08</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calcium</td>
<td>11</td>
<td>27.5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Harris (1995): 125. Note that K, Mg and Ca were not analyzed for 1994.

compensated each other and no significant changes were measured in exchangeable cations except for potassium, which was negative. The textural properties of the soils showed no change. However, the variability between sample sites was high. The contribution of inorganic fertilizers to this achievement is not known, but notwithstanding the presence of an agricultural development programme in the area at the time, farmers’ use of them was very low. Such hopeful conclusions challenge the supposed inevitability of continuous fertility decline under high rural population density, annual cultivation and a low and variable rainfall. Although their fertility is low by any absolute standard, such soils appear capable of a transition to stable or improving fertility management.

In such transitions, the role of animals in integrated crop-livestock systems is pivotal (Pingali et al., 1987; McIntire et al., 1992; Mortimore and Turner, 1993). Tending livestock and cycling nutrients require much labour (Harris, 1999; Mortimore and Adams, 1999), so that a high rural population density seems to be a prerequisite. The factors which constrain the livestock population thereby constrain the transition to low external input intensification; and the remarkable fact that the Kano Close-Settled Zone supports the highest livestock densities in northern Nigeria (in standard livestock units: Bourn and Wint, 1994), with less than five per cent of the area under rangeland, appears to challenge the ratios of cropland to rangeland which are considered to be necessary for sustainable fertility, though these are for drier areas (Schlecht et al., 1995). But a question still hangs over the capability of this developmental pathway to raise productivity significantly above present levels.

The capital constraint: terroirs in transition

Land use change, and in particular the extension of cultivated areas, is highly visible in dryland Africa. In semi-arid areas of Machakos District, Kenya, the agrarian structure is expressed in a continuous matrix of private farms each containing its homestead, cultivated fields, and grazing area. The cultivated fraction in three representative study areas ranged from <1 to 23 per cent in 1948. Thirty years later (1978), it ranged from 20 to 51 per cent, and afterwards it continued to rise. This was a dramatic change. By the year 1978, from 60 to 90 per cent of this land had
been protected from soil erosion by terraces, constructed by family or cooperative labour, and during the 1980s such investments continued (Tiffen et al., 1994: 64–76). During the same period, rapid population growth took place at over 3 per cent per annum, and there was extensive settlement in areas previously unfarmed. This transformation of the landscape provided the basis for an intensification of agriculture. In the District as a whole (which includes small areas of higher potential land), there was a threefold increase in real income per capita, and more than a tenfold increase per hectare, between 1932 and 1987.

In the Sahel, the agrarian structure is expressed spatially in the village *terroir*. Grazing areas are usually managed as common access resources, but cultivated land is subject to a varying degree of privatisation. Table 4 shows the evolution of the cultivated fraction in the four *terroirs* which are situated along a rainfall and population density gradient in north-east Nigeria. While the general direction, in relation to both time and density, is plain to see, there are variant patterns of change which depend on local circumstances. In Tumbau, while population density continues to rise, the cultivated fraction is stable at the upper limit of cultivable land. In Dagaceri, the cultivated fraction stabilised after 1969 owing to the imposition of restricted access to grazing reserves. In Futchimiram, a shifting cultivation system continued to operate throughout under a low population density, suggesting equilibrium. In Kaska, on the other hand, the cultivated fraction increased under a low density. While it is clear that higher rainfall is associated with a higher density and cultivated fraction (Tumbau), the inter-village differentials are disproportionate. Such findings suggest the diversity and complexity of Sahelian farming systems.

The expansion of cultivation involves the expenditure of much labour on cutting, pollarding, burning and carrying away woodland vegetation. When shifting cultivation or bush fallowing gives way to annual cultivation on permanent fields, the removal of naturally regenerating shrubs, the erection of boundary fences or hedges, and the planting or protection of trees represent cumulative investments in enhancing economic productivity. Soil conservation or drainage measures may be put in place, storage structures and houses built, and wells or small earth dams constructed (as is common in Machakos). While much of their cost is in the use of family labour, it is increasingly common for labour to be hired (a practice which has become normal for some farm investments in Kenya). There are strong grounds for arguing that such small and incremental additions to the productive capacity of farm holdings should be recognised as investment, a term which in agricultural development has too often been restricted to ‘improved’ or promoted technologies. The same argument applies to livestock holdings, in which the addition of animals by breeding or purchase is invariably regarded as a productive investment by their owners. The capital constraint which is assumed to frustrate the uptake of costly technologies in development programmes – and whose solution is assumed to be credit – has tended to obscure the achievements of smallholders.
Table 4: Cultivated land in relation to rainfall and population density

<table>
<thead>
<tr>
<th>Village</th>
<th>Mean rainfall, 1992–96, mm</th>
<th>Population density/km²</th>
<th>Cultivated in t1*</th>
<th>Cultivated in t2*</th>
<th>Cultivated in t3*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Tumbau</td>
<td>571</td>
<td>223</td>
<td>78</td>
<td>89</td>
<td>88</td>
</tr>
<tr>
<td>2 Dagaceri</td>
<td>360</td>
<td>43</td>
<td>36</td>
<td>56</td>
<td>55</td>
</tr>
<tr>
<td>3 Futchimiram</td>
<td>301</td>
<td>31</td>
<td>22</td>
<td>22</td>
<td>22</td>
</tr>
<tr>
<td>4 Kaska</td>
<td>326</td>
<td>15</td>
<td>4</td>
<td>11</td>
<td>18</td>
</tr>
</tbody>
</table>

* Per cent of total area

Source: rainfall measured by gauges on site; population densities estimated from air photographs (1990 or 1981) updated to 1996 with control enumerations; land use interpreted from air photographs of the years shown (Turner, 1997).

who, notwithstanding high levels of environmental risk and personal poverty, have domesticated and made livelihoods out of vast areas of African bush, using their own resources.

The conversion of woodland into arable land is often believed to be degradational. The term ‘deforestation’ implies a loss of plant bio-productivity, of standing timber, of biodiversity, and of soil protection. At Tumbau and Dagaceri in Nigeria, in order to assess the impact of the land use changes portrayed in Tables 2 and 4, estimates were made of annual aerial plant biomass production, measured in kg dry matter/ha (Mortimore et al., 1999). On farmland, this includes ‘economic’ crop output (grain, etc.), fodder residues, weeds, wood and foliage of shrubs, and of planted or protected trees. There was no unmanaged natural vegetation in either locality to use as a control. However, total production in three estimates compares favourably with theoretical values for Sahelian rangelands under the same rainfall (Penning de Vries and Djitéye, 1982: 322). Dry matter production in Tumbau in 1993 (a dry year) was 3,878 kg/ha, and in 1994 (a wet year) it was 6,489 kg/ha. At Dagaceri in 1996 (under lower rainfall), it was 2,080 kg/ha.

It has also been shown that timber volume on farmed parkland is superior to that on secondary woodland under fallow: 8.9 m³/ha standing volume compared with 4.6 m³/ha (Nichol, 1990: 56). It is generally assumed that incremental timber growth and canopy foliage is proportionate to timber volume, for want of accurate standards; though the mature farm trees may well be more productive than those of secondary shrubland. Although it cannot be disputed that arable land lies exposed to wind erosion during the long dry season, the weak profile development of sandy soils minimises the cost of erosion to the farmer, and the presence of standing trees reduces wind velocity.

On biodiversity, little evidence has come to light that a transformation to farmland necessarily entails a loss. At Dagaceri, an inventory recorded 121 non-domesticated plants which are used by the people under private, common or open access (Mohammed, 1994), and concluded that ‘indigenous and induced [i.e., regulated] management principles are all geared towards protection of the vegetation’.
The northern Nigerian experience also questions the view that the conversion of natural (or, more probably, secondary) vegetation to farmland reduces the carrying capacity for livestock. In a study of livestock husbandry in the Kano Close-Settled Zone, Hendy (1977) showed that with increasing population density (which accompanies a decline in natural grazing land), the density of cattle declines but the density of other animals, and especially small ruminants, increases. More recent surveys using air photography (Bourn and Wint, 1994) have proved that livestock densities (measured in standard units) correlate positively and highly significantly with rural population densities. The explanation for this apparent contradiction lies in the emergence of a highly integrated crop-livestock system in which farm biomass is produced in large quantities and cycled efficiently to livestock as fodder (Harris, 1998).

In Machakos District, massive soil losses occurred during several decades of prolonged cultivation on unprotected slopes from the 1930s to the 1950s (Thomas, 1991). However on these truncated profiles, where erosion has now been brought under control, it is still possible to maintain fertility adequate for low yielding maize and other crops with regular organic inputs based on the boma system of ‘zero grazing’. Cattle, which are also used for milk and traction, are fed on a cut-and-carry basis if and when grazing land is insufficient. On fallows and grazing land, the nutrient status of soils depends on the amount of vegetation cover, and farmers are beginning to invest in erosion control and pasture improvement on this increasingly valuable land (Gichuki, 2000). Except for foraging for fodder on road- or streamsides, and strictly limited purchases of inorganics, the capacity of the farm to support the family in maize depends on recycling. Thus composting, which offers an increased amount of organic fertilizer for the price of additional labour (and water), is strategic in increasing the productivity of the system (Tiffen et al., 1994: 98–118).

The labour constraint

Flexible management of family labour is necessary to cope with the variable demands of the crop growth cycle and the fluctuating bio-productivity from year to year, which determines how much weeding needs to be done and how much harvesting work is required (Figure 3). For short periods, the use of labour may reach 70 per cent of that theoretically available (assuming that every member of the family, including men, women and children, work all day, every day on farming tasks). It is during this time of stress that the adequacy of farm output hangs in the balance together with needs to tend and feed animals, undertake other necessary tasks, attend markets and cover sickness or other interruptions.

The ability of labour sharing institutions in breaking this constraint is limited by the concurrence of peak demand on all farms in the locality. The mwelha work groups which accomplished much soil conservation work in Machakos during the 1960s and 1970s were able to do so because such work could be undertaken during
the dry seasons. During the wet, families divided again to operate their own farms, and the impact of absent migrants was and still is felt by those who stay behind to produce essential maize and other crops.

Hiring labour has become increasingly common in agricultural enterprises which are integrated into markets, where its cost can be recovered from crop or livestock sales, or where off-farm incomes generate cash for farm investments, such as in Machakos where much conservation work is now done by skilled labourers (Gichuki, 2000). It is not an exaggeration to state that income diversification has become there a condition for sustainable agriculture.

Neither labour sharing (which seems to be in decline) nor labour hiring (which is on the increase) can eliminate, however, the risk of being caught with insufficient family labour to perform farm operations which are essential for household food security, especially in poor households. Therefore efficient allocation of family labour remains the key to farm productivity, given the constraints imposed by rainfall variability and low bioproductive potential. There is no reason to suppose that all households are equally efficient, nor that they have access (at the right time) to the technologies necessary to maximise their efficiency. Largely ignored by agricultural (and livestock) research and extension, the management of the labour constraint nevertheless emerges as quite critical when any Sahelian farming system is observed at first hand.

Migration (the exode of French literature) has often been understood as a threat to crop production and therefore to food sufficiency in the Sahel. David (1995), for example, records high rates of male absenteeism in the Djourbel region of Senegal, even during the farming season. Such absenteeism may frustrate labour-intensification in agriculture and thereby the achievement of ecologically sustainable systems. (Others have argued high costs imposed on urban infrastructure and services by poor migrants, or alleged the transfer of much needed capital from the periphery to the core of the economic system.)

In the Nigerian villages, migration is seasonal and short-term, and very few men fail to return home for the farming period. It is an historically entrenched form of adjustment to risk in the Sahelian environment (Prothero, 1959; Mortimore, 1989). For households in the villages, the opportunity costs of farm labour are an ever-present reality as they juggle with diversification strategies. There seems no reason why food security at the household level should be a policy objective if individuals can command superior income flows through migration. Travel is recognised as either an opportunity for accumulation or a means of coping in extremis. By having a foot in two worlds, a household may be allocating its labour resource according to a long-term rationale.
Conclusion

This chapter has argued that the environmental constraints of variable rainfall and low bioproductive potential in the Sahel need to be placed alongside two operational constraints – those of labour and of capital – in order to understand the challenge facing smallholders who produce crops and livestock. The question is raised, ‘What can Sahelian communities do for themselves to better their management of constraints and to invest in enhanced productivity?’

Evidence has been provided, by drawing on studies in north-east Nigeria and in semi-arid Kenya, that adaptive capacities exist to deal with rainfall variability (for example, in the manipulation of genetic resources), low bio-productivity (for example, in nutrient management), capital scarcity (for example, in many forms of incremental investment in landscape transformation), and the labour constraint (for example, in flexible management of farm labour and opportunistic allocation of labour to income diversification through migration). Such capacities, though remarkable and inadequately researched, offer much scope for further development, as they are resourced internally rather than being dependent on external capital or interventions.

Development approaches which seek to revolutionise ‘backward’ or ‘inefficient’ indigenous systems with neotechnologies have not found a place in the Sahel. The experiences of Machakos in Kenya and of dynamic urban hinterlands in the Sahel (Snrech et al., 1994), such as the Kano Close-settled Zone in Nigeria, suggest that a convergence of internal with external sources of change optimises the opportunities for small and poor households in drylands.

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Overcoming Constraints in Sahelian Agriculture


The Malian Cotton Zone: Economic Success, but Environmental Failure?

Tor A. Benjaminsen

Introduction

African agriculture, and dryland agriculture in particular, is reported to be in crisis (e.g. Cleaver and Schreiber, 1994). Despite this crisis, sustainable intensification is taking place in certain areas (Mortimore, this volume). This chapter discusses the cotton zone in southern Mali, which is often referred to as a success story. However, this is primarily seen as an economic success. The flip side is said to be serious environmental degradation through deforestation and soil depletion. These environmental impacts will be discussed in the latter part of this chapter after tracing the history of agricultural development in the cotton zone and trying to single out the factors which have caused this development.

In discussions of factors behind agricultural development, the Boserupian model of population increase inducing technological change and intensification is one of the main points of reference (Boserup, 1965). This model, labelled autonomous or labour-led intensification implies that more labour is added to each land unit. It is contrasted with policy-led or capital-led intensification advocated by, for instance, Lele and Stone (1989). The latter would imply that governments should encourage the intensification process by providing incentives for a shift to crops of higher value or higher yields through the use of capital-intensive inputs such as inorganic fertilisers.

In the same vein, Goldman and Smith (1995) introduce the term market-driven intensification. In a case study from northern Nigeria (Gombe), they show that both fertilisers and ploughs can be adopted at population densities of 25 persons/km², which is regarded as fairly low. While not denying that population pressure has a role to play in agricultural change, they present the Gombe case and the three other cases discussed as examples of market-driven intensification. This means that rather than population pressure determining the changes taking place, it is “the constraints and opportunities of market-oriented production that have governed the dynamics and locations of these changes” (Goldman and Smith, 1995: 259).

This divide between the two types of intensification might seem fictitious, since few scholars claim that higher population densities per se would be a sufficient condition for sustainable intensification. However, some would maintain, with Ester Boserup, that a certain level of population density is a necessary condition
without which labour would be the limiting factor. Lack of sufficient labour available leads to the failure of certain policy-led innovations and investments, because farmers resist them due to the labour constraints (Binswanger, 1986; Pingali et al., 1987). Where land is still abundant, farmers have little demand for yield-raising innovations, since extension of the cultivated area is less labour demanding than intensification.

In this study, *intensification* is understood to mean additional inputs of labour or capital per ha. This process is often contrasted with *extensification*, which would imply decreasing labour or capital investments per ha. It is here understood that agricultural development is not necessarily moving in one direction from extensive to more intensive systems. There are many examples of farming communities reverting to more extensive practices when it becomes opportune to do so (see Niemeijer, 1996 for a review). As also stressed by Carswell (2000), households follow a mix of intensification and extensification strategies according to changing circumstances such as the policy context and access to labour and other inputs.

The need for a certain population pressure for intensification to take place and population as a major engine of the process has been demonstrated in a number of case studies from Africa (Turner et al., 1993). However, less is known about the environmental consequences of such intensification. It is often assumed that environmental degradation is a logical result of intensification, but few studies have addressed the relationship empirically. Exceptions are the Machakos case study from Kenya and the Kano area in northern Nigeria (Mortimore, this volume). According to Mortimore, population growth and agricultural intensification did not lead to long-term environmental degradation in Machakos or in the Kano Close-Settled Zone, but to environmental improvement including increased investments in land and improved conservation of natural resources. This would seem to be in accordance with the Boserup model, in which the environment is not perceived as a constant which will inevitably be degraded through human impact. Instead, environmental endowments are seen as man-made results of agricultural practices. Hence, soil fertility “may be the result of the use of intensive methods of land utilisation and not vice versa” (Boserup, 1965: 19).

**The Malian cotton zone**

Southern Mali is a geographical region situated in the south-eastern corner of Mali, bordering Guinea, the Ivory Coast and Burkina Faso (see figure 1). Mean long-term annual rainfall ranges from 600–800 mm in the northern part of the region to 1200–1400 mm at the southern fringe. The main ethnic groups are the Bambara, the Sénoufo and the Minyanka (basically farmers) and the Fulani (pastoralists). Be-
Figure 1. Southern Mali
sides the cultivation of food crops, the most important being millet, sorghum and maize, cotton as a cash crop is driving the agricultural system. Cotton is still, despite increasing gold production, Mali’s major export product.

The *Compagnie Malienne pour le Développement des Textiles* (CMDT) is a key organisation in southern Mali. In addition to its main activities related to cotton production, it is responsible for implementing and coordinating an integrated rural development programme in the region.

The population in southern Mali has been growing rapidly for many decades. In Koutiala District, which is the core area of the cotton zone, the size of the population increased from 122,000 in 1967 (Sanogo, 1989) to 396,500 in 2001 (administrative census), which gives a population density in the district of 41 inhabitants/km$^2$.

The literature on intensification referred to earlier would consider this population density as fairly low, maybe too low to expect any significant intensification. Areas with rapid agricultural intensification generally have population densities of well above 100 inhabitants/km$^2$ even in African drylands (Turner et al., 1993), sometimes as high as 4–500 inhabitants/km$^2$ (Mortimore, 1993a and b; Tiffen et al., 1994). However, observers primarily concerned with environmental impacts perceive the population density in the Malian cotton zone as excessive. For a long time, scholars and development agents (national and foreign) have agreed that serious environmental degradation is taking place in the region. It is generally believed to be caused by population pressure exceeding carrying capacity (IER and KIT, 1991). Berthier (1933) already mentioned overpopulation when describing the northern part of the cotton zone (the San area). Even though overall population density at that time was only 11 persons/km$^2$, Berthier saw environmental over-exploitation in and around the village areas, which he called “surpeuplement par concentration de l’habitat”. Today, the two main environmental problems resulting from this alleged over-exploitation of the natural resources are thought to be deforestation and loss of soil fertility. However, quantitative data on environmental change in the region are scarce, despite the area’s long involvement with international conservation and rural development projects.

**Cotton history and agricultural development**

Cotton has a long history as an important crop in the West African Sudanian zone. By the 12th century, cotton spinning and weaving were probably common in the region, and with the introduction and expansion of Islam, the long-distance cotton trade in West Africa also expanded (Roberts, 1996). After the French had colonised the Koutiala area in 1893,¹ colonial administrators noted that “in all the vil-

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¹ On 22 March 1893, colonel Archinard and his troops occupied the Koutiala area and made Koutiala the centre of a District (*Cercle*).
lages, the inhabitants weave cotton for their personal use” and “some cotton is cultivated all over the district”. Local farmers were growing cotton in fallow cultivation with little labour input and in association with maize or millet/sorghum. The colonial authorities were, however, eager to intensify this agriculture which was looked upon as inefficient and archaic.

At the end of the 19th century, almost all the cotton processed by the European textile industry was grown in the USA. However, the Americans were expanding their own industry, which led the Europeans to fear losing their chief source of the raw material. The European industry therefore looked for new areas which could supply the cotton it needed. The Sudanian zone in West Africa was picked out by the French as a promising new area for cotton supply. There were several reasons for this choice: the local farmers, representing a cheap labour force, were already cultivating cotton; the climate was favourable for cotton production; and transport would be possible through the use of the Sénégal and Niger rivers and the Dakar-Bamako railroad under construction (the rails reached Bamako in 1904).

In order to encourage farmers to grow more cotton, it was accepted as tax payment at 0.10 F/kg from 1896 onwards (Sanogo, 1989). However, the problem was that local farmers cultivated a variety of cotton which the European industry could not use. The factory machines in Europe required cotton with long fibres of equal length, while the locally produced cotton had fibres which were too short and of unequal length. It was therefore perceived as being of low quality.

