

I Introduction

A significant characteristic of West African livelihoods is mobility. Migrating has always been a useful means for farmers to accommodate socio-economic and environmental variability in the Sahel. In the last few decades, the improvement of road and transport networks between and within countries, urbanisation, and the penetration of global markets deeper into rural localities, have contributed to enhancing the attraction and ability to be mobile for rural dwellers in the Sahel. Since the emergence of "bottom-up" approaches to development in 1990's, migration has been a recurrent theme mostly framed within the Sustainable Livelihoods (SL) approach that has provided a useful framework for researchers and development planners to understand and support local livelihood strategies. According to this approach, different forms of migration, whether circular or long-term, constitute an important element of the resilience of rural Sahelian environments and societies. Rural migrants are often presented as innovative and dynamic agents of economic, social and cultural change at places of origin. However, while much attention has been paid to what migrants bring or send back, there has been much less interest into what they leave behind. There are important structural transformations that are brought about by the temporary or permanent absence of community and family members, namely the freeing up of fields and the loss of labour capacity, which have ambivalent implications for farmers in sending communities. In order to fully appreciate the development implications of migration in sending places, more needs to be known about the way stayee farmers negotiate these changes while sustaining agricultural-based economies.

In this paper we examine this issue through transformations in family-based land and labour institutions in a West African rural context of high out-migration. Recently, concerns have been raised about the emergence of de-agrarianised rural economies that result from the competing of productive logics between farming and off-farm activities (Bryceson 2004). In this paper we examine this phenomenon through the intersections of out-migration and processes of household and farmhold fragmentation in sending places. In the 1970's and 1980's ethnographic and geographical work predicted the disappearance of extended-family based collective farming under the pressures of markets and population growth, leading to the fragmentation of households into isolated nuclear families (Marchal 1987; Serpantier et al. 1988). This is considered a real issue given that most of agricultural labour is recruited within the family, and because the returns of off-farm diversification are relatively low, sustained agricultural production is an essential precondition for a successfully diversified local economies (Toulmin and Gueye 2003). The permanent or temporary absence of family members is often presented as a factor of eroding social cohesion, thereby accelerating the fragmentation process (Adepoju and Mbugua 1997; Quesnel 2001). Unlike previous studies however, we find that while there is a tendency towards the individualisation of agriculture, communal farming institutions have not disappeared; rather, results suggest that out-migration has contributed to challenging and transforming traditional farming institutions in a way that is better adapted to accommodate individual logics of livelihood diversification, while allowing to maintain extended household structure that facilitates the mobilisation of kin support when it is needed.

Changes in family-farming are investigated in the context of rural Northern Burkina Faso, more specifically among Mossi farmers in the Yatenga province, and through the traditional social institution of pugkeenga that characterises extended kin-based collective farming. Yatenga

province is particularly appropriate for this study because it is the most important centre of out-migration in Burkina, and because extensive farming systems research conducted in the 1980's provides useful historical sources to assess changes in the practice of pugkeenga. A survey conducted with married men and women with 195 households spanning 23 villages provided a cross-basis to analyse the intersection of farming institutions and household migration ratios, and dynamics of change are further investigated through semi-structured interviews with different generations of non-migrant farmers about pugkeenga and experiences of out-migration. These complementary sets of data help reveal discrepancies in pugkeenga practice, and to show ways in which current farming institutions are embedded in the migration histories of households. Specific attention is given to women's perceptions of change, which show how opportunities and constraints that emerge at the intersection of migration and changing family farming institutions, have facilitated the re-negotiation of gendered relations of access and control over fields, labour and crops, thus redefining the role of women in the subsistence domestic economy. As such this paper aims to make a contribution to migration and livelihood studies, by pointing to the role of institutional structure-agency dynamics that frame on and off-farm livelihood options and trajectories. Livelihood diversification strategies only make sense in development theory if it is contextualised within the social dynamics that frame farmers' changing priorities, values and expectations.

The paper starts by discussing research gaps in the contextualisation of migration and livelihood studies in the Sahel regarding the role of household structural and institutional factors that frame the implications of migration for stayee farmers' livelihoods options. We highlight the ways in which the contributions of gender and feminist approaches to social relations of access enhance the analytical power of migration and development research. Section two presents fieldwork context, introducing family-based farming institution as well as historical trends in Mossi migration, and discusses methodological concerns. Research findings about changes in pugkeenga organisation are discussed in the third section, emphasising how livelihoods diversification in general, and migration in particular, have contributed to complexifying patterns of control and authority over land allocation. The last section takes us further deep into the household and discusses the implications for women, and the role of migration in reconfiguring gendered relations and domestic responsibilities over land and labour.

II Sustainable livelihoods and migration research in the Sahel

Migration seen from sending places: beyond economic analyses

The debate about linkages between migration and development has notoriously been limited by long-standing theoretical entrenchments broadly dividing rational choice and political economic approaches, both sharing an inadequately individualistic approach to migrants' rationality and decision-making, and both equally trapping the debate within dichotomous push-pull analyses (Gidwani and Sivaramakrishnan 2003). The Sustainable Livelihood framework offers an attractive alternative approach in that it conceptualises migrants as social agents embedded in complex social networks, and migration as part of a wider dynamics of livelihood diversification (Ellis 1998). This has contributed to shifting the focus away from migration as an isolated economic event, and rather emphasises how decisions to migrate are weighed-off against individuals' and households' portfolios of material (e.g. land, skills, technology) and symbolic (e.g. status, cultural norms...) assets and capabilities (for a comprehensive review of SLA see Carney 1998; Scoones 1998; Huskein and Nelson 1997). This approach draws attention to the importance of the variety of meanings that migration holds in different places, and encompass deeply rooted assumptions

about migration as a manifestations of poverty and environmental crisis. Indeed in the West African Sahel, migration is just as much determined by historical representations of migration, and by culturally embedded norms about household structure and asset management, than it is by immediate economic need (Hampshire 2006; Dabire 2007).

Surprisingly, these factors tend to be overlooked by research on whether and how farmers in sending places benefit from migrations (notable exceptions are de Haan et al. 2002; Hampshire 2002; 2006), which has mainly focused on the problematic of remittance flows and how these are invested at places of origin (Konseiga 2005; Wouterse 2008). Lack of attention to the way livelihood diversification interacts with farming practices may be understood as part of the theoretical groundings of the SL approach which has sought to avoid the structural-functional bias of earlier household studies and farming systems research. In addition the notion of diversification, while including the idea of trade-offs between economic, human, environmental and social elements, tends to frame the analysis in terms of what people choose to do, which can be difficult to reconcile with questions about the role of social institutions¹, relations and rules underlying resource access (de Haan and Zoomers 2005). However these factors are central; the outmigration of community and household members implicates demographic changes that challenge existing land/labour configurations and relations, which are fundamental to farming strategies. Below we draw on feminist theories to conceptualise the role of household structure and intra-household relations at the intersection of migration and family-based farming institutions.

Contribution from feminist theories: negotiating opportunities and constraints

Feminist approaches have brought significant advances to migration studies by questioning essentialist assumptions about the significance of the household. While they have not paid explicit attention to implications for sending place, they open up important questions about the role of household structure (extended, nuclear, lifecycle) in mediating migration processes, and the socio-economic implications for migrants in destinations areas (Radcliffe 1990). In addition, feminist work has drawn attention to the role of intra-household relations of social differentiation that mediate migration dynamics, and in turn how these are re-modelled through migration (Lawson 1998). Indeed, transformations at the intersection of household structure and out-migration implies a redistribution of resources within the household. For example, David et al. (1995) show that the emergence of de facto female headed households that results from male outmigration in Sudan, while enhancing the decision-making power of women within the household, also contributes to the marginalisation of their households within the wider community. In the Burkina context the temporary or permanent absence of some household males or even entire households opens up opportunities (access to vacant fields) and constraints (increased workload) for stayee household members. Examining how these are bargained among women, between men and women and across generations helps bring insights into dynamics of continuity and change in family-based ideologies of work, responsibility and status. In turn, understanding changes in informal institutions for the allocation of roles and resources also informs us about whom has and has not benefited from migration.

In the following section I outline fieldwork context including Mossi household structure and farming systems through the institutions of communal and individual farming (respectively pugkeenga and beolga), as well as historical dynamics of Mossi migrations, before briefly outlining the methods used.

¹ Here we define institutions as 'regularised patterns of behaviour between individuals and groups in society' (Mearns, 1995: 103, cited in Leach et al. 1999: 226) rather than formal organisations.

III Fieldwork and field site: Mossi migrations and conflictual aspects with family-based Moaga subsistence farming

The area of study is situated in the densely populated Yatenga province, North region, in a 20km radius around the town of Seguenega mostly inhabited by the Mossi, the majority ethnic group in Burkina (see map below). The area has relatively low agro-ecological potential (poor soils, low and variable rainfall), with a short growing season (June-September) and a long dry season (October-May). Agriculture is the main mean of subsistence, it is extensive and rainfed, mostly comprising of sorghum and millet for subsistence, a little groundnut, sesame, and vegetables for cash, and raising of small to big ruminants on the farms, the purpose and magnitude of which varies along a continuum of commerce to cash insurance, depending on a family's wealth.