As early as 1893, foreign varieties of cotton had been tested in the Kayes area and the veterinarian Sarrazin had been sent by the colonial government to French Sudan in the same year to work on improving cotton cultivation. In a letter from the veterinary service of the colony to the government, the reasons for summoning Mr. Sarrazin were explained:

Cotton exists already in this country, where it grows everywhere, but it is badly cultivated by the natives. It is in its infancy, so to speak. So, by introducing more developed cotton varieties, only improvements can be made. It is necessary to stimulate the black man from his laziness and to make him see the numerous interests he would have in producing a cotton of higher quality.

1 Archives Nationales, Bamako, Mali: Fonds anciens, IR 52, Rapports agricoles et commerciaux. Cercle de Koutiala. 1899. The French original texts in the archive documents referred to in this paper have been translated by the author.
3 See for example Dépêche Coloniale, 11 & 12 January 1903.
4 Various issues of Dépêche Coloniale, January–August 1903.
5 CAOM, Fonds ministeriels, Série géographique, Soudan XIII, 1b, letter from Service vétérinaire to Monsieur le Sous-Sécrétaire d’Etat dated 05.07.1893.
In 1903, the Association Cotonnière Coloniale (ACC) was created by the French textile industry. The same year, Mr. Quesnel, a representative of the ACC, arrived in San and distributed a large amount of long fibre American cotton seeds to the villagers.\textsuperscript{1} The distribution of this high-yield cotton variety with suitable fibre lengths for the industry in France continued, and in 1908 the ACC commenced purchasing cotton in Koutiala.\textsuperscript{2}

However, it soon proved difficult for the ACC to receive stable supplies from local farmers. The main reason for this limited local interest was the existence of a local cotton market with higher prices than the French were willing to pay (Fok, 1994; Bassett, 1995 (for neighbouring northern Ivory Coast); Roberts, 1996). In 1908, the ACC proposed 0.15 F/kg while the local market price was 0.30–0.40 F/kg (Fok, 1994). The ACC also had, as mentioned above, some requirements regarding the quality of the product upon which the local market did not insist.

In addition, the imported varieties were not tolerant to local diseases. Instead, a local variety (N’kourala) was improved through research. It showed a much better disease resistance, but still production failed to climb. Disappointed by the modest and uncertain supplies, colonial authorities made cotton cultivation compulsory in 1912 and cotton became \textit{la culture du Commandant}.\textsuperscript{3} Each village was obliged to supply a certain amount (ten kg per taxable person). This level, however, was nowhere near attained because of local passive resistance (see Bassett, 1995; Roberts, 1996). For example, peasants circumvented the serious loss of manpower which forced cotton cultivation imposed by reserving the strongest hands for the food crops (Rondeau, 1980), and by general foot-dragging and field neglect (Bassett, 1995).

Local opposition continued to lead to difficulties in recruiting enough manpower to maintain cotton production at a satisfactory level. After some time, the colonial authorities decided to introduce ox-ploughs, in order to become less dependent on the scarce local labour. In 1929/30, a large campaign for the use of ox-ploughs was launched. One thousand teams of oxen and ploughs were distributed in the region,\textsuperscript{4} but without much success. The number of ploughs in use in the Koutiala area decreased steadily during the 1930s.

In addition, in the same decade the distribution of hybrid cotton seeds (Karangani and Allen varieties) to replace the improved local variety, N’kourala,

\textsuperscript{1} Archives Nationales, Fonds anciens, IR 66, Rapports agricoles et commerciaux. Cercle de San. 1903.

\textsuperscript{2} Archives Nationales, Fonds anciens, IR 113, Rapport sur le coton. Cercle de Koutiala. 1910.

\textsuperscript{3} Archives Nationales, Fonds anciens, IR 115, Rapport sur le coton. Circonscription de San. 1912: “Enfin il a été insisté sur ce point qu’il y avait pour les populations de la Circonscription ‘obligation stricte de cultiver le coton’. Et il a été ajouté que c’était leur intérêt bien compris puisque leur bien être se trouverait de ce fait considérablement accru.” This obligation was also valid for the rest of southern Mali (Rondeau, 1980, Roberts, 1996). Forced cotton production to supply the colonial demand was later to be abolished in 1946.

was intensified, but with no resulting rise in production. Hence, despite all these efforts by the colonial government, cotton production in French Sudan remained disappointingly low seen from the colonial point of view, and exports of cotton from the colony to France fell during the 1930s and 1940s (table 1).

The turning point in the region’s cotton production came with the increase in world cotton prices due to a bad harvest in the USA in 1950. This coincided with the establishment of the CFDT (Compagnie Française de Développement des Fibres Textiles). Its objective was to secure the supply of cotton, jute and sisal to the French textile industry, but not without a humanist connotation: the objectives included the improvement of the lives of the Africans in the regions of intervention (Fok, 1994). In order to encourage farmers to increase production, probably the most important incentive was introduced, namely to guarantee farm-gate prices at a reasonable level. From 1952, cotton production was based on a guaranteed price announced in advance by the CFDT. The result was an increase in commercialised cotton in French Sudan from only 150 tons in 1952 to 3,900 tons in 1958. However, this was only the beginning of a rapid rise in the production of export cotton: in 1972 it reached 68,000 tons, and, in 1998, 561,000 tons (table 1). Mali is today the largest producer of cotton in Sub-Saharan Africa and the second largest in Africa after Egypt (CFDT 1996).1 Due to this rapid growth, Malian cotton development is often described as a “success story”. The increased production has been possible first of all by a general extension of the cultivated area (figure 2) through the steadily increasing use of ox-ploughs (from 23,515 trained oxen in 1975 to 81,200 in 1997), and by improved yields resulting from intensification. From the beginning of the 20th century and throughout the 1950s, cotton yields were around 200–250 kg/ha.2 By the late 1960s, yields had reached 400–600 kg/ha (Sanogo, 1989) and, in 1990, the highest cotton yield to date was registered (1376 kg/ha). However, yields are no longer rising in the Koutiala area, the most intensified part of the cotton zone. Yields in this area have levelled out and even show a slight decline during the last few years.

The institutional framework through the structures of the CFDT and, from 1974, the CMDT, has played a central role in the agricultural development which has taken place since the 1950s: firstly, by assuring cotton prices attractive to the smallholders, and secondly through general support for agricultural development in the area. This support has consisted of the development of infrastructure, guaranteed access to the market, the distribution of free cotton seeds (also maize seeds in the early 1980s), subsidised fertilisers, loans to smallholders through the village associations created in the 1970s and 80s (the credit system was taken over by

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1 In 1970–71, only two francophone countries co-operating with the CFDT were among the top ten cotton producers in Sub-Saharan Africa (Chad and the Central African Republic). In 1994–95, seven of the ten top producers were francophone countries with CFDT-involvement (CFDT, 1995). This underscores the relative success of the French model for cotton development.

2 Different annual agricultural reports from Service de l’Agriculture du Soudan Français.
commercial banks in 1989), research to support the smallholders (on a wide range of topics from the development of new varieties to socio-economic issues), and

Table 1. Production of cotton for export, southern Mali, 1908–1998

<table>
<thead>
<tr>
<th>Year</th>
<th>Cotton exported (tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1908</td>
<td>3</td>
</tr>
<tr>
<td>1912</td>
<td>205</td>
</tr>
<tr>
<td>1925</td>
<td>979</td>
</tr>
<tr>
<td>1930</td>
<td>1,391</td>
</tr>
<tr>
<td>1935</td>
<td>395</td>
</tr>
<tr>
<td>1938</td>
<td>850</td>
</tr>
<tr>
<td>1945</td>
<td>552</td>
</tr>
<tr>
<td>1952</td>
<td>150</td>
</tr>
<tr>
<td>1958</td>
<td>3,900</td>
</tr>
<tr>
<td>1972</td>
<td>68,000</td>
</tr>
<tr>
<td>1992</td>
<td>310,000</td>
</tr>
<tr>
<td>1996</td>
<td>430,000</td>
</tr>
<tr>
<td>1998</td>
<td>561,000</td>
</tr>
</tbody>
</table>

Source: Different annual agricultural reports from Service de l’Agriculture du Soudan Français and CFDT (1996)

Figure 2. Extension of cultivated area (ha). Main crops. Koutiala District. 1980–1997

literacy programmes. All this would indicate that development in the cotton zone might appropriately be termed market-led, policy-led or capital-led intensification.

However, population pressure has also been relevant for the process as indicated by the following: the Gestion de Terroir project (PGT) of the CMDT has divided the cotton zone into 6 different sub-zones subject to population pressure
and the adoption of technology (figure 1). At the same time, the CMDT has grouped production units in the area into four categories (the CMDT labels are kept here, although it might seem confusing to let the same letters represent both different types of sub-zones as well as types of production units):

A: Production units possessing at least two pairs of oxen, a plough, a donkey cart, a seeder and at least ten heads of cattle in total.

B: Production units possessing at least one pair of oxen, a plough and less than ten heads of cattle in total.

C: Production units with insufficient equipment for animal traction, possessing either oxen or a plough.

D: Production units using hand hoes (daba) and with no experience of or means to acquire animal traction.

With the exception of zone F in figure 1 with periodic rainfall shortages for cotton cultivation, population pressure seems to correlate with the adoption of technology (PGT/CMDT, 1993 and 1995). Zone E, the core area of the cotton zone which is called le bassin cotonnier, is centred around Koutiala town, and is the most densely populated zone in the region. Parts of this area have population densities of 50–60 persons/km² or more (PGT/CMDT, 1993), while the density for the whole Koutiala District is, as already mentioned, 31 persons/km². This is an area often presented as overexploited. According to the PGT project, the carrying capacity there has been surpassed by a factor of two or three (PGT/CMDT, 1994).

Cash-crop cotton production for export started here. It is presently spreading toward the south-west. Zone A is the most sparsely populated area with densities of 5–15 persons/km² (PGT/CMDT, 1995). Zones B and D are transition zones, while zone C shows a more heterogeneous pattern, with both high and low densities. On this axis from zone E to zone A, there seems to be a fairly clear gradient of decreasing population density and decreasing technological level in agricultural production. According to Suivi-Evaluation/CMDT (1996), the production units of categories A and B make up 71 per cent of all the units in the CMDT Koutiala region, while in the Bougouni region, which roughly covers zones A and B, 53 per cent of the production units were classified as A or B. In Koutiala, only 7 per cent were in group D, whereas in Bougouni 37 per cent were in this category. These data are examples of the differences in technological adaptation between zone E (relatively high population density) and zone A (low population density) in basically the same institutional and policy environment.

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1 In addition to the administrative division of the cotton zone into cercles and its division into zones according to population pressure and technological adoption the CMDT has also created its own regions. The CMDT-regions in southern Mali are Bougouni, Fana, Koutiala, San and Sikasso (recently, Kita also became a CMDT-region, but it is not part of what is here defined as southern Mali). These data concern the Koutiala region, which covers more than the cercle and is almost entirely within zone E (see figure 1).

2 The data were based on samples from 2140 production units in forty-one villages picked out to be representative for the different zones.
The general extension of the cultivated area as well as the intensified use of this area have also been of benefit to the food crops grown in the cotton zone. There has been a tremendous growth in grain production in the entire zone, which has led to increased food self-sufficiency during the last decades (Dioné 1989, Raymond and Fok, 1995). Niang and Giraudy (1995) estimate that net cereal production in the cotton zone is 336 kg per person (after deducting seed-corn and losses due to transport, gifts and storage). This, they conclude, is well above the FAO/WHO standard of 117 kg which is defined as the minimum amount of grain necessary for one person for a year.\(^1\) The cotton zone is today therefore a net exporter of grains to other parts of the country as well as to neighbouring countries, which further contributes to the success story.

The increased production of food-crops is primarily due to area expansion, but also to increased yields. Yields of the most common food-crops have increased over time, although with a trend towards stagnation in the Koutiala area since the 1980s. Maize yields have grown from 700 kg/ha during the first half of the century to 1700–1800 kg/ha at the present time. The increase has been more modest for millet and sorghum; from about 700 kg/ha before the 1960s to 1000–1100 kg/ha at the present time. Despite the recent levelling out of yields, total production has continued to rise due to the boost in area expansion since the 100 per cent devaluation of the FCFA in January 1994 which increased profits to cotton growers. Hence, food-crops have also benefited from the devaluation, since they have been cultivated in rotation with cotton and have enjoyed the residual effect of cotton fertilisers. After the devaluation, there has also been a higher demand for food-crops on the market. Exports of millet and sorghum to the Ivory Coast have, for instance, increased considerably during the last few years, which has also transformed these crops into cash-crops.

**Intensification and extensification**

In 1981, the Malian government signed an agreement with the IMF and the World Bank to join the structural adjustment programme. From 1982, this led to a dramatic reduction in subsidies on inorganic fertilisers and their use dropped instantly (figure 3). Farmers compensated for the subsequent price increase by area expansion in the same period (figure 2). Hence, structural adjustment had an immediate effect on the environment by encouraging farmers to clear new land as a replacement for intensification. This effect has earlier been pointed out by Berckmoes et al. (1990) who followed farmers’ decision-making in four villages in the cotton zone from 1978 to 1987. However, the effect was only temporary since the use of fertilisers later continued to grow (figure 3).

\(^1\) However, it is not certain that this increased grain production has led to increase food security. Hatloy (1999) found that the level of malnutrition among children in the cotton zone is still relatively high.
The levelling off of maize yields is also related to structural adjustment. In the mid-1980s, maize production was supported by the government (free seeds, guaranteed price, and fertilisers on credit through the village associations). This led to an increase in the area cultivated with maize as well as higher yields due to the increased use of fertilisers. In the southern parts of the cotton zone, farmers even started to grow maize for sale to the extent that it looked set to become a major cash crop. However, through the second phase of the Cereals Market Restructuring Project (liberalisation of the cereal market) from 1986/87 (Staatz et al., 1989) under the structural adjustment programme, the support for maize production ceased and yields declined due to a decrease in the use of fertilisers. A temporary regression of the maize areas (figure 2) may also be associated with this decision.

In January 1994, the FCFA was devalued, which further increased the costs of imported farm inputs (e.g. inorganic fertilisers). However, cotton prices also increased. This price increase was more beneficial to cotton production than the negative effects of higher fertiliser prices.\(^1\) In fact, as pointed out by Giraudy (1996), inorganic fertilisers have never been so cheap in Mali, if measured in terms of cotton prices (see figure 3 and table 2). Lately, this price reduction relative to cotton has been caused by the reintroduction of subsidised fertilisers as a result of the emergence of a farmers’ union in the cotton zone (the SYCOV) (see Degnbol, this volume) which has managed to establish an agreement with the CMDT and the government including support to buy fertilisers. This has again led to a dramatic rise in fertiliser use. However, due to the recently increased value of cotton crops, the cultivated area has also expanded in a spectacular way since devaluation. The extensification which this development represents may actually explain some of the missing growth in yields during the last years. Another contributing factor is unfavourable rainfall during the 1980s and parts of the 1990s. The 1980s had several severe drought years, 1992 and 1993 were also relatively dry years in Koutiala, while 1994, on the contrary, was an extremely humid year with inundated fields causing more damage to crops than many drought years. Then in 1997, there was an attack by parasites which reduced yields.

\(^1\) One may, however, argue that the cotton producers have not had their fair share of the price increase. While the international price on cotton fibre rose by 180% in 1994/95, the producer price in Mali increased only by 45% (Dioné, 1995). The CMDT received a net profit in 1994 of more than 10 Billion FCFA. In 1995, this profit rose to 20 Billion FCFA and in 1996 it reached about 30 Billion FCFA (Degnbol, 1999). However, lately the CMDT has been facing financial trouble due to “catastrophic” management according to a report by the consultants Ernst & Young, completed in July 2000. In 1999, the CMDT made a loss of 28.2 Billion FCFA and in the season 2000/01 production is expected to drop dramatically due to co-operation problems with the farmers. Farmers are currently (autumn 2000) switching out of cotton and into foodcrops as a response to the CMDT's withdrawal of bonus payments per kg of cotton produced.
Figure 3. The use of inorganic fertilisers in the cotton zone (Mali) correlated with cotton and fertilisers prices

Table 2. Policies and prices affecting fertiliser use

<table>
<thead>
<tr>
<th>Period</th>
<th>Fertiliser policy</th>
<th>Relationship cotton/fertiliser prices</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950s-1980</td>
<td>heavy subsidisation</td>
<td>favourable</td>
</tr>
<tr>
<td>1981–84</td>
<td>no subsidisation (except fertilisers on credit for cotton cultivation)</td>
<td>bad</td>
</tr>
<tr>
<td>1985–86</td>
<td>fertilisers on credit for maize growers</td>
<td>very bad</td>
</tr>
<tr>
<td>1986–88</td>
<td>no subsidisation (except fertilisers on credit for cotton cultivation)</td>
<td>very bad</td>
</tr>
<tr>
<td>1988–93</td>
<td>subsidisation of poorest farmers through Dutch gifts of fertilisers</td>
<td>improving (except 1992 which saw a fall in cotton prices)</td>
</tr>
<tr>
<td>1994–96</td>
<td>no subsidisation (except fertilisers on credit for cotton cultivation)</td>
<td>favourable</td>
</tr>
<tr>
<td>1997–98</td>
<td>subsidisation (1 billion FCFA in 1997 and 2.5 billion in 1998) as a result of an agreement between the cotton growers union (SYCOV), the CMDT and the government.</td>
<td>very favourable</td>
</tr>
</tbody>
</table>

Environmental impacts

Extensification

Deforestation by extension of the cultivated area represents the most obvious and visible environmental impact of the agricultural development in the cotton zone. This development is changing the landscape and the environment. Pastures and woodland are being transformed into cultivated land. Baramba village situated in the core area of cotton production (zone E in figure 1) can be used to illustrate the
rapid increase which has taken place in the cultivated portion of village land since the 1950s (figures 4 and 5).

It is generally agreed that the growth in agricultural production in the cotton zone has been caused primarily by extensification. The spread and increased use of ox-ploughs has been instrumental in this process. This labour saving technology has basically been used to be able to cultivate larger areas. The environmental flip side of this development would be the loss of local biodiversity, e.g. the loss of wildlife, of gallery forests and of certain plant species in the area. Hunters and elderly people in the villages confirm this. The amount and diversity of game has decreased substantially since the first half of the 20th century and gallery forests which existed in some of the topographical depressions have today disappeared in most places, at least in the core area of the cotton zone. In this area, there is basically no game left, except birds, and the hunters have to walk far to hunt.

**Fuelwood**

In addition to the extension of fields, rural domestic fuelwood consumption is often presented as a major cause of deforestation in southern Mali as in rural Africa in general. To investigate supply and demand in the area, a case study was carried out which took a conventional approach, comparing available figures on wood production with data on fuelwood consumption (Benjaminsen, 1997). An in-depth study in one village was undertaken. In addition, the study used available local data on 49 villages provided by the PGT project of the CMDT.

Baramba village was chosen as the in-depth case. In 1986, the erosion control project of the CMDT considered the Baramba village land to be among the most degraded village areas in southern Mali. The other 49 villages are situated in the same zone, where the population pressure on natural resources is considered to be high.

Since the aim was to assess the sustainability of local fuelwood management at the village level, the total removal of green wood per year was compared with the yearly primary production of woody biomass. The major part of the removal is represented by household fuelwood consumption in the villages. Fuelwood constitutes approximately 85 per cent of all wood consumed in southern Mali (DDRS/CMDT, 1995). The remaining 15 per cent is used for handicrafts and construction.

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1 Genetic resources in agriculture is another issue which causes concern in areas with intensification. Tree cotton (*Gossypium arboreum*) is the old cotton variety used in the area before the large-scale adoption of improved varieties. This is a perennial shrub, up to two meters high, which is presently hardly found in the cotton zone. Of the 12 villages in the survey, only in the southernmost village, Bladjé, a few plants still existed. They were kept by the village chief as a curiosity.
The daily fuelwood consumption in 67 households of a total of approximately 220 in Baramba was measured. It was found that the consumption of fuelwood as green wood extracts approximately 44 per cent of the primary wood production in the village (see Benjaminsen, 1997 for a further discussion of methodology and results). By adding the use of wood for construction and handicraft, this proportion increases to 57 per cent.

The other 49 villages were grouped in four sub-zones according to geographical location: Molobala, Konséguela, Diaramana and Diéli (figure 1). The only zone where the situation seems to be critical and where wood consumption is at the level of the regrowth is in Diéli. For all the villages in this area grouped together, the consumption of green wood is about the same as the primary production. The other three sub-zones seem to be far from a situation of physical scarcity of fuelwood and fuelwood induced deforestation. Grouping together the villages in these areas gives a consumption/production ratio for these sub-zones well below the 57 per cent found in Baramba village; Molobala: 22 per cent; Konséguela: 18 per cent and Diaramana: 27 per cent.
The particular situation of the Diéli sub-zone is explained by the fact that there is an unusually high external pressure on the woody vegetation in that area, due to its proximity to the Bla-San tarmac road. About half of the quantity exploited in Diéli is removed by external fuelwood traders (PGT/CMDT, 1995).