Situation of the area of study, and main migration destinations in Burkina (source: author)

Mossi farming is organised around the family authority system which is hierarchical and based on the separation of lineages or lineage segments (buudu) that form separate residential quarters (saka) headed by a buudu elder (saka kasma). Each saka is divided in several extended households (zaka) spanning different generations, and traditionally regrouping a number of nuclear families (man, wives and dependents). In the old days, it was normal for an entire saka to cultivate a single collective field, pugkeenga, headed by the saka kasma (Hammond 1966; Kohler 1971; Izard 1975), but this practice has disappeared with demographic pressure, and even in relatively small families, it is uncommon that all the lineage members work a common field². This fragmentation process

² For example during fieldwork I encountered several isolated cases of recently settled families, where all members

has been described by Marchal (1987) who explains that the node of authority and decision-making regarding the allocation of farming roles and responsibilities had been gradually devolved to the level of the household head (zaka soaba). In this case, pugkeenga is the field managed by the zaka soaba, and which every household member cultivates, in addition to their individual fields (beolga, pl. beolse), and repartition of labour is as described below, by the chief of the village of Sima:

"During the cropping season, people get up very early to go and work in their beolga, children work in their mother's fields, young men maybe help each other out in turn; then around 10 o'clock, everybody gathers in the family head's pugkeenga for a few hours, and those who are not too tired go back to work in their beolga until dark "

Sima village chief, 63 years old
12/01/2011

This account exemplifies the ideal Mossi farming system, which is similar to other farming system in the West African Sahel, and I got to hear a similar version to this one many times in various other places throughout fieldwork. Such strong consensus must be understood in a specific cultural context of relations, as well as representations of authority and morality, embedded in the patriarchal kinship system, and articulated around much valued principles of solidarity and mutual support, and there is often certain reluctance to present individual or group behaviour that may be in contradiction with these values. Marchal (1987) along with others (Watts 1983; Reyna 1987) predicted that, with increased population pressure and market integration, such system would continue to fragment into fields farmed by single nuclear families, leading to the disappearance of pugkeenga altogether, and to the gradual fragmentation of extended households into isolated nuclear families made up of a husband, wives and unmarried children. However we will show in section IV that on the Mossi plateau this process is not to as linear as it is usually presented.

Mossi migrations

Moaga society has a history profoundly marked by mobility, both in the context of the colonisation of neighbouring territories by the Mossi (Izard 1980; di Arnaldi 2006), and of circular work migration to coastal countries (Lahuec and Marchal 1979). This last trend is partly rooted in the history of forced labour during the French colonial administration that heavily mobilised Mossi farmers to work in cocoa and coffee plantations in coastal colonies. At that time, an important amount of circular migration between the region and the Gold Coast (nowadays Ghana) were also undertaken by Mossi farmers, almost exclusively male, who aimed to either evade colonial taxes or raise cash to pay them (Cordell et al 1996; Zanou 2001). Successive population surveys show that among all provinces, Yatenga has always had the highest population density, and the highest rate of out-migration, which according to Cordell et al. (1996) multiplied by 7 between 1930 and 1959 in rural Mossi areas.

By the 1970's, 10 years after independence, a network of migrants connections was already dense, and a series of devastating droughts contributed to accelerating circular (whether seasonal or longer) and permanent migration flows³. Seasonal migration also became an important type of migration with the improvement of roads and transport, and mostly concerned men who return on

shared a single compound, but not a single field.

³ However the connection between environmental events and areas of destination is becoming contested, see Henry et al. (2003); Mertz et al. (2010).

the farm for the rainy season (Rain 1999)⁴. The choice of destination places was mostly influenced by existing connections, but a series of contextual factors converged to changing migration spatial patterns. These include on the one hand, the opening of work opportunities for Burkinabe people on plantation work in Ivory Coast, and on the other hand national development programmes towards commercial agriculture (cotton, rice) in the valleys of the Volta rivers newly cleared from Onccocerchosis (AVV), which intensified internal migrations to southern parts of Burkina (McMillan 1995; Marchal and Quesnel 1997; Zoungrana 1995). The intensity of out-migrations have been such that in the area of study it is rare to find a farmer without at least one family member living either in Ivory Coast or in Kouka, a town 50km away from Bobo Dioulasso in the south west of the country (see map above). In a lot of cases, those who moved away during this period encountered great livelihood opportunities and have stayed on with their families, while continuing to send bags of grain or money back home, and visiting from time to time.

This trend continued through to the late 1990's until the situation in Ivory Coast started degrading, especially for Burkinabe workers, and until land related tensions started to arise between the autochthonous populations and Mossi migrants in the south and west of Burkina (Zongo 2009; Zonou 2006). At the same time, new livelihood opportunities emerged in the study area, with the discovery of numerous gold sites and the continual increase of gold prices, the development of dry-season vegetable farming and increased demand for those in widening neighbouring towns, and the improvement of agricultural potential of subsistence agriculture thanks to wide-scale soil and water conservation projects (Batterbury 1998; Reij et al. 2005). This combination of factors contributed to the slowing down of permanent outmigration, though results from the 2006 national census survey show that the North region is still the first centre of outmigration (Dabire et al. 2009).

The implications of such significant out-migrations flows is that for a period of 20 to 30 years, Mossi families in sending places were regularly deprived from their most productive labourers (Painter et al. 1994). In the West African Sahel, a common view is that this is a factor of eroding social cohesion and a threat to household sustainability, as it is suggested by Quesnel, below:

In departure zones, mobility challenges the structure of family farms. (...) The departure of young able males forces farm heads to rely on the child and female labour in the family. This implies that women are taken away from their individual fields they work for themselves. (...) In addition mobility accelerates the fragmentation process of family farms into smaller production units. (...) This goes against the logic of agricultural modernisation policies that require labourers to remain together in order to insure technical and economic efficiency. (Quesnel 2001: 30, my translation)

However the contrary can also be true, and de Haan et al. (2002) found in Mali that out-migration constituted a mechanism of demographic management that helped reinforce household cohesion, as well as norms about domestic roles and responsibilities. Indeed, the nature of the implications of migration for stayee farmers, is not straight forward. On the one hand, the migration of workers held, and still holds, the promise of potential remittances and the prospect of wealth accumulation. In addition those who depart are usually men old enough to farm their own beolga field, and their departure opens possibility for other family members to use land left vacant in the migrant's absence. On the other hand, the departure of a key family breadwinner constitutes an important gap in the family labour resources and revenues, and in some cases necessitates the redistribution of resources within the household. Whether migration is experienced as an

⁴ Dry-season migration is not examined in this paper because it does implicate any structural changes in the allocation of land and labour, but also because the survey undertaken has not found it to be an important livelihood strategy.

opportunity or a constraint is strongly determined by the structural characteristics of the household, and by the ability of household heads to shift resources around to accommodate the challenges incurred by the departure of some of its members. The concern here is not to test Quesnel's claims and verify the causal linkages between migration dynamics and the individualisation of farming – this phenomenon is difficult to isolate empirically – but rather to examine how the institutions for land and labour allocation at the household-level have transformed as a way to accommodate out-migration. In section IV we examine this question through the institution of *pugkeenga* and *beolga*, after briefly outlining the methodology used for the study.

Methodological concerns

Data were collected through a combination of semi-structured interviews and a stratified sampled survey. The former were conducted before and after the survey, with lineage or lineage segment heads (*saka soaba*), younger household heads (*zaka soaba*) and married women, as a way to both frame and follow up survey. They were conducted in the village of Sima, with the aim to elicit intersections between household histories of migration and field and labour allocation. The survey aimed to generate statistical data on the same themes at the household and nuclear family levels⁵. It reached 195 compounds (a total of 390 respondents equally representing men and women) in 23 villages. These were carefully chosen with key informants, with the aim to represent diversity of agroecological conditions, of livelihood opportunities and of village size. Respondent sampling was also stratified with village key informants, so to represent social and political diversity, by picking households with every lineage or lineage segment (*buudu*) in each village⁶. Finally, ethnographic studies on Mossi farming systems conducted in the 1970's and 1980's by researchers from the French development research institute (ORSTOM, nowadays called IRD) are used as secondary sources to complement primary data, as a way to analyse patterns of continuity and change in family farming. Below I draw on these to analyse changes in the structure of rural Mossi households and in communal and individual farming practices in the study area, highlighting the ways in which these changes are related to the out-migration movements described above.

IV pugkeenga and migration - rupture, continuity and change

Pugkeenga, beolse and household fragmentation

In a recent study on processes of household fragmentation and sustainability, West (2006) found through a questionnaire survey administered in 3 different villages that a majority of Mossi households (56.7%) still farm a household *pugkeenga* field. He found this figure all the more surprising when compared to earlier studies by Kohler (1971) and Imbs (1987) who found in different villages, that *pugkeenga* fields were only farmed by 31.7% and 10.5% of households respectively. Although the survey undertaken for this study used a different methodology⁷, it used a similar definition of the household, and I also found that a vast majority (63,6%) of households claimed to be farming a *pugkeenga* field. However the process of administering the survey, as well

⁵ The term "household" characterises the widest resource-pooling unit, that most often includes several nuclear families composed of a married man, wives and dependants who live in a single compound or have lived in the compound before going on migration.

⁶ Key informants were either my own local interpreters who have a 25 years experience of development project work in the villages, and locally elected or nominated village representative (*Conseiller Villageois de Développement* and *Conseiller Municipaux*). Picking households in each *buudu* aimed to avoid the socio-economic bias of snowball sampling if I had relied on key informants to select households.

⁷ Unlike West (2006) the survey was not undertaken with household heads, but with nuclear family heads (usually brothers or sons of the household head) and women, with the aim that a richer picture emerge about the diversity of *pugkeenga/beolga* practices within the compound.

as semi-structured interviews male farmers of different generations about the changing meaning of pugkeenga revealed a more complex picture about changes in both the institution and the practice of communal farming, which suggested that explanations of change in pugkeenga farming, and thereby in extended households, as either disappearing or being retained, are incomplete.

In the village of Sima, we conducted semi-structured interviews on changes in the repartition of pugkeenga and beolga fields with each lineage head, saka kasma, and with a household head, zaka soaba, in each lineage. While all saka kasma, claimed pugkeenga had long disappeared, 8 out of 13 zaka soaba claimed to farm a pugkeenga in their household. This confirms Marchal's findings that traditional pugkeenga fields that used to re-group all members of a lineage has indeed been devolved to the level of the household, but it also suggests that representation of pugkeenga is heterogeneous and meaning is embedded in relations of age and status within the household. The survey further explored how the meaning of pugkeenga is connected to communal farming practices. Table 1 below illustrates discrepancies between nuclear family heads' representations of pugkeenga and their actual involvement in collective farming in the household⁸.