**Intensification**

“Intensification” is here defined as increased investments of labour and/or capital in land. In order to sustain the productive capacity of the land under rapid population growth, new investments in this land are necessary.

Land investments in the central cotton zone include increased tree planting, especially around fields as property demarcations, and productivity management through the use of chemical fertilisers, pesticides/herbicides and organic manure. Many villages (about 600) are also involved in water erosion control primarily through the building of stone ridges. This is, however, the result of a large externally initiated project started in 1986 with Dutch funding under a division within the CMDT named *Division Défense et Restauration des Sols* (DDRS).

The Minyanka, the dominating group in the Koutiala area, as well as the other groups in southern Mali, do not have a tradition of planting trees (Jonckers, 1987).
The exception is fruit trees, especially the mango tree, which people plant around settlements, but tree planting on farm land has been practically non-existent. However, the natural regeneration of three species of farm trees in particular has been encouraged by the farmers. These are *Acacia albida*, the *nééré* (*Parkia biglobosa*) and the shea nut tree (*Butyrospermum parkii*), which are actively protected both when seedlings are coming up in the fields and when new land is cleared. Hence, with the clearing of new land for agriculture, bush is transformed into parkland where the three above-mentioned species dominate.

*Acacia albida* is said by farmers to increase yields. This is confirmed by research showing that it has nitrogen-fixing abilities (Mongi and Huxley, 1993). In the Koro zone in central Mali, farmers assessed that a five-year old *albida* would increase millet production by ten kg per year, about the same as what they believed the contribution of two cart-loads of organic manure would be (Yalcouye, 1997). The *nééré* and the shea nut tree are appreciated because of their fruits which are used in food preparation; to make a sauce and shea butter (cooking fat), respectively.

With the on-going intensification process, resulting in the subdivision of production units and the individualisation of tenure (Benjaminsen, 1998), the planting of trees around fields as a sign of ownership is becoming more widespread. Of the 443 production units in a survey carried out in 12 villages in the cotton zone in 1996, 49 per cent had planted trees the previous year. On average, 44 seedlings were planted per unit of all the units. By far the most popular tree is still the mango tree. However, other fruit trees are also important (e.g. papaya, orange), together with species used to delimit fields (*Euphorbia balsamifera*, a cactus species) and those chosen for their economic value (eucalyptus, neem). Of the 219 production units in the survey which planted trees in 1995, many planted several species.

Despite a few set-backs, the use of inorganic fertilisers has continued to increase through the 1980s and 90s. In Baramba, there was no use of fertilisers in 1950, and in 1960 there was "just a little bit".\(^1\) In 1995, all the 75 units sampled in the village had purchased inorganic fertilisers and of the production units in the survey in the 12 villages, 94 per cent used these fertilisers. However, their use is less frequent in the San area, due to a more modest involvement in cash-crop cultivation. In the two villages surveyed in this zone, Tamaro and Dokolo (figure 1), 69 per cent of the production units had used inorganic fertilisers in the previous year. In the rest of the villages in the survey, this proportion was between 95 and 100 per cent.

Pesticides are also widely used on cotton in the region. Their use follows basically the same pattern as for chemical fertilisers. Almost 100 per cent of the production units use pesticides except in the San area (54 per cent in Tamaro and Dokolo), again due to lower cash-crop production in that area. Herbicides were only used on 6 per cent of cotton fields and 9 per cent of maize fields in the Kouitiala region in 1996 (data from CMDT-Kouitiala).

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\(^1\) Interview with Tolé Coulibaly (*ancien combattant*) who left the village in 1934 and returned in 1950.
The amount of organic manure applied on the fields is also increasing. In the survey, 69 per cent of the respondents said that they had intensified the use of organic manure during the last years. On average, 1.1 ha per production unit is fertilised with organic manure. Most of the manure is compost produced in the village often mixed with animal droppings collected in the kraals. It has been estimated that about 50 per cent of the cotton fields in the entire cotton zone receive organic manure, but this represents more in terms of area because production units of type A apply more manure than the others and they also have the largest fields (Suivi-Evaluation/CMDT, 1995 and 1996). These production units are the best equipped in terms of beasts of burden and carts which, together with the fact that they are the largest units with most manpower available, makes them capable of bringing more manure to the fields. The survey showed that in the villages in the Koutiala and San areas, more than 95 per cent of the production units had used organic manure the previous year, while this proportion decreased with the lower levels of intensification toward the south. In Blâdié in zone A, only 42 per cent of the units had used organic manure. This tendency towards greater use of manure with more intensified production is also confirmed by the surveys of Suivi-Evaluation/CMDT (1995 and 1996).

However, due to the rapid increase in the area cultivated since 1993, the proportion of this area receiving organic manure has decreased lately. In the Koutiala region, it has fallen from 47 per cent to 33 per cent for cotton fields (during 1991–96), and from 17 per cent to 5 per cent for millet/sorghum fields (during 1993–96). It is hard to say whether this recent trend of extensification also concerns the use of inorganic fertilisers, since inorganic fertilisers are applied on virtually 100 per cent of the cotton fields. Data on the evolution of amounts of fertiliser applied per ha are not available. However, for millet/sorghum fields receiving inorganic fertilisers there is a falling trend: 36 per cent of the area was fertilised in 1993 and only 15 per cent in 1996. The above data could indicate that despite the application of increased amounts of organic and inorganic fertilisers, the area cultivated is lately increasing even faster. This may again in part account for the lack of sustained yield increase in the Koutiala area. It also indicates that even in the most intensified part of the cotton zone, extensification is presently more pronounced than intensification.

Soil fertility

Besides deforestation, depletion of soil fertility is believed to be the most serious environmental impact of agricultural development in the cotton zone (Berckmoes et al., 1990; van der Pol, 1992; ETC Netherlands, 1994; Quak et al., 1996). However, little field work has been undertaken to verify this view.

As a preparation for a larger survey of the influence of agricultural intensification on soil fertility in the cotton zone (Dhillion et al., in prep.), soil samples were taken in six villages in the Koutiala and San areas (villages 7–12 in figure 1).
Since few soil data are available from the area, a study of changes in soil properties over time was not possible. Instead, the spatial analogue method was chosen. It consists of comparing soil properties on different sites with varying histories of land use. The main independent variable used is length of fallow. Soil data from cultivated fields were compared with data from fallows of different lengths. In addition, samples were taken on woodland as well as in a sacred woodlot (with permission from the village chief). None of these land units had ever been cultivated, but the woodland sites had been grazed.

Since the number of samples taken is relatively modest, until the data from the main survey are available the results presented in table 3 can only give preliminary indications. Uncertainties are related to the micro-variability of soils connected to natural variations (types of soil) as well as the impact of management (use of fertilisers and organic manure; influence of farm trees). Despite these precautions, some trends can be drawn from the data:

For P-total (total phosphorus) and Ca (calcium), there is no significant variation among soils with increasing length of fallow. The amount of C (carbon) increases with age of fallow and the data show that it takes time for the carbon to recuperate and to reach the level found in the sacred woodlot. However, in an agricultural field one would not expect or need a high amount of carbon, since inorganic nutrient supply may come largely from fertilisers. The more artificial inputs are added, the less C, and its subsequent turnover for nutrients, is needed. Nitrogen (N), magnesium (Mg) and plant available P (phosphorus) have the highest values in the cultivated fields as an effect of the input of inorganic fertilisers and organic manure. The amounts of these nutrients fall sharply when the field is left fallow. After fallowing, nitrogen and available P seem to remain at a lower level without much build-up taking place through time, while the Mg level increases steadily again with length of fallow after five years. Potassium (K) is the only possible limiting nutrient factor which emerges from these data. The K-level is lowest in the fields and in the five-year fallows. Thereafter, it increases with age of fallow. However, it is difficult to assess whether the lowest potassium value found implies a deficit or not.

Van der Pol (1992), who studied nutrient balances of soils in the cotton zone based on comparing inputs (mainly through fertilisers) and outputs (mainly though crops) of nutrients, concluded that there are significant nutrient deficits of both N and K in the area. However, the results presented in table 3 do not support van der Pol’s view of a nitrogen crisis in the cotton zone. The general level of N is medium to low, but this seems to be more of a natural condition rather than one caused by soil depletion. However, based on the K-trends observed and van der Pol’s calculations, K may be a limiting nutrient factor in the soils. Even so, whether the lowest value which was found on cultivated land (0.17 ppm) implies a deficit in the soils examined cannot be concluded as yet.
Table 3. Chemical properties of soils sampled following the history of land use

<table>
<thead>
<tr>
<th>Type of land</th>
<th>Number of villages</th>
<th>Number of samples</th>
<th>% C</th>
<th>% N</th>
<th>P total</th>
<th>Ca ppm</th>
<th>Mg ppm</th>
<th>K ppm</th>
<th>Plant available P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cultivated land</td>
<td>6</td>
<td>18</td>
<td>0.38</td>
<td>0.39</td>
<td>18</td>
<td>1.22</td>
<td>0.64</td>
<td>0.17</td>
<td>17.0</td>
</tr>
<tr>
<td>Fallow 5 years</td>
<td>5</td>
<td>14</td>
<td>0.42</td>
<td>0.27</td>
<td>16</td>
<td>1.23</td>
<td>0.27</td>
<td>0.17</td>
<td>13.1</td>
</tr>
<tr>
<td>Fallow 8–10 years</td>
<td>3</td>
<td>9</td>
<td>0.48</td>
<td>0.30</td>
<td>17</td>
<td>1.31</td>
<td>0.34</td>
<td>0.19</td>
<td>10.4</td>
</tr>
<tr>
<td>Fallow 15–20 years</td>
<td>3</td>
<td>10</td>
<td>0.64</td>
<td>0.29</td>
<td>18</td>
<td>1.11</td>
<td>0.43</td>
<td>0.27</td>
<td>9.1</td>
</tr>
<tr>
<td>Woodland (never cultivated)</td>
<td>5</td>
<td>15</td>
<td>0.64</td>
<td>0.20</td>
<td>18</td>
<td>1.34</td>
<td>0.61</td>
<td>0.27</td>
<td>13.6</td>
</tr>
<tr>
<td>Sacred woodlot</td>
<td>1</td>
<td>3</td>
<td>0.88</td>
<td>0.32</td>
<td>16</td>
<td>0.95</td>
<td>0.48</td>
<td>0.27</td>
<td>11.5</td>
</tr>
</tbody>
</table>

Source: Soil samples taken by Daouda Sidibé and the author in March 1996 in villages 7–12 in figure 1. The soil analysis was carried out by Professor Shivcharn Dhillion at the Agricultural University of Norway. Averages were analysed using one-way Tukey's studentized test. ANOVA and significance was kept at p=0.05.

Conclusions

The cotton zone in southern Mali is an area with rapid growth in population and agricultural production. From the 1950s, cotton production has increased tremendously through varying periods of extensification and intensification. This development has also been of benefit to the food-crops grown in the area. The cotton zone is today abundantly self-sufficient in grains. The establishment of an institutional framework from the 1950s and onwards including a policy to support the cotton sector (through the CFDT and later the CMDT) has had an overall importance for this development to take place. However, population pressure is also a relevant factor influencing the pace of intensification. Differing population pressures are found in different parts of the cotton zone. The pressure decreases on a gradient toward the south-west from the Koutiala area (relatively high) to the Bougouni area (low). In the former, the adoption of technology has been visibly faster than in the latter, with approximately the same policy environment. The San area in the northern part of the zone represents a particular case, since rainfall there is marginal for successful cash-crop cotton cultivation. The Sikasso area is also an exceptional case with a more heterogeneous pattern of land use.
Since the 1980s, the growth in yields has levelled off in the core area of the cotton zone. The common interpretation of this is that the carrying capacity has been exceeded and that soils are being depleted. An alternative explanation would be related to the fact that extensification is more economical than intensification even in the most intensified part of the cotton zone, since the devaluation of the FCFA. Fertiliser prices increased rapidly with the devaluation, but have during the last years again decreased due to subsidies from the CMDT. In fact, if measured in terms of cotton prices, inorganic fertilisers have never been so cheap (1998). This has caused a rapid increase in fertiliser use among the cotton farmers. The use of organic manure is also increasing. However, despite increasing total amounts of fertilisers used, these investments are more thinly spread on the fields after devaluation, which is due to the fact that the area cultivated has increased comparatively quickly. In an opportunistic way, farmers sought immediate and maximum profits from the prosperous times in the cotton sector in the 1990s, both by increasing the amounts of fertilisers used and by extending the area cultivated. With extensification and decreasing investments of capital (organic and inorganic fertilisers) and labour per ha, one would not expect yield increase.

This would support the idea that it is not only African pastoral production systems that are non-equilibrial and opportunistic (Ellis and Swift, 1988), but that agriculture may also function “mainly as non-equilibrial (unstable) systems governed by external disturbances” (Niemeijer, 1996, p. 101). Whether farmers decide to intensify production, expand the cultivated area, produce cash-crops or food-crops, depends on external factors such as crop prices, costs of agricultural inputs as well as possible long-term changes in rainfall trends.

In fact, a number of African case studies have shown that societies may move back to extensification when it is rational to do so (for a review see Niemeijer, 1996; see also Berry, 1993). However, this insight should not lead us to discard evolutionary ideas such as the Boserup model, which has been useful in understanding agricultural change in a number of cases. In the Malian cotton zone, the model has found support in the fact that population pressure contributes to technological change and intensification, and from the soil data which show that soil fertility may be a product of land use. However, while recognising the role of population, the different periods of extensification and intensification found in the cotton zone illustrate the argument of the market and the policy in place as major determinants of agricultural change.

Intensification as well as expansion of the cultivated area are causing environmental transformation in the cotton zone. While domestic fuelwood use does not seem to cause any local deforestation, bush and woodlands have been, and still are, converted to agricultural parklands through extension of the cultivated area. Since the 1960s, this transformation has occurred at a rapid pace and was boosted further by the FCFA devaluation. However, trees are also being increasingly planted around fields as a sign of appropriation. The result is an on-going creation of a man-made landscape, where important natural resources, such as certain useful farm trees as well as the soil itself, are conserved and even enhanced by land
use practices. In southern Mali, as elsewhere, this process is frequently called degradation, but this is a perceptual term with a number of definitions in any situation. These different definitions originate from conflicting views regarding how the land should be used and what it should look like (Blaikie and Brookfield, 1987). Hence, there will always be discussion on the issue of degradation subject to the norms and values of the different actors and observers. The degradation view implies an ecocentric environmental conception granting intrinsic value to the natural ecosystem and the biodiversity within it. However, in most cases this ecosystem is not natural or pristine, but already shaped by humans. An anthropocentric utilitarian view, on the other hand, implies a perception of the environment in terms of use value according to which a transformation of bush into parklands becomes an environmental improvement. This is therefore a normative discussion and our views on the issue depend on whether we give priority to human survival and development or to biodiversity conservation.

While the Malian cotton zone is frequently claimed to be heavily degraded due to rapid growth in population and agriculture, the present study questions and seeks to qualify this assertion. The landscape and the environment are being substantially transformed through the agricultural development in the area. Some natural resources are being conserved and enhanced (farm trees and soils), others such as wildlife, gallery forest and probably certain plant species and genetic resources in agriculture are being lost from the area. Whether this change is perceived as degradation or improvement is subject to the values and environmental perceptions of individual actors and observers.

References


The Dynamics of Inequality in the Sahel

Agricultural productivity, income diversification, and food security among the Fulani *Rimaïbe* in northern Burkina Faso

*Simon Bolwig*

**Introduction**

This study examines how Sahelian households achieve sufficiently high levels of food security to survive under conditions of very low and insecure local food production. This question is explored by examining the livelihood strategies and practices of Fulani *Rimaïbe* farmers in northern Burkina Faso from the perspective of economic inequality.

Flexibility through diversification and mobility has proved to be a key strategy guiding livelihood practices in the Sahel (Mortimore, 1989). People generally respond to local resource scarcity and climatic and economic uncertainty by diversifying their access to resources and incomes – socially, spatially, and between sectors – and by a flexible use of resources in farm and off-farm activities (Reardon et al., 1992; de Bruijn & van Dijk, 1995; Adams & Mortimore, 1997; Mortimore, 1998; Reenberg et al., 1998). The other key livelihood strategy in the Sahel is asset accumulation. Asset ownership is a key means of survival in the Sahel where access to farm and off-farm incomes is precarious. These two ideal-type strategies, collectively described by the term *adaptive capability* (Mortimore, 1989), are central concepts for the study of livelihood practices and food security in the Sahel.

The study focuses on the relationship between adaptive capability and economic inequality in order to understand patterns of livelihood and food security. It specifically addresses the issue of inter-household inequality. Research from the Sahel shows that households which have differential access to resources and economic opportunities adapt to change and cope with uncertainty in very different ways and enjoy very different levels of income (Watts, 1987; Toulmin, 1992; de Bruijn & van Dijk, 1995; Raynaut, 1997). Several studies also show that labour is the key resource held by poor households in the Sahel and that labour availability and use therefore are major determinants of income size and composition (Delgado, 1979; Eddy, 1979; Koenig, 1986; Toulmin, 1992; Fafchamps, 1993; Raynaut, 1997). Labour is, thus, a central concept for understanding adaptive capability in

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1 The paper is based on research carried out for the author’s PhD dissertation (see Bolwig, 1999).
the Sahel. In this regard, the allocation of household labour between farm and off-farm work seems to be a key characteristic of farming communities in northern Burkina Faso (Reardon et al., 1988) and elsewhere in the Sahel (Raynaut, 1997).

Along these lines, the multiple causes and dynamics of inequality are explored in the context of northern Burkina Faso. The case study examines how differences in resource access, especially labour, between Fulani Rimaïbe households are related to patterns of agricultural productivity, off-farm income diversification, and food security. It also investigates how inequality is produced historically under shifting local conditions of agricultural production and off-farm employment by looking at Rimaïbe men’s strategies at different stages in their life cycle. In this context, the possibilities and determinants of economic mobility are evaluated. Finally, the case study examines the influence of income diversification on agricultural production and food security. I argue that both the farm and the nonfarm sector must be included in the analysis in order to understand livelihood and land use in the Sahel.

Local context and methods

The study is based on fieldwork conducted between 1995 and 1997 in the village of Petekole in the Seno Province of northern Burkina Faso, formerly the Fulani Liptako Emirate. Petekole is peopled by pastoral Fulani, the Fulbe, and by Fulani farmers, the Rimaïbe. The latter are the descendants of slaves held by the Fulbe in the 19th century. The paper is based on a detailed study of Petekole’s 33 Rimaïbe households. The economy of the Rimaïbe is based on crop cultivation, livestock rearing, and off-farm work. Petekole lies at the edge of a ten-kilometre wide east-west going sand dune, which is cultivated permanently with millet and sorghum. To the south and north of the sand dune an extensive plain used mainly as pastures dominates the landscape. The area is relatively densely populated (157 inhabitants per km$^2$) because of the general preference for sand-dune cultivation and Petekole’s proximity (8 km) to Dori, the chef lieu of the Seno province. The climate is typically Sahelian, characterised by a short rainy season, large inter-annual rainfall variability, and unpredictable drought events. Average annual rainfall is 433 mm (1970–1997). Since 1970, average rainfall levels have declined by 26 per cent compared with the 1958–1969 period.

Quantitative and ethnographic data were collected in the field using methods such as participant observation, interviewing, and field mapping. A key method was a time study of labour use, income earning, and market exchanges of 29 men in 11 households, conducted during 18 months in 1996–97 with an interview-interval of one week. All tables in the study contain baseline data on all 33 Rimaïbe households in the village. Quantitative data analysis builds on tabulations and a non-parametric statistical method, the Gini-index,$^1$ combined with a participatory

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$^1$ The Gini-index measures how much the Lorenz curve deviates from a perfectly equal distribution. A Gini-index of zero represents a perfectly equal distribution, and a Gini-index of one represents...
The Dynamics of Inequality in the Sahel

classification of households according to their ‘food provision capability’. This classification performed by local informants is the basis of the four food-security groups used in the analysis. A household in the study is defined as a grain production unit, comprising the people who cultivate the same fields and share the harvest among them (Claude et al., 1991). A worker is defined as a male person between 15 and 60 years. The latter definition does not include women because few women among the Rimaibe in Petekole participate in agriculture and off-farm work (Bolwig & Paarup-Laursen, 1999). The omission of women’s labour in the analysis, especially domestic work, which releases male time for income-generating activities, does, however, constitute an unsolved methodological problem.

Contemporary patterns of inequality and adaptive capability

Resource access and distribution

The Rimaibe in Petekole earn incomes and secure food mainly through crop cultivation, livestock husbandry, and off-farm work. Land, labour and livestock are the key resources put into those activities, and their distribution is the main basis of economic inequality.