Table 1. Crosstabulation of nuclear family heads' involvement in Collective farming and claiming to farm a pugkeenga

			pugkeenga		Total
			non	oui	
collective_field	non	Count	44	13	57
		% of Total	22.6%	6.7%	29.2%
	oui	Count	27	111	138
		% of Total	13.8%	56.9%	70.8%
Total	Count	71	124	195	
	% of Total	36.4%	63.6%	100.0%	

notes: $\chi^2 = 5$

Survey data reveal that in 6.7% of cases, nuclear family heads who claimed to farm a pugkeenga field actually referred to that which they farm with wives and unmarried children, in which case pugkeenga refers to the field of the nuclear family head. Inversely, in 13.8% of cases, some claimed not to farm a pugkeenga whereas they did farm a with other nuclear families in their compound, because for these farmers, pugkeenga refers to the old traditional institution regrouping all members of the lineage. Furthermore, informal conversation with farmers during the administration of the survey revealed that within the 70.8% of cases farming a collective field, nuclear family heads reported farming with some but not necessarily all other family heads, in which cases several pugkeense (pl.) may exist within a single household. However, unfortunately, the survey design does not allow to differentiate these cases quantitatively. What this suggests is that while pugkeenga is still an important feature of Mossi farming, it no longer has the purpose of feeding the household all the year round, but rather, serves to maintain social ties within the family in a context where each families become economically independent from one another. Indeed, pugkeenga yields tend to be relatively low (1 to 5 carts usually) compared to the sizes of households, and informal conversations throughout the survey confirmed that it is rare for farmers to work more than a couple of days a week in the pugkeenga.

Furthermore, unlike West (2009), we did not find that fragmentation of farmholdings was

⁸ We define a collective field here as one regrouping at least two nuclear families in a household.

necessarily linked to the residential fragmentation of extended households into independent ones⁹. Indeed, table 2 shows that there is almost exactly an equal occurrence of collective fields¹⁰ in small (1-4 nuclear families) and big households, suggesting that residential separation may be more a factor of a household lifecycle than of the progressive break-up of extended households towards the residential isolation of nuclear families. Thus, while the fragmentation of collective fields reflects a certain degree of economic individualisation, the persistence of pugkeenga, however much symbolic, in a majority of cases, seems to express a certain wish to retain a degree of solidarity, if no longer of mutual dependence between household members.

Table 2. Percentage of nuclear families farming a collective fields in big and small (1-4 nuclear families) households

			household		Total
			big	small	
collective_field	non	Count	112	30	142
		% within household	37.0%	37.5%	37.1%
	oui	Count	191	50	241
		% within household	63.0%	62.5%	62.9%
Total	Count		303	80	383
	% within household		100.0%	100.0%	100.0%

Note: $\chi^2 = .008$, not statistically significant at 0.05 level

What this shows is that there is an overall rationale for splitting up consumption and production units compared to 40 years ago, but the low rate of nuclear families farming apart from others within households suggests that farmers are generally reluctant to break apart from the wider family, and this is confirmed by the persistence of extended households. At the same time the practice of pugkeenga has transformed from a practical to 'symbolic' institution, which is a manifestation of continued purpose in maintaining a moral and institutional repertoire of work ethics based on intra-family cooperation and solidarity. The question we ask in the following section is the extent to which these transformations are connected to the circular or more permanent out-migration of household members to Ivory Coast and the Southwest country.

Fragmentation of farmholdings and migration

The implications of out-migration on farming systems in sending places have been touched upon in previous ethnographic studies, but results tend to be ambiguous. In his study West (2006) finds a high correlation between independent household not farming pugkeenga fields, and high rates of household migration, and this is also reflected in our findings where households not farming a collective field have a higher ratio of nuclear families residing away at the time of the survey (see Figure 1).

⁹ Another layer of methodological challenge comes from the fact that the word 'zaka' can be used both to refer to the extended household and to the nuclear family, which means that results from West's survey are ambiguous.

¹⁰ Unlike West (2006) I prefer to use collective fields rather than pugkeenga as an indicator of collective farming because of the ambiguous meaning of pugkeenga described above.