Land

In the assessment of land inequality one must distinguish between land of different quality and distance to the village. Farmers in Petekole cultivate ‘village’ as well as ‘bush’ fields. Village fields are predominantly sandy (Fulani: ssen) and situated on the edge of a large sand dune, while bush fields are predominantly loamy (bolaare) or clayey (lofaal) and located some 10 km from the village. Village fields are intensively manured, while bush fields are manured very little or not at all. Farmers generally prefer the sandy village fields to bush fields as they are easier to work and therefore faster to weed, less susceptible to drought, and nearer the homestead. Village fields can be subdivided into those on sandy and loamy soils, respectively, depending on their location on the dune. As a means to smooth output over the years, farmers try to get land on both types of soils as loamy soils yield better than sandy in years of good rainfall, and vice versa in dry years. There is an absolute shortage of village fields, while it is easier to borrow or purchase bush fields. As a result, some farmers only cultivate bush fields, and seven families have recently settled permanently in the bush to live near their fields.

Agricultural land in the area is a commodity, and rights in both village and bush fields are private. This pattern is linked to the historical hierarchy between

perfect or maximal inequality in the sense that all incomes are earned / assets owned by a single household. The following formula was used to estimate the Gini-index: where \( R = \) Gini-index; \( n = \) the total number of households (33); \( G(x^i) = \) the accumulated income of the ranked households from \( x = 0 \) to \( x = x^i \); and \( x^1 \leq x^2 \leq \cdots \leq x^n \) are the order statistics. Based on Deding (1998) and N.G. Bolwig (personal communication); see also Atkinson (1970).
Fulbe masters and Rimaïbe slaves in Liptako. A land market developed in the area in the first part of this century when Fulbe landlords, or ‘first occupants’, started to sell cultivation rights to the Rimaïbe returning from migration work on the Guinea Coast. More recently, the market for land has become sluggish and land sales are few. Oral records of land transactions suggest that prices have escalated in the last two or three decades. Population growth and the decline in crop yields have increased the demand for land while the supply has been near constant due to legal restrictions on land clearance.

Table 1. Distribution of land holding

<table>
<thead>
<tr>
<th>Land holding (hectares cultivated)</th>
<th>No. of households (N = 33)</th>
<th>Mean land holding (ha cultivated)</th>
<th>Per cent of total area</th>
<th>Annual output per worker (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 2 (incl.)</td>
<td>7</td>
<td>1.6</td>
<td>6.1</td>
<td>930</td>
</tr>
<tr>
<td>2 - 4</td>
<td>6</td>
<td>3.3</td>
<td>10.9</td>
<td>1080</td>
</tr>
<tr>
<td>4 - 6</td>
<td>8</td>
<td>5.1</td>
<td>22.6</td>
<td>1170</td>
</tr>
<tr>
<td>6 - 8</td>
<td>5</td>
<td>6.7</td>
<td>18.7</td>
<td>630</td>
</tr>
<tr>
<td>8 - 10</td>
<td>4</td>
<td>8.4</td>
<td>18.6</td>
<td>1120</td>
</tr>
<tr>
<td>10 - 15</td>
<td>2</td>
<td>12.5</td>
<td>13.8</td>
<td>1190</td>
</tr>
<tr>
<td>15 - 20</td>
<td>1</td>
<td>16.7</td>
<td>9.2</td>
<td>1690</td>
</tr>
<tr>
<td>Village mean</td>
<td>--</td>
<td>5.5</td>
<td>---</td>
<td>---</td>
</tr>
</tbody>
</table>

Land holding among the Rimaïbe is highly uneven (Table 1). The top land-holding quintile (seven out of 33 households) cultivate 41 per cent of the total area, while the bottom quintile cultivate 6 per cent only (Gini = 0.354). This inequality is partly related to differences in work force and household size but land holdings are also unequally distributed in terms of these factors: the Gini-index for the cultivated area per worker is 0.277, while the Gini-index for the cultivated area per consumer is 0.273 (the top and bottom quintiles cultivating 1.4 ha and 0.3 ha per consumer respectively). Land ownership is clearly associated with food security, whether considering the area cultivated per household, consumer, or worker (Table 2). Farmers’ life histories and the data just presented strongly suggest that land inequality is produced by a differential capability to invest in land, pointing to the importance of access to liquid assets such as livestock and off-farm incomes for

1 The low average figures in group I reflect the influence of a large-scale trader who gives low priority to crop cultivation.
Table 2. Land holding by food-security group (ha cultivated)

| Food-security group | I  
|                     | (n = 4) | II  
|                     | (n = 9) | III  
|                     | (n = 12) | IV  
|                     | (n = 8) | I - IV  
| Area per household | 4.9  
| (share of total)    | 5.5  
| Area per consumer  
| (share of total)    | 1.00  
| (7%)               | 1.00  
| (21%)              | 0.90  
| (16%)              | 2.7   
| (11%)              | 2.7   
| Borrowed land       | 2.7   
| (share of total)    | 4.8   
| (14%)              | 10.9  
| (19%)              | 2.3   
| (16%)              | 20.7  
| Purchased land      | 15.5  
| (share of total)    | 39.7  
| (11%)              | 16.1  
| (11%)              | 3.4   
| (28%)              | 74.7  
| Bush fields         | 6.7   
| (share of total)    | 32.9  
| (45%)              | 31.1  
| (46%)              | 10.2  
| (46%)              | 80.9  
| Notes: ’n’ denotes the number of households in each food-security group. ‘N’ denotes the total number of Rimaibe households in Petekole.  
| 1) All bush fields in group I are cultivated by one household which also resides in the bush.  
| 2) One farmer cultivates a very small area (2.4 ha).  
| 3) Consumer = male consumer equivalents. 

economic differentiation. Land scarcity is especially felt by young farmers among whom few can mobilise enough cash to enlarge their village fields beyond the size of their inheritance. This inhibits their social mobility. People with different status and personal experience had, however, different perceptions of the availability of land in the area. Some informants believed that land-poor farmers could always borrow a field in the bush and so did not see land scarcity as a source of poverty. Others stated that land shortage, in particular of village fields, was an important cause of their low grain production.

Labour and household demography

The small average household size (8.5 persons) among the Rimaibe appears to be a major contradiction in their economic organisation. Small households are the product of many factors, including an adherence to the Fulbe ideology of independence (Riesman, 1977), the political weakness of Rimaibe lineages related to their lack of control over land, and nearly a century of migration work, taxation, and other forces which tend to disintegrate large corporate units (Goddard, 1973; Lewis, 1981; Marchal, 1987). More proximate factors inhibit the development of households with many workers. The number of sons that men have varies greatly, although all marry early in life (age 20 to 22). Only a few men were in polygamous marriages. Finally, by accelerating procreation, early marriage promotes an early division of the household and the fragmentation of work units (Arnould, 1984).

Seventy per cent of Rimaibe households consist of conjugal families while 30 per cent are multi-family fraternal or paternal households. This pattern is reflected in great inter-household differences in the numbers of consumers and workers (Table 3). The household workforce ranges between one and five workers, and one-third of households contain only one worker. Table 4 shows that small household size means low food security, when comparing the three lowest food-security
groups (II–IV). Among these groups, the most food-insecure (group IV) have a markedly smaller workforce. Group I households deviate from this pattern by having fewer workers than the next two groups below, and by being small. These wealthy farmers compensate for their poor access to labour by using hired or client farm labour and/or by relying heavily on trading incomes. Such strategies, however, require good access to capital. They are therefore not pursued by labour-scarce households in food-security groups II–IV due to the insufficiency of livestock and cash.

Table 3. Distribution of household size and workforce

<table>
<thead>
<tr>
<th>Household size class (consumers)</th>
<th>2–4</th>
<th>4–6</th>
<th>6–8</th>
<th>8–10</th>
<th>13.3</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of households (N = 33)</td>
<td>5</td>
<td>10</td>
<td>9</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>Household work-force class (male workers)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>No. of households (N = 33)</td>
<td>11</td>
<td>6</td>
<td>11</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Inter-household labour exchanges in weeding (man-days received less given in 1996)</td>
<td>5.5</td>
<td>-2.0</td>
<td>-8.0</td>
<td>-8.0</td>
<td>-13.0</td>
</tr>
</tbody>
</table>

Table 4. Household demography by food-security group

<table>
<thead>
<tr>
<th>Food-security group</th>
<th>I (n = 4)</th>
<th>II (n = 9)</th>
<th>III (n = 12)</th>
<th>IV (n = 8)</th>
<th>I–IV (N = 33)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi-family households (no.)</td>
<td>1</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Household size (consumers)</td>
<td>7.3</td>
<td>8.0</td>
<td>6.2</td>
<td>4.3</td>
<td>6.4</td>
</tr>
<tr>
<td>Male workers (aged 15–60)</td>
<td>1.8</td>
<td>3.0</td>
<td>2.7</td>
<td>1.4</td>
<td>2.3</td>
</tr>
<tr>
<td>Worker–consumer ratio</td>
<td>4.1</td>
<td>2.7</td>
<td>2.3</td>
<td>3.2</td>
<td>2.7</td>
</tr>
<tr>
<td>Average age of household head (range)</td>
<td>45.5 (40-55)</td>
<td>38.9 (31-61)</td>
<td>39.8 (22-54)</td>
<td>44.6 (33-67)</td>
<td>40.7 (22-67)</td>
</tr>
<tr>
<td>Average age of workers</td>
<td>33.4</td>
<td>26.6</td>
<td>26.6</td>
<td>40.8</td>
<td>29.3</td>
</tr>
<tr>
<td>Hired weed-labour (days per year, average for 1996 &amp; 1997)</td>
<td>19.5</td>
<td>0.3</td>
<td>0.6</td>
<td>0</td>
<td>2.7</td>
</tr>
<tr>
<td>Unpaid weed-labour received (average days in 1996)</td>
<td>11.8</td>
<td>4.6</td>
<td>5.0</td>
<td>6.4</td>
<td>6.0</td>
</tr>
<tr>
<td>Unpaid weed-labour given out (average days in 1996)</td>
<td>5.0</td>
<td>12.1</td>
<td>10.3</td>
<td>4.0</td>
<td>8.6</td>
</tr>
</tbody>
</table>

The uneven endowment of household labour is partly compensated for by inter-household labour exchanges in cropping (Table 3) and livestock husbandry. This pattern also applies to labour transactions between food-security groups, as shown in Table 4: the labour-rich households in groups II and III are net suppliers of assistance in weeding to the relatively labour-scarce households in group I and IV. Because the Rimaïbe in Petekole are net suppliers of labour to Fulbe and extra-village households, more labour is given out by the labour-rich households than is received by the labour-scarce.

The eldest heads of household are found in the two extremes of the food-security strata (Table 4). The mature stage in the life cycle of the eight wealthiest farmers (group I and the upper strata of group II) is a factor contributing to their
wealth. Being middle-aged (40–55 years) they have had time to accumulate wealth but their assets have not yet been divided among their heirs. However, a high share of middle-aged household heads is also found among the most food insecure households: in groups III and IV 70 per cent are 40 years or older. The highest average age of workers is found among group IV households in which there is a virtual absence of junior men (age 15–30). This is partly caused by their immature stage in the household development cycle, and partly by a failure to raise sons early in life or to keep them in the household.

Livestock

The Rimaïbe keep livestock for several reasons: livestock are stores of wealth and thus a buffer against crop failures; they are objects of productive investments and hence a means of wealth accumulation; they provide working capital for other economic activities; livestock ownership endows members with some economic autonomy within the household; they are an important source of status and identity; and they provide manure which is an essential input in crop production.

Farmers in Petekole are poor in livestock. The exodus of many Fulbe pastoralists from Petekole supports the casual observation that pastures are scarce in the area compared with the region as a whole. Competition over fodder resources from livestock owned by townspeople in Dori also limits local fodder availability. Moreover, and perhaps as a result, most Rimaïbe households allocate a small share of their labour resources to livestock husbandry (Bolwig & Paarup-Laursen, 1999). Livestock holding in Petekole is highly skewed (Table 5). The upper cattle-holding quintile own 75 per cent of the cattle (four individuals own 58 per cent) while the bottom half own no cattle at all (Gini = 0.759). Cattle-holding size is not significantly related to household size (the Gini-index for cattle per consumer is 0.783). One reason is that Fulbe herdsmen do most of the herding work, another that one person can look after many cattle. Sheep and goats are more equally distributed than cattle: the highest quintile own 50 per cent of the small stock, while the lowest quintile own 3 per cent (Gini = 0.457). Small stock ownership appears to be positively related to household size (Table 5). Still, the number of small stock per consumer ranges between zero and six (Gini = 0.404).

Livestock ownership is strongly related to food security (Table 6). Group I households have most of their livestock wealth in cattle. By doing this, they are striving for higher status in a society dominated by Fulbe pastoral values. It is also easier and safer to manage and supervise great wealth in cattle than in the value-equivalent number of sheep and goats (about four times as many). This is particularly because cattle are entrusted to Fulbe herdsmen while small stock are herded by Rimaïbe children and youth. Households in group II divide their livestock wealth between small stock and cattle. Households in groups III and IV hardly own any cattle and are also poor in small stock: half of them do not have a breeding stock but keep sheep and goats in the farmyard as a temporary store of wealth or for fattening and resale.
Table 5. Distribution of livestock holdings

<table>
<thead>
<tr>
<th>Livestock holding (No. of animals)</th>
<th>Cattle</th>
<th>Sheep and goats (small stock)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. of households</td>
<td>Mean holding</td>
</tr>
<tr>
<td>0</td>
<td>17</td>
<td>0.0</td>
</tr>
<tr>
<td>1–5</td>
<td>6</td>
<td>2.3</td>
</tr>
<tr>
<td>6–10</td>
<td>6</td>
<td>6.7</td>
</tr>
<tr>
<td>11–20</td>
<td>3</td>
<td>14.7</td>
</tr>
<tr>
<td>21–40</td>
<td>1</td>
<td>30.0</td>
</tr>
<tr>
<td>&gt; 40</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Village mean</td>
<td>–</td>
<td>3.9</td>
</tr>
</tbody>
</table>

Table 6. Livestock holding by food-security group

<table>
<thead>
<tr>
<th>Food-security group</th>
<th>I (n = 4)</th>
<th>II (n = 9)</th>
<th>III (n = 12)</th>
<th>IV (n = 8)</th>
<th>I - IV (N = 33)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle (no.)</td>
<td>17.0</td>
<td>6.1</td>
<td>0.1</td>
<td>0.5</td>
<td>3.7</td>
</tr>
<tr>
<td>Sheep &amp; goats (small stock) (no.)</td>
<td>18.6</td>
<td>28.2</td>
<td>9.5</td>
<td>6.1</td>
<td>15.2</td>
</tr>
<tr>
<td>Cattle per consumer</td>
<td>2.3</td>
<td>0.8</td>
<td>0.2</td>
<td>0.1</td>
<td>0.6</td>
</tr>
<tr>
<td>Small stock per consumer</td>
<td>2.6</td>
<td>3.6</td>
<td>1.5</td>
<td>1.4</td>
<td>2.4</td>
</tr>
</tbody>
</table>

Income distribution and agricultural productivity

Total income

Income levels are generally low in Petekole but great income inequality still exists among households. Income here refers to cash incomes and the monetary value of grain production. In 1996–97, the total annual income per consumer in the 11 households in the time study varied between 23,000 and 76,000 CFA francs, the average being 60,000 F CFA. Average annual income per male worker ranged between 49,000 FCFA and 469,000 FCFA, with an average of 153,000 FCFA.¹

Grain incomes and grain productivity

The level and stability of grain production (millet and sorghum) are key variables in Rimaïbe food provision. Grain self-sufficiency was about 70 per cent of in-house consumption in 1995 and 1996 combined, but varies greatly between years according to production conditions. The value of grain production makes up about 50 per cent of total Rimaïbe incomes (source: the time study). Below, I examine the distribution and variability of grain production among Rimaïbe households, and

¹ 100 FCFA equal one French franc. The time study included households in the village with the estimated lowest and second highest annual incomes. Grain production for auto-consumption was evaluated at local market prices in the calculation of total annual income. The consumption of vegetables and milk was not included in annual income due to the lack of data and because their value is believed to be very small compared with that of grain consumed.
The Dynamics of Inequality in the Sahel

Table 7. Distribution of grain production per household (annual average 1995–97)

<table>
<thead>
<tr>
<th>Grain output per household (kg)</th>
<th>No. of households</th>
<th>Mean grain output per household (kg)</th>
<th>Per cent of total output</th>
<th>Household size (consumers) (mean)</th>
<th>No. of workers in household (mean)</th>
<th>Area cultivated (ha) (mean)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0–1000</td>
<td>5</td>
<td>760</td>
<td>5.2</td>
<td>3.4</td>
<td>1.0</td>
<td>1.9</td>
</tr>
<tr>
<td>1–2000</td>
<td>12</td>
<td>1530</td>
<td>25.4</td>
<td>5.3</td>
<td>1.9</td>
<td>3.9</td>
</tr>
<tr>
<td>2–3000</td>
<td>9</td>
<td>2500</td>
<td>31.1</td>
<td>7.2</td>
<td>2.8</td>
<td>6.3</td>
</tr>
<tr>
<td>3–4000</td>
<td>4</td>
<td>3450</td>
<td>19.1</td>
<td>6.6</td>
<td>3.8</td>
<td>8.5</td>
</tr>
<tr>
<td>4–5000</td>
<td>3</td>
<td>4610</td>
<td>19.2</td>
<td>10.1</td>
<td>3.0</td>
<td>11.4</td>
</tr>
</tbody>
</table>

Table 8. Distribution of grain production per male worker (annual average 1995–97)

<table>
<thead>
<tr>
<th>Grain output per worker (kg)</th>
<th>No. of households</th>
<th>Mean grain output per worker (kg)</th>
<th>Per cent of total output</th>
<th>worker–consumer ratio (simple mean)</th>
<th>No. of workers in household (mean)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0–500</td>
<td>2</td>
<td>420</td>
<td>2.5</td>
<td>2.7</td>
<td>2.0</td>
</tr>
<tr>
<td>500–750</td>
<td>11</td>
<td>630</td>
<td>29.0</td>
<td>2.9</td>
<td>3.0</td>
</tr>
<tr>
<td>750–1000</td>
<td>8</td>
<td>900</td>
<td>23.1</td>
<td>3.1</td>
<td>2.4</td>
</tr>
<tr>
<td>1000–1500</td>
<td>6</td>
<td>1340</td>
<td>22.9</td>
<td>4.1</td>
<td>2.0</td>
</tr>
<tr>
<td>1500–2000</td>
<td>5</td>
<td>1660</td>
<td>18.6</td>
<td>3.9</td>
<td>1.6</td>
</tr>
<tr>
<td>&gt; 2000</td>
<td>1</td>
<td>2840</td>
<td>3.9</td>
<td>6.2</td>
<td>1.0</td>
</tr>
</tbody>
</table>

Table 9. Grain production by food-security group (annual average 1995–97)

<table>
<thead>
<tr>
<th>Food-security group</th>
<th>I (n = 4)</th>
<th>II (n = 9)</th>
<th>III (n = 12)</th>
<th>IV (n = 8)</th>
<th>I–IV (N = 33)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grain output per household (kg)</td>
<td>2230²</td>
<td>3180</td>
<td>2130</td>
<td>1150</td>
<td>2190</td>
</tr>
<tr>
<td>Grain output per worker (kg)</td>
<td>1270</td>
<td>1060</td>
<td>800</td>
<td>840</td>
<td>940</td>
</tr>
<tr>
<td>Grain output per consumer (kg)</td>
<td>310³</td>
<td>400</td>
<td>340</td>
<td>260</td>
<td>340</td>
</tr>
<tr>
<td>Grain output per hectare (kg)</td>
<td>460</td>
<td>400</td>
<td>380</td>
<td>430²</td>
<td>400</td>
</tr>
<tr>
<td>Output variation 1995 to 96 (kg)</td>
<td>-180 (10%)</td>
<td>-1050 (34%)</td>
<td>-300 (17%)</td>
<td>-220 (21%)</td>
<td>-470 (24%)</td>
</tr>
<tr>
<td>Output variation 1996 to 97 (kg)</td>
<td>1400 (82%)</td>
<td>2440 (120%)</td>
<td>1720 (115%)</td>
<td>720 (86%)</td>
<td>1640 (109%)</td>
</tr>
</tbody>
</table>

Note: 1) One household, a large-scale trader, has a very low self-sufficiency.
2) One household, a large-scale trader, has a very low output.
3) The figure is 399 kg/ha if excluding one very area-productive household in the group

the differences in labour productivity,¹ grain yields, and grain self-sufficiency. I compare households in different food-security groups in terms of these four variables, and assess the effects on grain production of resource access, household size, and the worker–consumer ratio (dependency burden).