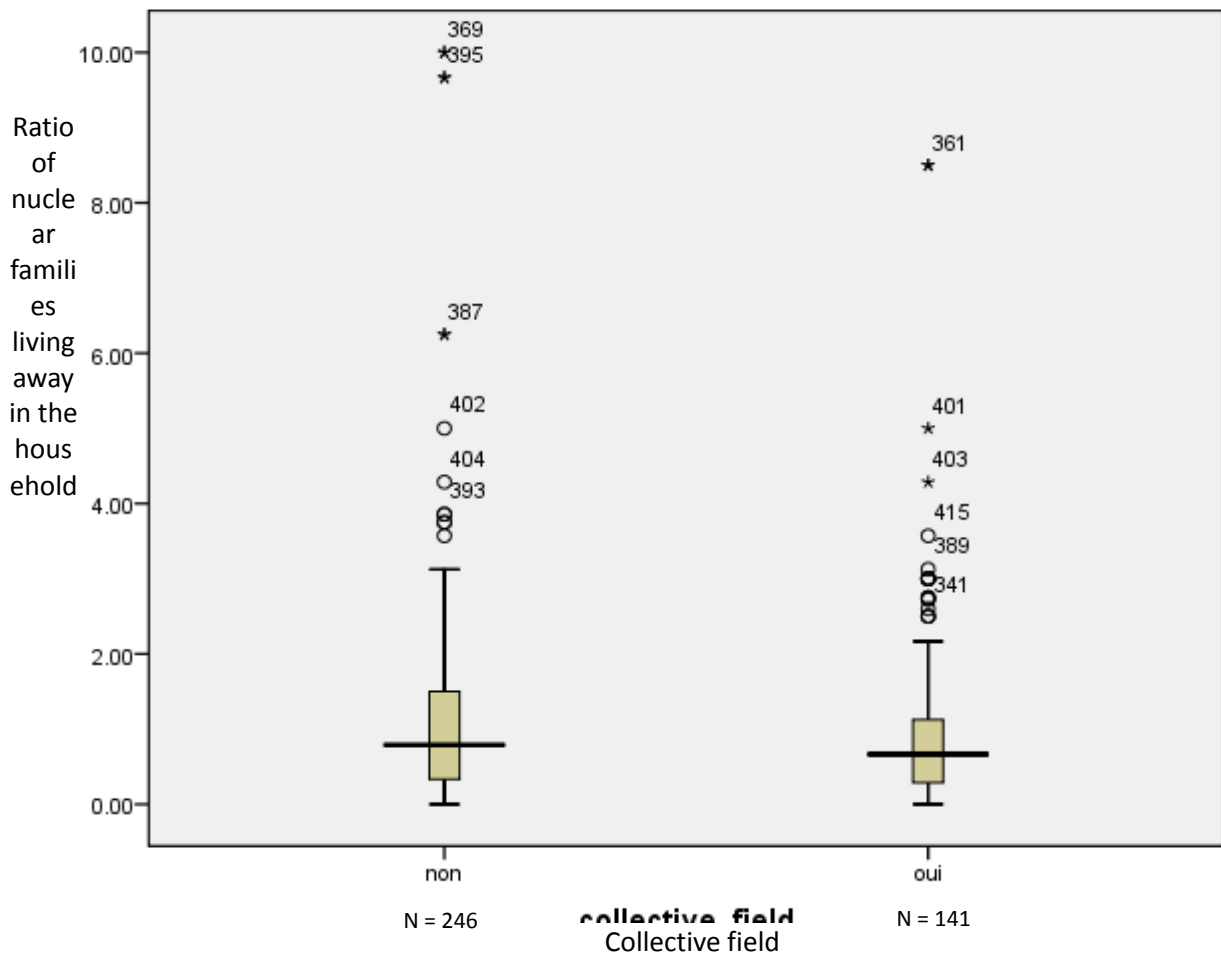


Figure 1. Ratio of nuclear families away in households farming a collective field

West (2006: 141) interprets these results according to the solidarity function of collective farming and *pugkeenga*, which discourages people to undertake migration (see also Fiske 1991). However the causal relation could also run the other way around: what if out-migration encouraged the fragmentation of farmholdings? This relation is an ambivalent one, and migration process can be both a factor of retaining and dividing family farmholds: on the one hand, one underlying factor of fragmenting communal fields into a greater number of individual or nuclear family fields comes from the fact that the compound has become too big for people to efficiently work together, and the fact that males or households migrate, takes away that pressure, and remove the need for people to separate (de Haan 2002; Serpentier et al. 1988). On the other hand, migration can also be a factor of fragmentation within the household. The departure of young men to distant places in search of resources is not always a consensual process within the family, and in some cases migration constitutes a direct contestation of the established patriarchal authority, and it becomes an opportunity to claim more independence for other household members who feel they would be more efficient if they acquired more autonomy.

The survey does not give sufficient information to disentangle these two outcomes, but family farming histories provide some elements to answer how out-migration affects inter-generational relations of reciprocity and land claims. The following two extracts are fragments from farming histories conducted in the household of a *saka kasma* (lineage head) in Sima, where 6 nuclear families live together including those of, the elder, three of his younger married sons, a widow and a married nephew. Each family cultivates its own fields and the elder's very last son, about 27 years

old, cultivates his father's field along with his 'mothers'. The first interview was conducted in the family compound in presence of the elder, two of his wives, his nephew and his youngest son, and the exchange takes place between me and the latter. The second extract takes place the following day in Seguenega alone with one of the married son on his way back from the goldmine.