Grain production and its distribution. Grain production is unequally distributed between Rimaïbe households (Table 7). The highest grain-producing quintile produces 38 per cent of all grain in the village, while the lowest quintile produces only 8 per cent (Gini = 0.299). Grain output increases with the number of consumers in the

¹ Labour productivity in the paper refers to output per agricultural worker in the household. A worker is defined as a man between 15 and 60 years of age. This definition excludes women's labour for reasons given in the Introduction. The man-days actually invested in grain production by different workers were recorded for only 11 households and so cannot be used to compare all households.
household, but grain output per consumer (grain self-sufficiency) is still unequal (Gini = 0.221). Grain output also increases with the number of male workers in the household, but the distribution of output per worker is still uneven (Table 8): the highest quintile produces 29 per cent of all grain in the village, while the lowest harvest only 14 per cent (Gini = 0.271). Grain output per household and per consumer is positively related to food security if looking at groups II–IV (Table 9). However, average grain output in group I is unexpectedly low due to the poor performance of one large-scale trader who is too busy to farm. High labour productivity also tends to be related to high food security. Still, group IV households enjoyed a higher output per worker than those in group III.

Grain production variability. Table 9 illustrates the risky nature of grain production in northern Burkina Faso, due mainly to the large and unpredictable variations in rainfall. Total grain output in Petekole decreased by 24 per cent from 1995 to 1996, and doubled from 1996 to 1997. Comparing inter-annual output variability among food-security groups suggests that drought works as an equaliser and that a wet year increases inequality in production. The grain output of the low-productive households in group IV thus seems less sensitive to the drought in 1996 than that of the high-productive households in group II. Well-endowed households, conversely, are better able to benefit from a good rainfall year (1997). A superior access to productive resources, therefore, has a smaller relative effect on output in dry years than in wet years.

Labour productivity and its determinants. The size of the cultivated area is the most significant proximate determinant of output per worker and per household (Table 7). For a given household, the size of the cultivated area is, in turn, determined by either labour input into weeding (access to farm labour) or by the size of the land holding (access to land). As for the access to farm labour, the highest output per worker is found in households with few workers and not, as would be expected, in large households (Tables 8 & 11). Thus, the efficiency gains in crop cultivation, which theoretically accrue to large households (Toulmin, 1992) do not appear to apply to grain production in Petekole. A high output per worker is also related to a high worker-consumer ratio (Table 8), a finding supporting Chayanov’s (1966) hypothesis. As for access to land, it was noted that land is scarce and expensive around Petekole. Nevertheless, households with small land holdings do not suffer much lower levels of output per worker, and vice versa for large land holders, except in the two extreme land-holding classes (Table 1). Land-poor farmers can thus, to a large extent, compensate for their smaller holdings by more labour-intensive cultivation methods. This means that land inequality does not have significant implications for differences in labour productivity. Data on actual labour inputs into cultivation are not available for the entire village. Still, the general preference for extensive land use in the area suggests that more intensive cultivation practices have a cost in the form of lower and more variable returns to labour. The other proximate determinant of labour productivity is grain yields. Therefore, privileged access to soil nutrients in the form of animal manure through livestock ownership can be expected to enhance labour productivity. The study thus showed that farm-
ers with more livestock on average produced significantly more grain per worker (and per hectare) due to the manure effect, a finding confirmed by farmers’ statements.

Table 10. Distribution of grain yields (annual average 1995–97)

<table>
<thead>
<tr>
<th>Grain yield (kg/ha)</th>
<th>No. of households</th>
<th>Mean grain yield (kg/ha)</th>
<th>Land holding (ha) (mean)</th>
<th>No. of workers in household (mean)</th>
</tr>
</thead>
<tbody>
<tr>
<td>200–300 (incl)</td>
<td>7</td>
<td>270</td>
<td>9.2</td>
<td>3.1</td>
</tr>
<tr>
<td>300–400</td>
<td>8</td>
<td>340</td>
<td>5.4</td>
<td>1.9</td>
</tr>
<tr>
<td>400–500</td>
<td>8</td>
<td>470</td>
<td>4.6</td>
<td>2.0</td>
</tr>
<tr>
<td>500–800</td>
<td>6</td>
<td>550</td>
<td>4.4</td>
<td>2.8</td>
</tr>
<tr>
<td>&gt; 600</td>
<td>4</td>
<td>920</td>
<td>2.4</td>
<td>1.8</td>
</tr>
</tbody>
</table>

Grain yields and their determinants. Millet and sorghum yields are on average low (Table 10). They most often lie between 200 and 600 kg/ha and few households harvest more than 800 kg/ha (Gini = 0.229). Grain yields are little influenced by household access to land and labour (Table 10). They are inversely related to field size only at the extreme ends of the land-holding strata. More workers also do not result in higher grain yields; on the contrary, some households with only one worker realised very high yields, while several large households suffered from very low yields. These findings comply with other evidence showing that people in the area prefer extensive land use, i.e. the cultivation of large areas rather than high inputs per area. Grain yields are only weakly associated with food security (Table 9). Nevertheless, some important differences in grain yields remain. Households in group I enjoy the highest grain yields for several reasons: they have large livestock holdings and so easy access to pen-manure; they own scotch-carts with which to collect manure, and they can better time the weeding of their crops through the use of hired or client labour. The fact that many households in groups III and IV enjoy high grain yields despite poor access to resources corroborates observations that they farm their small land holdings intensively by means of conscientious weeding and labour-intensive manure collection. Households in group IV thus enjoy higher yields than those in groups II and III.

Grain self-sufficiency and its determinants. Surprisingly, household grain self-sufficiency is not associated with a favourable demographic situation (Table 11). Low worker–consumer ratios do not result in high grain self-sufficiency levels, neither does a large work force. This pattern is related to the strategy of income diversification discussed in subsequent sections.
Table 11. Grain production related to size of household work force
(annual average 1995–97)

<table>
<thead>
<tr>
<th>Household work force (male workers)</th>
<th>1 (n = 11)</th>
<th>2 (n = 6)</th>
<th>3 (n = 11)</th>
<th>4 (n = 4)</th>
<th>5 (n = 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grain output per worker (kg, simple mean)</td>
<td>1260</td>
<td>1090</td>
<td>920</td>
<td>740</td>
<td>650</td>
</tr>
<tr>
<td>Grain output per consumer (kg, simple mean)</td>
<td>310</td>
<td>370</td>
<td>350</td>
<td>340</td>
<td>340</td>
</tr>
</tbody>
</table>

Livestock incomes and livestock productivity

Incomes from livestock sales make up about 20 per cent of total Rimaïbe incomes, small stock providing 42 per cent of sales revenues. In 1996–97, a year following a relatively poor harvest, the off-take rate was 20 per cent for small stock and 14 per cent for cattle. The off-take rate denotes sold less purchased animals divided by the initial stock. The previous section showed that livestock wealth is very unevenly distributed among Rimaïbe households. Below, I suggest that livestock inequality is accentuated by market forces during the transformation of livestock wealth into cash incomes. The inter-household distribution of incomes ultimately derived from livestock husbandry, therefore, cannot be directly inferred from differences in herd size and composition. This is due to differences in commercialisation and management strategies, which, in turn, depend on herd size and other aspects of household wealth.

First, great seasonal and inter-annual fluctuations in livestock prices, and in grain-for-livestock terms of trade, are common in Sahelian rural markets, and are known to disadvantage especially livestock-poor and grain-deficient households, thus reinforcing economic inequality (Watts, 1983; Sutter, 1987; Swift et al., 1984). In Petekole, the rich households generally sold livestock to buy grain at the time of the harvest when the grain-for-livestock terms of trade were most favourable. Poor households, on the other hand, more often sold livestock later in the year when the terms of trade had worsened. Their poor timing of livestock sales was related to the fact that they had smaller herds. Due to higher off-take rates, small herds typically contain a large share of immature and reproductive animals. Selling immature animals is unprofitable as prices rise with age, while selling reproductive animals will jeopardise the growth of the herd (Sutter, 1987). Poor farmers therefore have an interest in postponing livestock sales. In Petekole, most were partly able to do so by purchasing food with their off-farm earnings.

Second, price variations are also caused by differences in the quality, sex, and age of animals, and so ultimately by livestock feed and breeding management, and by off-take rates (Sutter, 1987). The prices obtained by farmers in Petekole for livestock of the same species thus varied greatly. Livestock management practices

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1 These and the other data in the subsection are based on the time study.
2 Rimaïbe farmers obtained an average price of 13,000 FCFA for sheep and goats. In comparison, sheep fattened for the Tabaski festival were sold for as much as 36,000 FCFA, while small stock sold at other times, and of lower quality, received as little as 5–6,000 FCFA. Cattle prices averaged
were associated with household wealth. Animals owned by well-endowed households in groups I and II were better fed because farmers in these households purchased more industrial feed, collected more hay using their scotch-cart, and enjoyed better access to non-household herding labour. Because of this, and because they sold more mature animals, wealthy farmers obtained higher prices for their livestock.

Apart from wealth, livestock management depends on a household’s overall income strategy. Several poor households, pursuing a farm-based income strategy, fed their sheep and goats intensively by means of high labour inputs, and so obtained high prices. Conversely, two large-scale traders among the cattle-wealthy were too busy with their trading business to manage their large herds effectively.

**Off-farm occupation and incomes**

Off-farm incomes make up about 30 per cent of total Rimaïbe incomes (source: the time study). Goldmining is the dominant source of off-farm income, providing about two-thirds of total off-farm incomes, followed by trading and migration work. Off-farm occupation and the level of off-farm income are both associated with food security (Tables 12 & 13). In group I, two households are engaged in large-scale trading while two spend little time in off-farm work due to their emphasis on large-scale mixed farming. Although precise information on large-scale trading incomes is unavailable, other evidence suggests that they are much larger than incomes earned in other off-farm occupations. Among households in groups II and III, goldmining and migration work are the most important occupations in terms of labour use, while goldmining is by far the most important source of off-farm income. Many of these middle-strata households combined goldmining or migration undertaken by young men, with village-based work done by senior household members. Farmers in group IV spent less time in goldmining and migration than those in groups II and III, and earned much smaller incomes per household, per worker, and per consumer. The low incidence of goldmining is linked to the small size of households in group IV, which limits the mobility of workers, as well as a high average age, which limits the physical ability and desire to work in the mines. Instead, such farmers engaged in a variety of village-based, low-income activities such as weeding for cash, charcoal burning, and fodder sale (Table 12).

**Income strategy, agricultural productivity, and food security**

A ‘topography’ (Ferguson, 1992) of income strategies can be identified based on the previous analysis. Based on our knowledge of the level and variability of income generated by different farm and off-farm activities, the study shows that households combining mixed farming (crops and livestock) with *ex situ* off-farm

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70,000 FCFA but varied between 48,000 and 115,000 FCFA. Heifers, producing cows and mature bulls received the highest prices, while cull-cows and immature bulls received the lowest prices.
Table 12. Type of off-farm work by food-security group, number of persons undertaking activity in 1996–97 (in brackets)

<table>
<thead>
<tr>
<th>Food-security group</th>
<th>I (n = 7 workers)</th>
<th>II (n = 27 workers)</th>
<th>III (n = 32 workers)</th>
<th>IV (n = 11 workers)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extra-village (ex-situ)</td>
<td>Goldmine (0)</td>
<td>Goldmine (18)</td>
<td>Goldmine (18)</td>
<td>Goldmine (5)</td>
</tr>
<tr>
<td>Migration (1)</td>
<td>Migration (6)</td>
<td>Migration (3)</td>
<td>Migration (1)</td>
<td></td>
</tr>
<tr>
<td>Large-scale trading (2)</td>
<td>Gardening (1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Village based (in-situ)</td>
<td>Cart transport (own) (2)</td>
<td>Cart transport (own) (8)</td>
<td>Fodder sale (4)</td>
<td>Charcoal (3)</td>
</tr>
<tr>
<td>Fodder sale (1)</td>
<td>Petty trading (3)</td>
<td>Petty trading (3)</td>
<td>Fodder sale (2)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Weaving (3)</td>
<td>Weaving (2)</td>
<td>Cart transport (share) (2)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Brick making (2)</td>
<td>Construction (2)</td>
<td>Weaving (1)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Charcoal (1)</td>
<td>Local butcher (1)</td>
<td>Petty trading (1)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Begging food (1)</td>
<td></td>
</tr>
</tbody>
</table>

Note: The table does not list agricultural off-farm work (weeding for cash).

Table 13. Off-farm work & income by food-security group (12 months in 1996–97)

<table>
<thead>
<tr>
<th>Food-security group</th>
<th>I (n = 4)</th>
<th>II (n = 9)</th>
<th>III (n = 12)</th>
<th>IV (n = 8)</th>
<th>I–IV (N = 33)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off-farm income (FCFA)</td>
<td>n.a.</td>
<td>154,400</td>
<td>135,300</td>
<td>58,800</td>
<td>110,200</td>
</tr>
<tr>
<td>(percentage from goldmining)</td>
<td>(0%)</td>
<td>(59%)</td>
<td>(72%)</td>
<td>(62%)</td>
<td>(65%)</td>
</tr>
<tr>
<td>Off-farm income per worker (FCFA)</td>
<td>n.a.</td>
<td>51,500</td>
<td>50,700</td>
<td>42,800</td>
<td>46,400</td>
</tr>
<tr>
<td>Off-farm income per consumer (FCFA)</td>
<td>n.a.</td>
<td>19,200</td>
<td>21,700</td>
<td>13,500</td>
<td>17,200</td>
</tr>
<tr>
<td>Goldmine work (days in 1996–97)</td>
<td>0</td>
<td>135</td>
<td>163</td>
<td>66</td>
<td>112.2</td>
</tr>
<tr>
<td>(per cent of households with goldminers)</td>
<td>(0%)</td>
<td>(89%)</td>
<td>(83%)</td>
<td>(38%)</td>
<td>(64%)</td>
</tr>
<tr>
<td>Migrant work (days in 1996–97)</td>
<td>53</td>
<td>110</td>
<td>34</td>
<td>15</td>
<td>52.2</td>
</tr>
<tr>
<td>(per cent of households with migrants)</td>
<td>(25%)</td>
<td>(56%)</td>
<td>(25%)</td>
<td>(13%)</td>
<td>(30%)</td>
</tr>
<tr>
<td>Weed for cash (days in 1997)</td>
<td>0</td>
<td>0.7</td>
<td>2.9</td>
<td>5.0</td>
<td>2.5</td>
</tr>
<tr>
<td>(per cent of households weeding for cash)</td>
<td>(0%)</td>
<td>(11%)</td>
<td>(50%)</td>
<td>(63%)</td>
<td>(30%)</td>
</tr>
</tbody>
</table>

Note 1) FCFA = CFA francs. 100 CFA francs = 1 French franc.

work enjoy the highest level of food security, while households relying on a combination of millet cultivation and in situ off-farm work are the most insecure. The key factors in food security are thus access to livestock and ex situ off-farm work, while food insecurity is associated with low levels of income diversification and mobility. The most common income combinations are mixed farming and millet cultivation combined with ex situ wage labour, followed by millet cultivation combined with in situ off-farm work.

The structure of income for the different food-security groups can now be outlined. Group I households either combine mixed farming with large-scale trading, or concentrate on large-scale mixed farming. The vast majority of group II households combine mixed farming with ex situ off-farm work, mainly goldmining. These households have larger land holdings and more livestock than the group immediately below. Most group III households combine crop cultivation with off-
farm work. Only 25 per cent have a breeding stock. Compared with group II, more households in group III do in situ off-farm work but their total off-farm incomes are equal to those earned by group II households. Most group IV households combine crop cultivation with either ex situ or in situ off-farm work. As among group III households, only 25 per cent own a breeding stock. Compared to groups II and III, fewer households in group IV do ex situ off-farm work, and their off-farm incomes are significantly smaller. It is also among group IV households that we find the ‘food-insecure’ combination of livestock poverty and village-based or no off-farm work.

**Labour availability, agricultural productivity, and food security**

Based on the previous analysis this section examines the short-term effects of resource access on agricultural productivity, income diversification, and food security, as well as the interrelationships among the three latter. Four key findings are discussed.

(i) The relationship between resource access and agricultural productivity is not straightforward in the Rimaïbe economy, in particular if considering the availability of labour resources. Given the theoretically expected advantages of large households among Sahelian farmers (Toulmin, 1992:257), the inverse relationship between a household’s grain-productivity and the size of its work force is surprising. Two types of explanation may account for this, both of which relate to income diversification. The first concerns the potential benefits derived from flexibility and cooperation in work. Men who were alone in the household were less able to diversify activities into ex situ off-farm work due to reduced mobility. Most of them also lacked the working capital to engage in remunerative self-employment. They were thus compelled to pursue a farm-biased income strategy based on high labour inputs into cropping and herding, thereby realising relatively high agricultural production levels. Conversely, large households with two or more workers diversified their income sources, mainly into goldmining. They thus allocated more labour to off-farm work and so did not realise the maximum production potential of their land and livestock resources.

The second explanation concerns the moral hazard or free rider problems of large economic units (Toulmin, 1992:257–67). According to this view, workers in large, multiple-worker households have a reduced incentive to work hard in grain cultivation because the harvest is consumed by all members of the household while the burden of work is felt individually. The moral hazard problem is greatly accentuated by the existence of alternative employment from which incomes are individually controlled. Among the Rimaïbe, such incentive problems were linked to the household life cycle. Multiple-worker households were typically at a mature stage in the life cycle and so contained young workers heading for independence. Young workers are interested in spending time in off-farm work or small stock rearing because they have more influence on the use of those incomes. They need cash to establish an independent family and farm, i.e. to marry and to purchase land and livestock. The significance of this effect was demonstrated by events showing that
large households containing three or more adult brothers often suffer from problems of motivation in crop cultivation. Informants also stated that men begin to work harder on their farm when they become heads of their own households. Such factors often contributed to the division of households.

Access to livestock resulted in higher grain productivity. Conversely, land poverty did not seem to reduce output per worker but it very likely reduced returns to labour. Access to liquid capital improved weeding performance by enabling the use of hired or client labour, but these forms of labour mobilisation were available only to a small elite. The same elite also invested cash in feed for their cattle and small stock.

(ii) A high level of food security is not necessarily associated with high agricultural productivity if off-farm sources of income are available. As noted, small and poor households opted for intensive farming methods and achieved a surprisingly high level of output given their low endowment of resources. But these households were typically also more food insecure: they engaged in village-based activities yielding low incomes, which, moreover, were more likely to co-vary with the size of their grain harvest. They also owned fewer livestock which could act as a buffer against drought-induced crop failures which intensive management practices cannot prevent. Conversely, larger and better-off households opted for less intensive farm practices and hence lower levels of food self-sufficiency. Such households, however, realised higher and more stable incomes through ex situ off-farm work, notably goldmining, and thereby achieved a higher level of food security. The exception to this pattern was a very small group of elite farmers who owned large fields and livestock herds, and for whom off-farm incomes were not important for food security at their present stage of life. Yet for the large group of ‘middle-class’ households (groups II and III) intensive farm management is not a desirable strategy, neither for achieving food security, nor for junior members’ abilities to invest in private land and livestock.

(iii) Income diversification is a key factor in ‘adaptive capability’, here expressed as food provision capability, especially incomes linked to external markets. Off-farm incomes were particularly important means to cope with crop failures among the Rimaîbe. This is illustrated by events occurring in 1996–97. That year, most households suffered from low grain self-sufficiency levels because of a poor harvest in 1996. Among a few poor households, food scarcity resulted in a temporary famine and hence a reduced physical ability to farm, and in one case land was sold to buy food. Yet despite the large amount of grain purchased that year, the vast majority of households managed to secure sufficient food without resorting to emergency sales of land and livestock. Off-farm incomes earned in goldmines 40–50 kilometres from the village were the most important source of cash to buy food. Food purchases largely followed goldminers’ remittances, and were stretched

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1 In 1996, the 33 Rimaîbe households produced on average 236 kg grain per consumer. Each of the 11 households in the time study purchased on average 800 kg grain, equivalent to 32% of in-house grain consumption. 1996–97 denotes the 12 months following the 1996 harvest.
over much of the dry season and the first part of the rainy season. This method of grain provision does, however, mean that grain is bought when prices are at their highest. Also, off-farm work does not provide security against total crop failure due to the time lag in income earning and the insecurity of employment. Only the richest farmers bought cheap grain at harvest time with incomes from the sale of livestock. The sale of fattened livestock was another means to cope with food shortage. In 1996–97 most small stock were sold at high prices at the Muslim Tabaski feast in April. Many fattened sheep and goats were exported to national and coastal markets, especially Côte d’Ivoire. The prices of exported animals were not depressed by the increase in local supply prompted by the increased demand for cash (resulting from the poor harvest in 1996), as is often seen in rural markets (Sutter, 1982). Moreover, in 1994 the devaluation of the CFA franc (from 50 to 100 FCFA for one French franc) caused an increase in the demand for Sahelian livestock from other countries in the CFA franc zone by increasing the local price of meat imported from outside the zone.

(iv) Access to labour is a key factor explaining inter-household differences in agricultural productivity, income diversification, and food security. In the Rimaïbe economy, in which food was best secured by combining mixed farming and off-farm work, access to junior labour was especially important. In this light, the large share of Rimaïbe households with only one worker (33 per cent) is striking and was a major constraint on food production and food provision for the village as a whole. An unfavourable household demography was the most conspicuous characteristic of group IV households compared to groups II and III: few workers per household, the high age of workers, and a high worker-consumer ratio. Moreover, the positive relationship between small household size and poverty may be self-reinforcing, as poor farmers appeared less capable of keeping their married sons in the household (see also Hill, 1982:190).

The mobilisation of non-household labour helped to alleviate the labour constraint experienced especially by the very poor and several of the very rich households. Households in group IV were partly compensated for their small number of workers by unpaid weed-labour assistance received from other households. The richest households in the village, on the other hand, could cope with their small number of workers for two main reasons. First, trading, which does not depend on a large work force, was central to the food provision of two wealthy households. Second, and more importantly, rich households had privileged access to non-household labour for crop cultivation and livestock husbandry. They hired labour for weeding and received large amounts of unpaid weeding assistance from poorer agnatic and affinal kin. This assistance was returned by drawing on their capital and cash resources: they gave credit, lent out their scotch-carts, and employed their poorer kin when the latter needed cash. By drawing selectively and flexibly on family, client, and wage labour, these wealthy farmers obtained both cheap and timely labour for their crop and livestock production.
Long-term processes of accumulation and economic differentiation

The prior discussion provided a short-term view of economic inequality and patterns of production, income, and food security. This section analyses accumulation and economic differentiation in the long term by examining the investment and income strategies of three ‘generations’ of Rimaïbe farmers, and how their past strategies relate to current patterns of inequality. Using this life-cycle and generational perspective, the strategies of farmers in three age-groups are considered: elderly farmers aged 60 years and above, middle-aged farmers between 40 and 59 years, and young farmers aged 15 to 39. These groups constitute 13%, 24%, and 64%, respectively, of the adult male population of 88 persons. Contemporary patterns of inequality are seen in the light of the lived experiences of these men, that is, in terms of their responses to shifting employment and production/resource conditions since around 1950. Such a ‘career’ view reveals that the Rimaïbe’s capacity for economic betterment (adaptation beyond survival) is more limited than suggested by the short-term analysis of income strategies and food security.

Elderly farmers

All elderly farmers in Petekole were migrant workers in Ghana from the 1940s to 1960s and the youngest among them also worked as migrant weavers in Niger in the 1970s. Two were traders. Migrant and trading incomes were used to pay taxes and purchase clothes, and were frequently invested in land and livestock. As for land accumulation, all the elders purchased land, and, it appears, have avoided substantial land sales. Oral records of land purchases show that a very large percentage of the land cultivated in the village today was purchased by these elders or by their fathers. This achievement contrasts dramatically with the experience of the village’s Fulbe elders who sold most of their land and a great part of their cattle. However, due to successful procreation by Rimaïbe elders, land shortage is now considered a problem among the next generation of farmers. Rimaïbe farmers also built up sizeable cattle herds in the 1950s and 1960s. The favourable rainfall conditions in those decades also contributed to this generation’s accumulation of land and livestock by increasing food self-sufficiency levels and by improving grazing resources. In the 1970s and 1980s, however, reduced rainfall led to a substantial decline in cattle herds.¹

The greatest achievement of Rimaïbe elders, perhaps, is their accumulation of ‘wealth in people’. During their lifetime, the village’s male workforce has thus increased significantly: the 18 men born in the village between 1900 and 1935 have raised a total of 66 sons (3.7 each on average), of whom 57 are still in the village. A larger census among the Rimaïbe in Liptako gives a fertility rate of seven children per woman (Hampshire & Randall, 1995). High fertility rates can partly be ex-

¹ The data on long-term changes in livestock wealth are much less precise than those describing changes in land holdings.
plained by income diversification, which increases the demand for household labour (Cordell et al., 1994). The general success of this generation is shown also by low rates of emigration: only two men among Rimaïbe elders, and only six men among their sons, have emigrated from the region. The investment of time, money and rhetoric in bringing family members back to the village when they stayed away for too long has been important in this regard. Such means are still employed in an attempt to control the ‘wealth in people’ of Rimaïbe lineages in the face of migrant employment opportunities and local resource scarcity. The Rimaïbe elders’ ability to hold their households together is somewhat less impressive than the growth and cohesiveness of the Rimaïbe community as a whole: among 11 Rimaïbe elders, half have kept their married sons in the household and are heads of large households. Among the latter, many retain a certain control over their sons by controlling relatively large land resources, especially the attractive village fields.

Middle-aged farmers

Today’s middle-aged farmers were establishing households (at age 15–30 years) between the mid 1960s and early 1980s. During that period, nearly all of them worked in small weaving workshops in Niger. Employment conditions were favourable in Niger due to the country’s uranium-boom, and substantial amounts of cash and clothes were presumably remitted to the village. Some farmers also worked in the Ivory Coast, and a few in Ghana. In the early 1980s, many continued wage labouring in goldmining while others moved into trading, village-based off-farm work, or large-scale farming.

Most middle-aged farmers began their adult lives after 1970, which has been a period of low average rainfall and several major droughts. During this period, local food production has been well below subsistence and much cash has been spent on food. This constant drain on cash incomes has reduced this generation’s accumulation of land and livestock. The head tax has been another drain on liquid wealth but was abolished in 1983. Middle-aged men’s access to land has been reduced by rising land prices and an absolute shortage of village fields. Thus, only 60 per cent have purchased land. The building up of livestock herds has been jeopardized by low rainfall and a shortage of local grazing resources, and by the effects of high off-take rates induced by food shortage. Such constraints help to explain why only eight out of 21 middle-aged farmers are food secure (groups I and II) and enjoy good access to land and livestock, the remaining 13 farmers being in groups III and IV.

The life histories of middle-aged men in Petekole strongly suggest that the accumulation of agricultural wealth in land and livestock relates closely to the ability to earn and save off-farm incomes. However, as noted, not all middle-aged men have been equally successful in improving their absolute and relative economic position through off-farm work. A combination of factors can explain the creation of inequality in the early stages of middle-aged men’s careers. (a) Surprisingly perhaps, the type of off-farm work engaged in while very young has not been a deci-
sive factor in economic differentiation among middle-aged men. All poor middle-aged farmers worked off-farm in their youth, and all, except three, did the same work as the rich: migrant weaving in Niger, and later, for some, local goldmining. (b) Personal skills and energies appear to have made a decisive difference to accumulation. Informants’ statements suggest that today’s wealthy farmers were very skilled and hard-working weavers in the 1970s and so earned higher incomes than their peers. (c) An unfavourable position in the parental household is likely to have disadvantaged some of today’s poor farmers by reducing their personal mobility and hence their access to off-farm incomes. Interviews thus revealed that obligations in the parental household toward elderly parents typically fall upon the youngest brother. This charge is also placed on brothers who prove to be less apt in off-farm work. The problem is more general in the sense that it reveals the importance of competition for labour between family life and economic activity. The uneven distribution of obligations in the family in most cases is not fully counterbalanced. While there is a clear obligation to share off-farm incomes among one’s siblings in the village, redistribution is in practice reduced to gifts of clothes and small sums of money and so rarely permits larger investments. (d) The domestic situation might also affect the ability to save out of one’s off-farm earnings. In the mature, parental household the eldest brother usually has the main economic responsibility, especially for the provision of cash for food, medicine, and the marriage of younger brothers. This burden on the eldest brother’s capital resources is often greater in households where the father has died early.

Inequality was accentuated by the divergent careers of middle-aged men later in their lives. A small group of farmers shifted into better-paid forms of self-employment when weaving and goldmining work became less profitable or inaccessible to them due to their increased responsibilities in the farm and family. Thus, among eight wealthy middle-aged farmers two became large-scale traders, one worked for long periods in the Ivory Coast, one acquired an irrigated garden in Dori through his wife, three engaged in large-scale mixed farming, and one is working to expand his petty-trading business. In contrast, the many middle-aged men in the food-insecure groups still undertake wage labouring and in situ petty activities (Table 12). In middle age, such an income strategy is a sign of failed upward occupational and economic mobility, while it is usually the only relevant option for young men.

The study thus supports Polly Hill’s observation from the Sahel zone in Nigeria that while the vast majority of men are poor in their youth, there is ‘a kind of economic threshold over which a man must pass in his middle years if he is not to remain forever impoverished’ (1982:189). Only about a third of today’s middle-aged men were able to escape the poverty of their youth despite 15 years or more of effort in off-farm work. The two-thirds are still wage-workers or unemployed in local petty income-generating activities. Some are also the clients of their more successful age-mates or of wealthy traders and farmers in Dori and adjacent villages.
Young farmers

Nearly all of the 56 young Rimaïbe farmers in Petekole earn cash incomes by wage labouring: in the goldmines (68%), on migration (10%), as casual farm labour in weeding (6%), or by any combination of the three. A few young men (14%) are self-employed or work with their father in farming or trading. For young farmers, goldmining is thus by far the most important off-farm occupation. The off-farm work patterns of today’s youth vary according to their age and the stage in the life cycle of their household, but in general their off-farm income strategies are very similar to those of the previous generations. The significant difference is the proximity of the place of work: while Rimaïbe youths in the early days of migration work walked for 20–30 days to reach their destination in Ghana, and later travelled two or more days to reach the weaving workshops in Niger, young men today travel to the goldmines in half a day. The proximity of off-farm work today has three major implications: it gives greater flexibility in the alternation between off-farm and farm work, something which greatly improves access to cash incomes during the cropping season; it allows adolescent boys to earn good cash because they can endure hard physical work, and it makes middle-aged men’s responsibilities to farm and family less of a constraint on their off-farm income-earning capacity.

Only 10 per cent of young farmers have purchased land, while around 20 per cent have accumulated livestock. The ability of young men to purchase or inherit sufficient land is hindered by high land prices and by the fact that their generation is about twice the size of the previous one. Land shortage is thus likely to accentuate inequality and poverty for this generation. For the eldest segment of young men (in their own or retired/deceased father’s household), most land and livestock accumulators come from large and relatively wealthy parental households. Still, having rich forbears does not guarantee prosperity, as most wealth must be generated by the youth himself through off-farm work and sound agricultural investment and management. In this regard, the way adolescent boys use their relatively large cash incomes is an interesting question. Often, adolescent boys enjoyed a relatively high level of private consumption, in particular if their father or elder brothers took responsibility for household food provision. Yet in some households and situations, food provision was a major burden on young men’s cash incomes. This said, patterns of consumption beyond food provision were not quantified.

Conclusion

The study sees adaptive capability as a competence that is unequally distributed among households with differing endowments of human and physical resources. It shows the ways in which ideal-type strategies of livelihood in the Sahel, i.e. flexibility and asset accumulation, find expression in actual livelihood practices of people constrained by time and poverty. I have also stressed the multidimensional nature of adaptive capability in the Sahel, showing that incomes can be earned in multiple ways even under conditions of extreme resource scarcity. Finally, asset accumula-
tion proved to be an important dimension of adaptive capability that interacted with income diversification and mobility in people’s long-term livelihood strategies.

Great inequality in access to human and physical resources was found among Rimaïbe households. Resource inequality, in turn, produced very differing income-generating strategies and hence different levels of food security, farm investment, and agricultural productivity. The access to one’s own and others’ labour was pivotal in these patterns and interrelationships. A high level of food security was associated with income diversification directed at external sources of income. Off-farm work, and to some extent livestock rearing, not only served as short-term means to cope with crop failures, they were also integral to Rimaïbe men’s broader life projects as independent farmers, family heads, and respected citizens in Fulani society.

Unexpectedly, food security was not necessarily associated with high agricultural productivity. Indeed, labour-intensive management of natural resources was not the most effective means to achieve food security, except for a very small elite with large land and livestock holdings. Under these conditions, outsiders’ efforts to intensify local crop and livestock production may not conform to people’s broader objectives of secure and sustainable livelihoods (cf. Nielsen, 1999). Such development interventions are often based on an image of Sahelian farmers as a homogenous group of subsistence millet cultivators. As shown by this and other research (e.g. Reardon, 1994; Painter et al., 1994), this perception is misleading and hinders a true understanding of production and income patterns in the region. Instead, research and development assistance in the rural Sahel must consider both the farm and the nonfarm sector, and their interlinkages, and be sensitive to social and economic inequalities within communities.

In one sense, Rimaïbe farmers have been capable of adapting to drought, population growth, price fluctuations and other pressures on their livelihoods. Events in 1997 showed that nearly all households maintained control over their basic productive resources (labour and land) in the face of a poor harvest, and that few stress sales of livestock occurred. Yet seeing adaptive capability in a historical and ‘career’ perspective exposes the down side of this otherwise remarkable achievement. The life histories of today’s middle-aged farmers showed that the Rimaïbe’s overall opportunity structure (access to resources and incomes) has not improved despite 30 years of effort in agriculture and migration work. Food provision is still a recurrent problem for many households, and two-thirds of middle-aged men still depend on low-paid and casual wage labour. Thus, like the situation in Western Kenya described by Francis and Hoddinott, economic differentiation in Petekole since 1970 has been ‘less about accumulation than about differing ability to stave off impoverishment’ (1993:142). Generally, Rimaïbe farmers have invested cash primarily in securing land rights and not in raising the productivity of the land once acquired. Likewise, the off-farm income-earning capacities of Rimaïbe men seem unchanged, although employment conditions abroad have worsened. Once skilled weavers, Rimaïbe men today earn cash by hard and dangerous work in low-grade goldmines. No one has received any formal education (illiteracy is near 100
per cent) and very few have learned a trade. Instead, the ability to exert oneself physically in the goldmines and to improvise petty activities and various scams have become key qualifications among Rimaïbe youth. By way of comparison, in Western Kenya until around 1970, investment in children’s education and the latter’s employment in the urban sector was a key factor in rural accumulation and differentiation (Francis & Hoddinott, 1993). In this light, Petekole presents a case of lost opportunities. This situation, however, is scarcely related to environmental degradation or unsustainable agricultural practices, concepts which greatly influence the design of development interventions in northern Burkina Faso.

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Agricultural Expansion and Animal Husbandry in a West African Savannah Environment

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Introduction

In West Africa, a significant shift in animal husbandry has taken place during the last three decades, from the semi-arid Sahel to the semi-arid and sub-humid Sudanian and Guinean zones. As part of a new settlement structure, herders have moved from northern Mali, Burkina Faso and Niger towards the southern areas of these countries and further on to Côte d'Ivoire, Benin, Togo, Ghana and Nigeria.

This change was partly initiated by the droughts of the 1970s and 1980s, a gradual reduction in the tsetse fly populations in the south, and increased use of the plough and the cart in the more agriculture-dominated wetter environments, encouraging the integration of agriculture and livestock.

However, agricultural expansion in these regions transforms grazing areas into fields, making it increasingly difficult for herders to find grazing and to keep the animals from entering the fields during the cropping season.

In dominant models of agricultural intensification, livestock plays an important role as a supplier of nutrients and traction power, thus helping an early mechanisation on its way. A correlation between population density and livestock density has been identified in several cases in sub-Saharan Africa, supporting the importance of livestock for intensification. Especially in the relatively dry areas of sub-Saharan Africa, a supply of nutrients to the fields through manure is important, as the application of inorganic fertiliser is often not economically feasible.

Agricultural expansion is mostly seen as a forerunner of intensification, and in the Boserup model of agricultural intensification it is not considered a separate process but an integrated part of intensification. However, as the case from southeastern Burkina Faso shows, the integration of livestock in the early stages of intensification is not a straightforward process. Agricultural expansion may reduce the possibilities for specialised animal husbandry through the conversion of pastures to fields and the ensuing conflicts over crops damaged by stray animals. The present chapter will demonstrate how we might face an expansion paradox where expansion, instead of acting as an integrated forerunner for intensification, actually works against it as it undermines some of the preconditions for further intensification. This is particularly relevant when animal husbandry and crop cultivation are
based on separate systems divided along socio-cultural and ethnic lines. In the case analyses below, interaction between farmers and herders in the form of entrustment\(^1\) is important for animal husbandry as well as farming. Thus, a weakening of this system due to agricultural expansion not only marginalizes the economically important specialised animal husbandry, but may also undermine the prospects for further agricultural intensification. The case presented demonstrates this expansion paradox and hence the need to operate with a distinction between agricultural expansion and intensification. This may contribute to a better understanding of the prospects for a Boserupian autonomous intensification in a West African Savannah environment.

The Sahelian countries have important comparative advantages in cattle rearing compared to the coastal countries where the demand for meat is rising because of rapid urbanisation. Simultaneously, the demand for a low-status staple food like millet, a major crop in Burkina Faso, is reduced. The marginalisation of specialised animal husbandry may, thus, have serious implications for the future development of Burkina Faso as it reduces the possibility for exploiting this important economic potential.

**Agricultural expansion in the intensification hypothesis**

It is estimated that about 80 per cent of the growth of African agriculture is attributable to the expansion of land under cultivation. When faced with increased demand for agricultural production during population growth, the first reaction of the farming community will probably not be to invest in new technology or soil fertility improvements or to shift to cash crops. Rather, farmers will gradually extend cultivation unto unused land, probably in a forest-fallow system.

The theories of Ester Boserup are relevant for local processes of agricultural development, and her work is very influential in contemporary perceptions of rural development, in policy formulation and development initiatives. Following the Boserup model of autonomous intensification, the farmer will cultivate the land he already uses more frequently when the density of the population increases. This shortening of the fallow period can be defined as the beginning of the intensification, but agricultural expansion is a common process that to some extent is separate from and may even counteract intensification.

Boserup deliberately did not make a distinction between unused land or virgin land, and land that was part of a fallow rotational system. Her argument was that it is not possible to make a sharp distinction between cultivated and uncultivated land in “primitive” types of agriculture as:

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\(^1\) Entrustment is a system where the *Fulani* herder takes care of the *Bisa* farmers’ cattle, in some cases only for part of the year. The *Bisa* farmer pays in various ways for this service, while the herder has the right to the milk and the manure of the animal.
... most or all of the land added to the sown area as population increases in a given territory was used already, as fallow land, pasture, hunting ground, or otherwise. (Boserup, 1965)

Therefore, expansion as a process was discarded and replaced by the view that the transformation of the agricultural system in response to population growth should be seen as:

... a continuum of types of land use ranging from the extreme case of truly virgin land, i.e. land which is never cropped, through land cropped at shorter and shorter intervals, to that part of the territory in which a crop is sown as soon as the previous one has been harvested. (Ibid.:13)

Boserup’s argument, above, makes sense in a system of e.g. shifting cultivation where it is not necessarily the same fields that are used when cultivation shifts from plot to plot. However, in many agricultural systems the farmer has specific rights to a fallow field and will use the same field again when the fallow period is over. The fallow field must therefore be regarded as part of a more permanent system, and other users may only have partial and temporary access to these fields. Therefore, the re-opening of a fallow field is different from the opening of virgin or previously uncultivated land. An enlargement of the agricultural area through the reopening of fallow fields is part of intensification because input per cultivated area including fallow fields will increase. If expansion and fallow cultivation are taken as one, it may be overlooked that intensification and expansion have diverse features. Therefore, expansion is here defined as the cultivation of land that has hitherto not been cultivated, and the reopening of fallow land is excluded from expansion as it is seen as part of intensification. Other uses of the land like grazing, hunting, gathering etc. are seen as exterior to the agricultural system and the opening of cultivation in such areas is thereby defined as expansion.

The clear distinction between agricultural intensification and expansion is maintained, because in the study area an inclusion of expansion in the intensification process would not capture the consequences that expansion of the agricultural areas has for land use and the development process.

Intensification is defined as an increase in capital and labour investment per area and hence increased production. Extensification is defined as the opposite process to intensification, i.e. a decline in input and labour investment per area and hence a declining output. Expansion can imply extensification, but extensification can also take place without expansion e.g. in relation to emigration by the local workforce. As the focus is on the enlargement of the agricultural areas, this study will operate with the more precise term expansion rather than extensification.
Expansion and intensification both signify agricultural development, however at somewhat different stages in the process. When land is abundant it is less likely that intensification will take place as expansion may be seen as a forerunner of intensification. In the words of Lele and Stone:

... the area frontier\(^1\) acts more or less like an hourglass by which to gauge the time remaining for autonomous intensification. (note added)

Technological innovation and adoption are important factors in this process where e.g. the ox-drawn plough may stimulate both processes. Whether or not the expansion will eventually be succeeded by intensification will depend on locally specific preconditions such as population density, agro-ecological conditions, market access, credit availability, information, supportive policy, and tenure arrangements, etc. Intensification may be initiated deliberately through development programs. Favourable market conditions may also lead to the increased profitability of certain crops and encourage the farmer to invest to increase outputs. An example of such policy- and market-driven intensification is the cotton-producing zone of southern Mali (Benjaminsen, this volume).\(^2\)

Table 1 presents a simplified summary of the consequences of expansion and intensification. The comparison illustrates the potentially significant differences between intensification and expansion from a Boserup-inspired point of view and may not be valid in all cases, as the local context has to be taken into consideration. Each relationship will be discussed below.