Extract 1

- *so you dont have a beolga ...?*
- *no, but you know what, [grinning at his father] this year I am not going to cultivate*
- *why not?*
- *all my brothers have left so me too, I am going to flee*
- *you're going to leave your old man?!*
- *ai! but the others are going to come back, the old brother is in Abidjan, and then it will be my turn to go there [the old woman mumbles something] here people don't do anything for me, no money, no help to get more materials, so what else am i going to do?*

Souleymane, 27 years old
02/05/2011

Extract 2

- *before they (migrant brothers) left did you all have beolse too, or was it just your dad's field you guys worked together?*
- *it was one single field, men didn't have beolse. beolse were for women, mums, we all worked in the same field, it's after they left that we separated*
- *is it you who decided to take up your own field?*
- *everyone does that, the brothers decided to leave, since nowadays it has become a world where each searches for his own resources (money), everyone does its own business, selling at markets or looking for gold, and if everyone still cultivated together, we wouldn't have the same objectives, and that would create problems between us.*

Amade, 33 years old
03/05/2011

In this case, the breach of conventions instigated by the departure of a family member encourages those who stayed behind to claim more autonomy for themselves. When Amade's brothers left, he also decided to "search for his own resources" at home, and started working in artisanal goldmines. While this does not affect his ability to work on family land because goldmines close during the rainy season, his need for farming was not the same as that of other household members without off-farm activities, and he negotiated with his father to farm his own field in order to avoid intra-household conflict. The loss of elders' capacity to provide for sons' and grandsons' needs, as reflected in Extract 1, means that his father was easily persuaded to let him become more independent. Indeed, Amade's last comment suggests that the fragmentation of farmholdings may not be as alarming as it is usually presented in the literature, and paradoxically, it is the fact that they separated field and labour practices which allowed them to stay together within a single compound. In turn, this also explains why we do not find that smaller households are more likely than bigger ones to farm a collective field.

This family situation is by no means generalisable. However it shows how male out-migration has ideological implications that encouraged both a redefinition of roles and responsibilities and a new repartition of fields, in a way that is better adapted to changing domestic economy, while maintaining family values. Indeed, interestingly, in this rural context where intra-household

livelihood goals have become increasingly diverse, the fragmentation of fields prevents the rise of tensions between individuals who may not have the same goals, and allows them to stay together within a single household. In this sense, we can easily understand how cultivating a 'symbolic' pugkeenga, though this is not the case of this family, becomes an effective compromise that allows each nuclear family some socio-economic independence, while at the same time maintain social ties between nuclear families, which may become a useful 'human resource' in times of need.

In this section we showed that Mossi households have not separated into nuclear families, however they have undergone significant transformations indeed while pugkeenga institution is still an important feature of Mossi farming, its meaning and practice have become more individualised and more diverse. However this individualisation of farming is not a manifestation of detachment away from family values, and the persistence of pugkeenga, however much symbolic nowadays, shows how traditional communitarian institutions are adapted to a changing economic context. In the section below we examine how this process of farmhold fragmentation is affecting gendered ideologies and relations of access to land and labour.

V Gendered agriculture, migration and changing patterns of work and work ideologies

Changes in women's land access and vacant fields

Mossi women are, in accordance with the principle of virilocality, a crucial source of family labour, both in the husband's and his father's fields. In exchange, women are sometimes given small plots of land, beolga fields, which they are allowed to work in after fulfilling their time and labour obligations on family lands. On their beolga fields, women traditionally plant vegetables and condiments to complement the grain that their husbands traditionally give them for the preparation of communal meals. In the context of the fragmentation of farms, an important question is whether and how women's access to beolga fields has transformed. On the one hand, the fragmentation of farmholds may lead to the land grabbing of sons and brothers, and to the greater exclusion of women from agriculture. On the other hand, the autonomisation of nuclear families may confer greater production responsibility to women within the domestic subsistence economy, and an increased involvement of women in agriculture. In our area of study we find that the latter tends to be true. In 1969, Imbs (1987: 215) found that on a total of 91 farms, around 27% of women did not have a beolga, while this was only the case for 18% of women in our multi-villages survey.

Another important area of change in women's access to beolga, is the democratisation of access among them. For example Kohler (1971: 199) found that on the total surface of land dedicated to men and women beolse, $1/3^{\text{rd}}$ was used by the wives of household heads, and only $1/10^{\text{th}}$ used by those of smaller brothers and sons of household heads. In our survey however, we found that the wives of 85% and 77% of household heads' brothers and sons respectively, farmed at least one beolga field, compared to an almost identical rate of 86% for the wives of compound heads' wives, and harvest rates between these women were not significantly different. These results show not only that a greater number of women have access to their own fields, but the devolution of farming decision-making to the nuclear family level seems to have rubbed off access differences between women of different status. Another positive indicator of change in women's involvement in agriculture is the increase in their cattle ownership. While the study area has become an agro-pastoral zone in the last 20 years (Sumberg 2003), Mossi work ethics is mainly based around land farming, and women are not traditionally involved in pastoral activities (Hendersen 1986: 142). However the survey reveals that more than half of women (56.6%) owned some goats and sheep, though never cows, of greater economic value.