Both processes will result in a fall in output/work-hour because of diminishing returns to labour and an increased workload for the farmer. Mechanisation in association with intensification may raise the output/work-hour through labour-saving technology like the plough, but when the work used for maintenance of the animals and levelling and de-stumping of the fields is included, this effect may be somewhat or wholly counteracted. The question of diminishing returns to labour in relation to intensification is still debated and far from commonly accepted. If, in fact, the diminishing returns to labour thesis is rejected, as maintained by Hunt, the difference between intensification and expansion will be even more explicit, but

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1 That is, the border between unused arable land and cultivated land.

2 Some issues in relation to this, notably a detailed investigation of tenure and the importance of off-farm income, have only partly been included in the research, which may also have an effect on the feasibility of agricultural intensification in the study area.
labour productivity may still be conducive to triggering the intensification process as it then will act as an incentive instead of only population density acting as a ‘stressor’.

While the output/area increases with intensification due to technical and agro-ecological improvements, it is likely to decrease under expansion because of declining soil-fertility on old fields and the inclusion of new fields, often of inferior quality. New fields may raise the yields initially as the fertility of unused land is presumably better than that of the old fields. However, it is likely that the land chosen last for cultivation is also the least suitable, which is why such an eventual initial output increase may be expected to be short-lived. This, of course, will vary according to the locality.

The input/area may, under expansion, be expected to remain unchanged or fall as the farmer may have difficulties applying the same amount of labour to new fields as well as to the old. This may add further to a decrease in the output/area described above. Inputs like fertilizer etc. are not normally associated with expansion. For intensification, input/area is part of the definition.

For both intensification and expansion, the work-hour/person is expected to increase. In the case of expansion this is because the area cultivated is increasing while the number of household members are assumed to be constant, and in the case of intensification, increased labour input is often intrinsic to intensification, again assuming that the number of household members is constant.

Expansion and the more frequent cultivation of fallow land unaccompanied by anti-erosion measures make environmental degradation and ultimately loss of soil-fertility more likely. Expansion by itself does not ensure compensation for the nutrients removed with the harvest or protection against cultivation-induced erosion. Moreover, expansion is often associated with deforestation, seen by some as degradation in itself but which may, furthermore, aggravate soil erosion through decreasing vegetation. Technological innovation following intensification is likely to comprise anti-erosion and fertility maintenance measures, which is why intensification has been seen to have positive environmental effects.¹ This depends on the local context, but as investments associated with intensification are assumed to be of a long-term character as the farmer is not expected to intensify his/her production if (s)he does not plan to keep the land for the foreseeable future, it is also likely that this will include care-taking of the land as the most important capital asset.

Expansion may not necessarily lead to intensification. Expansion and intensification may lead in quite different directions if the preconditions for intensification are not present. In cases where agricultural potential is too marginal to justify further investments by the farmer, or where the policy environment for agricultural development is not conducive, expansion may be the dominant trend as long as new arable land is available. In such marginal regions, intensification may not be a feasible option when expansion onto new land is no longer possible. Furthermore,

¹ A prime example hereof is the Machakos area in Kenya described in Tiffen et al., 1994.
alternative uses of the land may have been sacrificed in the expansion process. One
such activity could be marginal land used for grazing by pastoralists. Taking their
grazing rights away for the benefit of cultivation may mean expansion or intensifi-
cation in one system, but may also mean limitations or even total abandonment in
another system, as also noted by Boserup. Though Boserup is, therefore, right that
uncultivated land has alternative uses, it would be misleading to gather these uses
under one and the same system and hence primarily a single ethnic group.

Livestock is generally expected to become more integrated into crop-farming
with intensification as the need for manure and animal traction increases. At the
same time, the expansion of agricultural land will provide more crop residue for
fodder and the costs of livestock integration will therefore fall. The former pasto-
ralist will become part of the integration process as the land available for grazing
decreases and he therefore becomes increasingly dependent on access to crop resi-
due for fodder which will give him the incentive to cultivate himself. However, it
will be increasingly difficult to manage the herds during the cropping season and
prevent animals from straying into the fields. This may create conflicts between
herders and farmers and eventually force the herders to move away. Any reciprocal
relationship between the farmer and the herder will thereby disappear. The en-
trustment system may be crucial for the farmer’s ability to keep cattle. If this sys-
tem and other complementary links break down as a consequence of agricultural
expansion, the expansion paradox may become apparent where agricultural expan-
sion, instead of acting as a forerunner of intensification, may actually work against
the intensification process.

The case presented in the following supports the existence of the expansion
paradox. Here agricultural expansion is pursued by a dominant group of farmers
while the pastoralist minority is marginalized. The animal husbandry is in this
process relocated to distant grazing lands, while the region holds out little promise
of agricultural intensification. Thus, the analysis concerns the process of agricu-
tural expansion, the integration of animal husbandry in farming, the importance
and role of animal husbandry, settlement and grazing patterns, entrustment and
conflicts.

**Introduction to the region**

The Bougou province is one of the south-eastern provinces of Burkina Faso shar-
ing its borders with Togo and Ghana. This part of the country is characterised by
relatively good agro-climatic conditions and higher population densities compared
to the northern parts of the country. Even though the southern location is rela-
tively advantageous in terms of rainfall, it is still a marginal region compared to the
large and densely populated south-western provinces.

Several important rivers braiding through the landscape dominate the Bou-
gou province. A few dams have been constructed, creating reservoirs increasing
the potential for both animal husbandry and irrigated agriculture. In 1992 one of the country’s largest dams, the Bagré Hydroelectric Dam on the White Volta (Nazinon), was finished, creating a large reservoir referred to as Lake Bagré. Onchocerciasis (river blindness) made large areas of the region unsuitable for permanent exploitation until the seventies when the effects of the WHO Onchocerciasis Control Programme were manifested. Therefore large areas surrounding some of the riverbeds have only recently been exploited for agricultural use.

The region lies within the Soudanian agro-ecological zone with one rainy season from around May till September and a recent average rainfall 1980–1996 of 763 mm (Burkina Faso Meteorological Institute). Although several rivers in the region allow for exploitation of the shallow watertable in the dried-out riverbeds, the most populated areas in the region are situated far from the riverbeds, and deep-lying water tables exclude irrigation. Almost all of the cultivation is exclusively rain fed, and water availability during the dry season is one of the main problems. A mobile and flexible production asset like cattle, however, will have relatively easy access to water.

The region is generally considered to have a low agricultural potential. It is estimated that around 35 per cent of the total area in the Boulgou Province may be
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cultivated, of which 10 per cent is suitable for irrigation. It is further estimated that around 70 per cent of the potential agricultural area is already under cultivation. Cultivation intensity shows large regional variations. The areas of highest density with up to 75 per cent of the total area used for fields are found along and north of the road between the major towns Garango and Tenkodogo. The average area cultivated by the Bisa farmers is around 3.1 ha per household while the Fulani cultivate around half this area.

The population density of the Boulgou Province is on average about 55 inh/km² with an annual growth rate of around 2.7%. As with the cultivation intensity, there are however, large regional differences. The highest population density is found along and north of the Garango-Tenkodogo road with a maximum of 138 inh/km² in Garango. The overall population density is thus quite low compared to regions where successful autonomous intensification has taken place. The most important ethnic groups are Bisa (58%), Mossi (30%) and Fulani (8%) (1985 figures). The Mossi are only found in the northern part of the province, while the other two groups are scattered throughout the province.

The Bisa and Mossi are sedentary farmers whose households are loosely clustered in villages that consequently may occupy a large zone with fields separating the individual households. The Fulani are sedentary pastoralists who normally live in separate villages.

Livestock potential

Animal husbandry is considered the second most important activity. According to statistics from the regional veterinary services, the province has a general animal population density well above the national average (3 ha/TLU against 7 ha/TLU national) which, when compared to provincial averages, places it among the most densely animal-populated provinces in the country. In 1995, Boulgou province had the third-highest number of cattle in Burkina Faso, only surpassed by Seno and Gourma provinces, while with respect to sheep the province was sixth and for goats sixteenth out of 30 provinces. In 1974, however, the region had a cattle density close to the national average. From 1983–89, there was a 70 per cent increase in cattle, indicating an annual cattle growth rate of 11 per cent. Goats had a modest growth rate of 15 per cent during 1983–89, and sheep growth rates seem to have stagnated. Since 1989 no census-based statistics on animal husbandry exist, hence

1 Calculated from CRPA 1993.
2 The SPRA figures are based on the 1989 census “Enquête Nationale sur les Effectifs du Cheptel (ENEC) modified with an annual growth rate estimated from trials, comparable agro-ecological regions and expert studies. Annual growth rates are set at 2% for cattle, donkeys, pigs and camels, 3% for sheep, goats and poultry and 1% for horses.
3 TLU (Tropical Livestock Units) conversion factors: Horse 1; cattle 0.7; sheep 0.12; goat 0.12; donkey 0.53; camel 1.18.
it is impossible to ascertain whether or not this significant growth rate has continued. Although such data are not accurate, they do reinforce the impression of the importance of animal husbandry, and that this is a relatively new phenomenon.

There could be several reasons for this increase. The region has for a long time been an important animal husbandry zone, with the Fulani from the Mossi plateau in the north arriving in the dry season to exploit the grazing resources on the free land along the rivers, which has been deserted due to onchocerciasis. During the last two-three decades the region has received a large number of pastoralists migrating from the northern, more densely-populated regions like Namentanga, Kouritenga and Ganzourgou to settle in a more favourable environment made permanently available with the eradication of onchocerciasis. Other reasons for the growth may be sought in the general trend towards agropastoralism where farmers increasingly acquire animals to be used for draught, savings, or as an economic activity in its own right. Furthermore, the profitability of animal husbandry has improved as the demand for animals has increased with the heightened demand for meat as a result of rapid urbanisation and the more prevalent use of draught animals. Since the 100 per cent devaluation of the Franc CFA in 1994, the demand for Sahelian meat in the coastal countries has increased, a process that has been further accelerated by the partial discontinuance of EU price support on frozen European export meat. Following the devaluation, cattle exports from Boulgou province tripled.

Figures from the local animal husbandry extension service show that cattle and sheep each make up 37 per cent and 36 per cent of the stock, respectively, while goats make up around 24 per cent of the total animal population. If, however, the crude number of animals is transformed into tropical livestock units (TLU), cattle will make up around 74 per cent of the total. When calculated in terms of monetary value, cattle make up around 86 per cent of the total market value of the animal population. Again these figures are only to be considered rough indicators, but they do nevertheless point to the significance of cattle compared to other species.

Boulgou province is located close to Burkina Faso’s second and third most important animal export markets, Ghana and Togo, and is also favoured by the largest domestic market for animals in Burkina Faso, Pouytenga, which is situated only 60 km north of Tenkodogo.

Animal husbandry is an activity accorded high political priority and several pastoral zones have been planned in the province.

Animal husbandry in the region may be divided into three types:

1. Also according to personal communications with Moumini Savadogo, Antenne Sahelienne, SPS, Ouagadougou.
2. Market prices used are my own data from the local markets during the dry season of 1996 (an average rainfall year). Prices (and values) are only indicative as they vary considerably with season, market situation, size, age, condition etc. The calculation was also done with average national market prices 1994 where the animal prices differed but the partition of total value gave an almost identical result.
1) Animals held by the sedentary Fulani who often “belong” to a Bisa/Mossi village and who herd both their own and the farmers’ animals.

2) Animals of the Bisa/Mossi farmers sometimes used for traction in connection with soil preparation and weeding.

3) Animals of transhumant Fulani from northern provinces passing through the area in the dry season in search of pasture, residue grazing and water.

Here only the first two forms of animal husbandry will be considered, as the transhumant Fulani have little influence on the processes of expansion and intensification of agriculture discussed here.

The Bisa farmer villages

In the following, two Fulani settlements and the related Bisa villages are used as cases to illustrate the changes in agricultural and animal husbandry systems in the study region. Because of their proximity and close relations, a comparison between the two villages reveals the process of change which the two societies are going through. They may not represent actual stages in a specific development trend, but the changes that have taken place result from similar processes. The comparison is illuminating, as the changes that have already taken place in Sanogo can be identified in Lergo today. In the following, the Bisa and Fulani villages will be treated separately. For convenience, the Bisa villages are called Sanogo Bisa and Lergo Bisa, while the Fulani villages are called Sanogo Fulani and Lergo Fulani.1

Sanogo and Lergo are located 10 km south of the main dirt road linking the provincial capital Tenkodogo to the important Pô-Ouagadougou road. The area is an agricultural frontier region with areas that have only recently been opened up for agricultural exploitation.

Sanogo is the oldest of the two neighbouring villages. According to the list of chiefs and their reign the village was established almost 300 years ago.2 The distance between Sanogo and Lergo is around four km. They are major villages in the area with respect to size and services, but are not provincial centres with state administration offices or services. They have a small market and a few service activities like a pharmacy, a mill, a school, a church, and a mosque that services some of the smaller villages in the immediate surroundings. Where they may differ from some of the villages in the more densely populated northern parts of the depart-

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1 The following analysis of the two Bisa villages is predominantly based on a questionnaire survey with 50 heads of households in Sanogo and 47 in Lergo. This represents almost half of the households in each village and is considered to be a representative random sample. The survey was conducted by assistants in December–February 1996–97.

2 The chronology of the chiefs and the early history of the village was recorded by an administration clerk according to the memory of Daouda Zéba, a prominent citizen, 1971.
ment is the presence of nearby non-cultivated areas. Especially for Lergo, the southern village, this has some important implications. To the east, the region has the benefit of a seasonal river that provides rather good watering opportunities for the cattle in the dry season and land suitable for rice and vegetable cultivation in the low-lying areas.

**Land-use**

In Sanogo, the households cultivate on average 3.1 fields while in Lergo they cultivate 3.7 fields. Only a few farmers have 5 or 6 fields. A field is here defined according to the farmers’ own classification. This means that a field is a unit as distinguished by the farmer and is based on a combination of factors like location, soil-texture, topography, crop and tenure. This number of fields is significantly lower than what has been found in studies in other parts of the province, which
may indicate a better availability of land compared to more densely populated areas of the province.

According to a recent study based on satellite images and aerial photos, the Sanogo area has a cultivation intensity of 60–64%, while in Lergo this is slightly lower with 50–54%. South of Lergo towards the lake, cultivation intensity decreases but a remarkable rise in intensity can be found in the Zangoula area close to the lake (50–54%).

In general, the fields are old. Most of the fields have been inherited by the current user and have thus been cultivated for several decades. As can be seen in the figure below, it is mostly the smaller fields in Lergo that have been cleared by the present user as the number of fields also indicates the relative size of the field i.e. the largest is number one, the second largest number two, etc.

The difference between Sanogo and Lergo may be interpreted to show that agricultural expansion has been more pronounced in Lergo than in Sanogo in recent years.

In Sanogo, 86 per cent of the interviewed farmers reported that finding new land for establishing fields is difficult. In Lergo, the corresponding figure is 63%. Furthermore, 72 per cent of the Sanogo farmers reported that if they plan to establish a new field, they will do so in the Lergo territory; not only because they consider free bush-land to be available there, but also because they know the area and the people there. Most of the Lergo farmers will establish new fields in the southern part of the Lergo territory. No one suggested northern regions as a possibility. These figures strongly support a fundamental difference between the villages concerning land availability. South is obviously the direction to go if new land is to be found.

The age of the fields that the farmers did not inherit confirms the trend that the fields of Sanogo are younger than in Lergo. This indicates that the saturation of fields took place in Sanogo quite some time ago, and there also seems to be a tendency, especially in Lergo, for the smallest fields to be the youngest.

The largest fields are normally located next to the household though there is a tendency for this to be more pronounced in Sanogo than in Lergo, indicating a somewhat more active expansion in the latter. The outlying fields are, on average, around 6 and 4 km away from Sanogo and Lergo, respectively. The figures are based on the indications made by the farmers, which is why they can only be regarded as indicative, but they nevertheless confirm that there is very little unused arable land left within the Sanogo territory.

A comparison of aerial photos from 1978 and 1994 indicates that agricultural expansion has been widespread in the areas south of Lergo and especially in the Zangoula area. However, because of low data quality it is not possible to quantify the expansion in this 16-year period, but it confirms the trend stated by both Bisa farmers and Fulani herders.

The data indicate that Sanogo is more densely cultivated than Lergo, and that the area frontier is to be found in the southern part of the Lergo territory.
They also show that the *Bisa* farmers cultivate several fields, of which the largest closest to the household has been cultivated for many years. Thus, it must be assumed that it is getting increasingly more difficult for farmers in Sanogo to expand their agricultural land. Following Boserup’s theories, it might then be expected that agricultural practices will be more intensive in Sanogo than in Lergo. The data available do not allow for a detailed investigation of the degree of intensification, but by looking at various factors like crops, harvest, fallow and animal traction, a rough indication can be obtained that reveals some of the relationships discussed in the theoretical section.

Gardening in the low-lying areas is only practised by 10 per cent in Sanogo and 19 per cent in Lergo. The most common garden crops are cabbage and lettuce but also manioc, maize, banana, onion and tomato are found inter-planted with mango trees. These fields are irrigated from shallow wells dug within the field boundary. They are situated in the low-lying areas close to the river, or in connection with small dams in the vicinity. Most of the fields were established by the farmers themselves on average six years ago. This activity is therefore relatively new, which confirms explanations given by the *Fulani* that unused land in the low-lying areas is getting harder to find.

Red sorghum and millet are the two most important crops, cultivated by almost all farmers. The households are not normally self-sufficient in cereals. During the 1996–97 dry season, 90 per cent of the farmers in Sanogo and 66 per cent in Lergo did not consider the harvest to be sufficient. A calculation based on the average harvest points to a consistent grain deficit corresponding to the yearly need of nine persons per household, and of the same magnitude in both villages.

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1 All crops except maize, which is negligible, are included, as the sale of crops is not confined to traditional cash-crops like peanut and cowpea. The yearly need per person is estimated at 190 kg irrespective of crop type and age-group. This is the consumption estimate used by the Burkina Faso statistical office and must therefore be regarded as locally adapted (Direction des Statistiques Agropastorales, Ministère de l’Agriculture et des Ressources Animales, Ouagadougou, Burkina Faso).
In order to cover this grain deficit, approximately 2/3 of the farmers in both villages reported having bought food-grain in 1996. On average, the farmers interviewed bought 153 kg which corresponds to at least CFA 15,000 (1996 prices) or roughly the value of three sheep. This was financed through savings, the sale of animals, credit or by children working in the city or in the coastal countries. Off-farm income is often an important part of household subsistence, and figures from the Soudanian zone of Burkina Faso suggest that around 26 per cent of total household income, including the value of the subsistence crops, originates from outside farming. In Sanogo, 62 per cent of farmers reported having relatives working outside the village on more or less permanent basis, while the same figure for Lergo was 42 per cent. Most of them worked in Côte d’Ivoire and the majority had settled permanently and only returned irregularly on visits. Only 16 per cent of the farmers interviewed in both villages reported having sold crops.

Manure is used by most farmers and is almost exclusively used on red sorghum. The manure, which primarily consists of household waste and in some cases animal dung, is seldom transported on carts to distant fields.

The animals of the Fulani are to varying degree installed on the fields of the Bisa farmers. In Sanogo 23 per cent and in Lergo 79 per cent of the farmers reported that Fulani animals stayed on their fields. They normally enter the fields after the harvest and stay for a few months or the rest of the dry season. Only few of the herds are installed in night pens from which the most important and concentrated dung application occurs. Thus, the nutrient contribution is of random and varying importance.

Fallow is used by 24 per cent of the farmers in Sanogo and 38 per cent of the farmers in Lergo. On average the fields have been left fallow for six years in Sanogo and ten years in Lergo.

The above figures point to an agricultural system with limited use of fertility management in the form of nutrient recycling and fallow. Most of the fields have been used continuously for many years and the application of manure is determined by immediate availability and costs of transportation. Thus, the majority of fields are dependent on the plant residues left after the harvest (especially from nitrogen fixating crops like cowpea and groundnut), dung from occasional stubble grazing animals, and the nutrients deposited with dust transported by the Harmattan winds. The yield from the fields will therefore converge towards a low-level steady state where water and labour availability will be the most significant determinant for a given year’s yield. This tendency is confirmed by other studies in the area.

One outstanding large household in each village was left out of the calculation in order to get a more representative picture. Their influence on the average, however, was less than 10%.
Animal husbandry

Animal husbandry among Bisa farmers is in general much more prevalent in Lergo than in Sanogo. From the figure below can be seen that 26 per cent of the Sanogo farmers interviewed have cattle while in Lergo the corresponding figure is 40 per cent.

However, the cattle herds are generally larger in Sanogo. In Sanogo, the cattle herds consist, on average, of 8.2 heads of cattle while in Lergo the herds consist of 5 head of cattle on average. For sheep and goats, both the size and the difference between the villages is similar to cattle.

The use of draught animals is widespread in both villages, though again with some differences. In Sanogo, 44 per cent use draught animals while in Lergo 55 per cent use them. Of the farmers who use draught animals, 68 per cent in Sanogo and 73 per cent in Lergo own the draught animals themselves. Draught animal owners in Sanogo have on average 3.9 draught animals while the farmers in Lergo have 2.4 animals. The animals are most often oxen around 3–4 years old. In both villages, the farmers had started using draught animals some 6 years ago on average. Herd composition with only 20–25 per cent females is typical of animals kept primarily for traction purposes.

The slight majority of farmers using draught animals for cultivation purposes in Lergo could support the contention that more expansion is occurring in Lergo,

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1 Data of this sort can be delicate to deal with. The number of animals is directly related to wealth and the respondent could therefore be expected to be reluctant to give a precise number. Especially cattle may be difficult as they have been used as taxation. However, the taxation of cattle has been abandoned in Burkina Faso. The farmers were in general not reluctant to answer questions concerning their herds, and the degree of secrecy among the farmers is questionable as it is rather difficult to hide the ownership of large animals like cattle in a small coherent society like the ones described. There is no reason to suspect that the comparison between the villages should not be reliable as the relative figures should not be affected by inaccurate absolute figures, i.e. there is no reason to believe that the farmers of one village should be more inaccurate than in the neighbouring village. Furthermore the figures correspond well with the findings of Delgado from 1976–77 from the Bisa village Loanga close to Tenkodogo (approx. 20 km distance from Lergo/Sanogo).
as the introduction of the plough is usually accompanied by an enlargement of the field. This was reported by the vast majority of farmers (all in Sanogo and 68 per cent in Lergo). As will be shown later, entrustment arrangements are also more prevalent in Lergo, which facilitates cattle and draught animal ownership and may partly explain the differences in animal husbandry between the two villages.

**Summing up**

The *Bisa* villages show significant differences. Land is more readily available in Lergo than in Sanogo, which is also reflected in the fields being younger in Lergo compared to Sanogo. Sanogo is now densely cultivated, while Lergo still has some arable unused land left to the south. Animal husbandry is more prevalent among Lergo *Bisa* farmers than among farmers from Sanogo. The livestock in Lergo gives better opportunities for maintaining the fertility of the fields, which may account for the significantly higher degree of cereal self-sufficiency in Lergo. Draught animals are more widespread in Lergo, which may indicate active agricultural expansion. A comparison of the *Bisa* villages thus indicates a trend towards the saturation of arable land which is reflected in different conditions for the integration of animal husbandry and interaction with the *Fulani* pastoralists. In the following, a parallel development in the *Fulani* villages will be shown, which will help to explain the differences in animal husbandry observed in the *Bisa* villages.

**The Fulani settlements**

The lifestyle of the *Fulani* varies significantly with the environment. In the arid Sahel, the *Fulani* have had to adopt a very mobile and flexible lifestyle, while in the Soudanian zone, where precipitation and hence biological production are more stable, they gradually adopt a *de facto* sedentary lifestyle. In the study area, this includes the cultivation of permanent fields, the maintenance of stable relations with the *Bisa* farmers, and the manifestation of usufruct rights over the natural resources in the village territory to which they belong. What makes the *Fulani* different from the *Bisa* farmers is their cultural identity, their marginality in relation to village society and hence also to political power, and their preference for animal husbandry. They conceive of themselves as primarily livestock- and especially cattle-keepers, and will normally strive to optimise herd management at the expense of crop cultivation.

However, living a largely sedentary lifestyle does not mean that mobility is not an important aspect of their livelihood strategy. The maintenance of an animal herd composed of goats, sheep, and cattle in all age groups and for different purposes and with several owners, demands flexibility and considerable experience. The seasonality of the rain, the widespread cultivation and the variable availability of fodder and water demands a high degree of mobility and flexibility. The herder is forced to adopt an opportunistic grazing strategy and adapt to the possibilities
offered by the season, which include moving the herd to where the best resources may be found or where fields are less of a hindrance.

The Sanogo Fulani and Lergo Fulani villages cannot be seen as isolated from the Bisa villages. Administrative decisions and the settlement of disputes etc. take place in the court of the Bisa chief who is the local chief, also for the Fulani. However, the Fulani do have a far from negligible influence on the decisions taken.

The following section describes the grazing patterns of the Fulani herds in the area, and shows how these patterns have changed in recent years, leading to long-term changes in the Fulani settlements. These changes may be seen as symptoms of more far-reaching trends concerning the marginal political and social situation of the Fulani. As for the Bisa villages, the two Fulani villages are interpreted as being under the influence of the same processes that, owing to conflicts, lead to the further marginalisation of the Fulani with negative consequences for the feasibility of animal husbandry in the region both for the Bisa farmer and the Fulani pastoralist.

The Sanogo Fulani and Lergo Fulani settlements are small compared to the Bisa villages. Sanogo Fulani use the school and the pharmacy in Sanogo Bisa, but they have their own well, mosque, Koran school, and a pump under construction. There is no mill. The settlement consists of 11 distinct households. Sanogo Fulani is the oldest Fulani settlement in the area and was apparently established at the same time as Sanogo Bisa. Sanogo Fulani is, to a large extent, populated by older families whose children have settled elsewhere with their herds. Lergo Fulani consists of 17 households and has its own well. The chief of the Fulani (the Djiorro) lives in Sanogo Fulani and is also the head of the Fulani settlements in the vicinity, including Lergo.

The Fulani villages have experienced significant changes during the last 20–25 years. A general shift of location from the north towards the south has taken place. From the area around Garango to the north, the Fulani have moved towards Sanogo Fulani, and from here towards Lergo Fulani. Most of the households in Lergo Fulani originate from the Sanogo area. The reason given for settling in Lergo was closely related to the difficulties of herding in a densely-cultivated environment. From Sanogo Fulani, families have also moved further south towards Zangoula close to the borders of the Lake Bagré as can be seen in the figure below.

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1 The analysis of the Fulani villages is based on recurrent semi-structured open-ended interviews with all households in the two villages and some households in the distant, recently-established permanent settlements. The interviews were conducted by the author over a period of five months in the winter 1996–97.
In Sanogo, most of the adult children and the herds have moved to southern areas. All the households remaining in Sanogo Fulani have children in Zangoula, which refers to a relatively large area covering a section of the northern shores of the Lake Bagré. The settlement started here in around 1982, that is, before the lake was created by the Bagré hydroelectric dam, because of good grazing and cultivation possibilities. The Fulani in this area now also experience difficulties in finding adequate grazing land because of agricultural expansion. The first migration of Fulani away from Zangoula has already taken place because of these increasing difficulties.
Land-use
The Fulani live a settled life with many links to the Bisa communities. They have fields with sorghum, millet and maize cultivated annually though fewer than the Bisa. Around half of the Fulani families have only one field close to the household. Only very few families have more than two fields. The crops on the largest field are red sorghum, millet, some maize and some beans. On the second field, the Fulani generally cultivate white sorghum and millet. Crops are seldom sold and 68 per cent of the Fulani had a harvest that would accommodate the needs of the household. This indicates a much higher degree of self-sufficiency among the Fulani when compared to their Bisa neighbours.

Fallow is seldom used by the Fulani. The fields are all well fertilised with manure from the animals which may explain the relatively high self-sufficiency of the Fulani. Typically, manuring is done by moving the night pen around on the fields. The manure is seldom sold, but is in some cases given to the Bisa farmer for free or in exchange for services like ploughing. The manure is primarily applied to the red sorghum and the maize and to a limited extent to the millet. Inorganic fertiliser is not used.

Draught animals are used by around 70 per cent of the Fulani but only around half of the families own a plough themselves. Those who do not own a plough have others to do their ploughing for them. They do not usually pay for this service as it is often part of the entrustment agreement. Most of the Fulani were of the opinion that plough use also leads to an expansion of the fields. None of the Fulani have gardens with fruit-trees or irrigated crops. Only a few of the Fulani are engaged in migrant or other off-farm work.

Animal husbandry
The Fulani herds number on average almost 40 head of cattle, 18 goats, and 11 sheep in both villages. A horse and donkey was only found in one case. The figure below shows the species composition of the Fulani herds in Lergo. As the composition on average is almost identical in the two villages, only Lergo is shown here.

On average, cattle constitute around half of the herds, goats make up 24 per cent and sheep 15%. In sharp contrast to the Bisa herds, the Fulani keep their cattle for breeding rather than for traction, which is indicated by a high percentage of females in the herds (76 per cent for Sanogo, and 66 per cent for Lergo). Sheep and goats are seen as a possibility for building up a cattle herd and cattle are in almost all cases considered the most important animal because of the milk, manure and the high value, which is why the focus will be on cattle in this analysis.

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1 As for the Bisa villages, much attention was given to the reliability of these data. As the data from the Fulani stem from repeated semi-structured interviews over several months, it was possible in some cases to verify the given figures with actual observation. Much effort was also put into triangulating the information both with respect to respondents and to methods. Serious inaccuracies have not been detected, though the data should still be seen as indicative.
Grazing patterns

The typical cattle grazing patterns differ for the two villages. The following section will describe grazing patterns in the two villages individually, thus illustrating the consequences for animal husbandry of agricultural expansion as described for the two Bisa villages.

In Sanogo the herds of cattle typically only stay in the village area after the harvest in October where they graze on the leaves of the stems and the stubble on the fields. Only few smaller herds stay here during the dry season, as some of the fields and the bush are burned. The vast majority of the herds move to the Zangoula area during the dry season where there is still unburned bush and fields available. The water from the lake is used for the cattle until later in the dry season when the quality deteriorates.

With the arrival of the first rains, usually in April, the Sanogo Fulani often follow the rains by moving the herds to the areas that receive the rain first. Rainfall is very erratic at this time, both with regard to its magnitude, frequency and geographical distribution.

During the rainy season proper, the herds are normally kept well away from the Sanogo area, for the most part in the area between Lergo and the Lake Bagré, as this is the time when the risk of straying into fields and hence demand for payment of compensation for damaged crops is at its highest. The expansion of fields has made it more difficult for the herders to keep hungry animals away from the fields, and the cattle corridors that are used by the Fulani to navigate through the mosaic of fields are sometimes cut or narrowed by new fields established by farmers who do not respect the agreements with the Fulani on keeping them open.

Only one herder was still trying to stay behind depending on how much available land he could find, but in the year prior to the research (1996) he was also forced to move, in this case to Lergo. There is an unfortunate coincidence between
the forced migration of the herds and the need for labour in the fields. Therefore, the Fulani can find himself in the dilemma of trying to keep his herds close to the household at the risk of large compensation payments, or permanently moving away to establish new fields in an area where the herds can be kept in the vicinity and the manpower used for the work in the fields. The latter option is the one that almost all the families in Sanogo have chosen, and today Sanogo Fulani largely consists of old people with just a few milking cows kept close to the household.

All Fulani in Sanogo stated that the present grazing pattern developed some 20–30 years ago. Prior to this, they kept the animals close to the households in Sanogo for most of the year and managed, in the rainy season, to keep the animals
in the forests still existing at that time especially in the depressions close to the village. The single reason for the change was the expansion of the fields.

In Lergo the situation is less critical than in Sanogo. Pockets of forest still exist where the herds can find grazing with a more acceptable risk of straying into the Bisa fields. The grazing pattern has therefore not undergone the radical changes that characterises the Sanogo herds. The general pattern is that the herds stay for most of the year within five km of Lergo. After the harvest, almost all herds graze on the stubble fields in Lergo, though a few find the fields in the southern areas towards Zangoula to offer better grazing opportunities. Close to Lergo, a small irrigation dam offers relatively good watering until late in the dry season when the water becomes too stale and salt. Later in the dry season, the same picture prevails, though there is some tendency to move towards Zangoula because of bushfires.

With the arrival of the first rains it is common to track the areas that have received the early rain, but most of the herds return to the Lergo area relatively early because the manpower is needed in the fields. The herds are then guarded by the children in the patches of forest available.

The picture is more blurred than in Sanogo, however. Three out of 11 Fulani find the Lergo area to be too difficult and move away for all or most of the rainy season. Others would have moved away if it were not for the need for manpower in the fields. Also, the high degree of entrustment among the Lergo herds may hinder the Fulani’s mobility as he is dependent on permission from the owners of the animals. Most Fulani maintained that it is not normally difficult to obtain permission from the owners to move the herds to the Zangoula area, as it is within a distance where the owner is able to check on his animals. However, all Lergo Fulani who have entrusted animals also maintain that they would move far away permanently if they were not dependent on the owners. This indicates that the situation in Lergo is becoming similar to Sanogo, with limited grazing land available, thus forcing the Fulani to find alternative areas.

Entrustment

It has been shown how Sanogo and Lergo display different degrees of land saturation leading to agricultural domination with only few cattle herds remaining. This difference is also apparent when looking at entrustment. Entrustment is an important aspect of livestock management in the region.

The benefits of entrustment for the Bisa farmer can be summarised as follows:
- More efficient use of family labour
- Reduced risk of theft
- Better care of livestock
- Reduced likelihood of conflicts over damaged crops when the animals are taken away.
In economic terms, entrustment is also a major advantage for the farmer as was shown in an extensive study on the entrustment system in the Tenkodogo area undertaken by Delgado in 1976–77. Linear programming analysis led to the conclusion that entrusting is the most economically feasible way for the farmer to keep cattle, and that without entrustment the opportunity costs related to the labour that has to be invested in herding especially during peak periods of labour demand in farming are likely to be prohibitive.

For the *Fulani*, entrustment is normally something that is only done when he does not own many animals himself. In return for his services, he typically has the right to the milk and manure from the cows. It is also common that he is given a part of the sum when an animal is sold, typically between 1000 and 5000 CFA. In some cases, the *Bisa* proprietor helps the *Fulani* to plough the fields with draught animals, and sometimes millet is donated. The practice of giving the *Fulani* a calf occasionally is not practised. Most *Fulani* stated that it used to be common for the *Bisa* to give the *Fulani* millet and clothes as part of the payment, but as the *Fulani* now have fields themselves with good harvest, this has become more rare. For most *Fulani*, the payment was not satisfactory especially because they maintained that the milk yield from the cows had declined. Most *Fulani* would not accept entrusted animals if they had more animals themselves, mainly because of problems with accusations of theft or mismanagement when an animal is lost.

The figures below show that entrustment is much more common in Lergo than in Sanogo. In Lergo, 59 per cent of the cattle herded by the *Fulani* is owned by the *Bisa* farmers. For the Sanogo *Fulani*, only 15 per cent of the cattle are entrusted. All the *Fulani* in Lergo have entrusted animals in their herds, while in Sanogo this is not always the case.

Entrusting is an important part of livestock management in the region because it allows the *Bisa* farmer to invest in cattle without compromising crop production and it is an important source of subsistence for *Fulani* with small herds. Without the possibility of entrustment, it is difficult for the farmer to adopt animal traction. Thereby entrustment becomes an important factor for the farmer’s possibilities to intensify agricultural production. As has been shown, the *Fulani* have been forced to move away more or less permanently in one of the villages, which is reflected in large differences in entrustment between the two villages. Conflicts between farmers and herders have played an important role in creating this difference. The following section will show how these conflicts contribute to undermining the entrustment system, and thereby also the prospects for a Boserupian agricultural intensification.

Conflicts

Conflicts between *Fulani* herders and *Bisa* farmers are relatively common, and create a sometimes hostile relationship between the two groups. The most important source of conflict is the straying of animals into the *Bisa* fields during the rainy head of cattle.
season leading to serious crop damage. However, also bushfire, the cutting of cattle-corridors, the gathering of crop residue, animal deaths and theft, access to water and land, and simple envy can lead to conflicts.

The straying of animals into Bisa fields is common. Seven out of 11 Fulani in Lergo reported that their herds had damaged crops within the last few years, while the corresponding number in Sanogo was 6 out of 8 though this often took place in Zangoula, as the majority of the herds have been moved away from Sanogo. All the Sanogo Fulani who keep their herds in Sanogo or the Lergo area have had problems. More than half of these instances led to the payment of compensation to the Bisa farmers, in the order of 7,000 to 50,000 CFA depending on the extent of damage. It is the general opinion among both the Fulani and the Bisa that straying animals are a major problem.

The pattern of more frequent crop-damage in Lergo than in Sanogo is confirmed by the Bisa as 18 out of 47 (38%) farmers interviewed in Lergo reported having had crops destroyed in 1996 by Fulani herds, while the corresponding figure for Sanogo was only 7 out of 50 (14%). This can be seen as a result of the resettlement of the Sanogo Fulani.

The straying of animals and the resulting damage to crops is detrimental to the relationship between Bisa and Fulani. The many small conflicts lead to mistrust and animosity, something that is often expressed openly in strong language and which led to an armed conflict in the Bagré area some 35 km to the southeast in
While there are no direct data to suggest an increase in the occurrence of conflicts, incidents like straying, the cutting of cattle corridors, bushfires and the gathering of crop residue, which are among the most serious sources of conflicts, have increased. It is therefore likely that these have led to more conflicts and have aggravated the relationship between the two groups. Several of these sources of conflict are closely related to agricultural expansion.

The conflicts have meant that trust between farmers and herders is being undermined. Trust is a precondition for entrustment as the herds entrusted represent a very high value. Therefore, entrustment is being negatively affected by the conflicts. Conflicts are closely related to agricultural expansion, hence the latter has a direct influence on the entrustment and thereby also on the farmer’s prospects for pursuing agricultural intensification. Through these mechanisms, agricultural expansion acts as a hindrance to agricultural intensification and the expansion paradox becomes apparent.

Conclusion

A comparison between the villages indicates a growing agricultural expansion into areas that have hitherto been used for grazing by the Fulani. The land taken over by agriculture is being used for permanent or short-fallow cultivation of predominantly subsistence crops like sorghum and millet, but with a yield that does not support self-sufficiency. As forest and other grazing land becomes more scarce, the Fulani are forced to move away during the rainy season in order to keep the animals out of the fields. Ideally, the Fulani would keep the herds close to the household during the rainy season, as labour is also required in the fields, but gradually the Fulani move away permanently, leaving only the oldest members of the household behind. The many new fields and the occasional cutting off of the cattle corridors make it difficult for the Fulani to keep the animals away from the germinating crops, hence conflicts over damaged crops erode the relationship between the Bisa farmer and the Fulani herder. This deterioration of the relationship between the two groups undermines the trust that is essential for the entrustment system to operate. Without the option of entrusting animals to the Fulani, the farmer will be faced with opportunity costs in the form of labour allocated to animal maintenance, which greatly reduces the feasibility of adopting animal traction. Thus, through the entrustment system, agricultural expansion has direct consequences on the farmers’ opportunities to introduce animal traction and hence to intensify agricultural production. This is reflected in less prevalent livestock ownership in Sanogo compared to Lergo, less use of entrustment, less use of draught animals, less access to manure and a lower degree of grain self-sufficiency.

Thus, a comparison between the two villages yields a picture of increased marginalisation of the Fulani pastoralists which lowers the local potential for cattle

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1 This conflict did not directly involve the Bisa and Fulani of the study area.
As discussed, livestock integration is intrinsic to the agricultural intensification process. However, with a point of departure in the two case villages it has been shown how expansion can have negative consequences for livestock integration and thus the intensification process. Because animal husbandry is based on the interaction of two distinct socio-economic and cultural groups each with their own land use system, expansion in one system leads to marginalisation in the other. In contrast to dominant theories of agricultural intensification, the case points to the need to distinguish between agricultural expansion and intensification at least in situations of interrelated but distinct land use systems. Expansion influences the various stakeholders differently, and hence the expansion paradox evolves where expansion, instead of being an integrated forerunner of intensification, actually works against it. Marginalisation of *Fulani* pastoralism and the presence of the entrustment system is common in West African Savannah environments. When theories of agricultural intensification are applied to this region, it is important to operate with a more nuanced view of these theories and the development processes occurring. If expansion is seen as a forerunner of intensification, development potential may be over-estimated as agricultural expansion may significantly constrain future intensification.

Animal husbandry in Burkina Faso is an economic activity that, in contrast to most crop-based farming, is favoured by important comparative advantages in relation to the neighbouring coastal countries. An agricultural expansion leading to the marginalisation of *Fulani* animal husbandry not only undermines the economic potential of this specific group, but also the animal husbandry of the farming communities. In a longer term perspective, agricultural expansion at the expense of animal husbandry in these agro-ecological zones therefore has far-reaching implications for further agricultural development.

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