In this sense, the fragmentation of farmholds has resulted in the greater integration of women in the production economy and women's access to agriculture-based livelihood resources has significantly improved in the last 40 years or so. Women's greater access to beolga fields may be explained by the labour time availability freed-up with the decrease of the importance of pugkeenga. At the time where compound pugkeenga fields constituted the main production unit, men also had their own beolse, and while it was an obligation for women to work in pugkeenga, they were also expected to help in the husband's field which left little time for their own. As pugkeenga fields now demand much less work, it is likely that women have more labour-time to dedicate to their own fields. However this hypothesis has not been verified through fieldwork.

Interestingly, these positive indicators of change contrast with a gloomier picture presented about the condition of women in other parts of the Sahel. Diarra and Monimart (2006) for example showed that in Niger, increased land pressure is leading to the progressive exclusion of women (and young men) from agricultural production. An interesting question therefore is whether the massive, and to a lesser extent, continued out-migration of males in Mossi rural area, may have contributed to compensating for the land pressure effects that have prevented women's access to their own fields in other parts of the Sahel. Survey data do not show significant differences in women's access to beolga fields between households with different migration ratios. This may be explained by the fact that the survey only provides a snapshot of the situation whereas the process of change may be slower and older. On the other hand, family farming histories give an interesting perspective on the relation between male out-migration and women's access to fields.

Migration is essentially male among Mossi communities, and when migrants are married, they tend to take their wives away with them¹¹. The relation between migration and women's land access can be illuminated through what families do with the land left vacant after migrants' departures and whether women have access to these fields. This is the case of Adjara¹², a woman of about 50 who has 6 sons, 3 of whom have lived in Ivory Coast for the last 5 years. Among these three sons, 2 are married and used to have their own beolse before they left. She explains that she currently has 2 beolse, which her youngest single son helps her with, and one of these two beolse is part of the land her son in Ivory Coast used to cultivate with his wife before they left. While this snapshot is not generalisable, it is important to note that among the 4 women we interviewed on the same topic, 3 had acquired at one beolga after one of their son's departure. Interestingly however, we found that women did not tend to claim the fields of their husbands' brothers who left on migration, which may reflect a difference of status between middle-aged men, and women and young men, and it would be interesting to further explore who accesses the fields left vacant by middle-aged men who leave on migration.

While these indicators point to positive directions of change for women's livelihood, the greater access to women's agriculture can be double edged, and in order to speak of overall improvement, we must also examine women's perceptions of these transformations; in the section below we examine what women actually do with what they produce on their fields.

Is this an improvement?

Beolga production is individually owned and managed, and the grain (millet and sorghum) used for

¹¹ In the survey undertaken, only 7.6% of women's husbands were away, and this figure includes husbands who may have effectuated a migration for the dry season only, while coming back for the farming season.

¹² Semi-structured interviews with Adjara took place in Sima, on the 30/04/2011 and the 01/05/2011.

communal meals is, in principle, exclusively provided by husbands. Grain and condiments produced by women are often used to make sauces that complement the daily grain, or sold to buy clothes for themselves and children, or are kept as a risk-insurance for times of need (crop failure, illness, etc...). Conclusions about improvements in women livelihoods, cannot be asserted until we determine whether women retain such control over their resources. The following extract illustrates transformations in women agricultural practice and their changing role in the domestic economy:

Extract 3

- *why did you ask for a beolga?*
- *at some point, the one field did not suffice to get food, and thats why we began to do beolga*
- *but do you do millet and sorgho?*
- *yes, and beans too*
- *but in the old days, did you use to do millet?*
- *mmmh, well before we used to do groundnut really*
- *and now it's millet?*
- *yes and beans*
- *but beans is for sale, no?*
- *if you get more than enough for food, you can take some and sell*
- *and with millet, what do you do?*
- *thats food only [laughs]*
- *you dont sell?*
- *see, groundnut is really what we sell*

Aminata, 65 years old

04/05/2011

Here the claim for a beolga field is justified by the shortness of supplied at the time when the whole household use to farm pugkeenga, and changes in the crops planted, towards increased millet and sorghum production, confirms this. Indeed, informal discussions in the course of the survey revealed surprising practices. In two cases in unrelated families where pugkeenga was practised in a symbolic way, we found that in each case, the man's wives worked collectively in their own fields, and that after the rainy season, the household started to prepare communal meals using grain from the women granary, until around January when the man's granary was opened, which lasted until the harvest season when pugkeenga grain was consumed. Although these are largely isolated cases, this example shows that better access to land, does not necessarily mean greater economic independence¹³, and while the fragmentation of family farms may have created opportunities, the ways in which roles and responsibilities are negotiated within the household largely determines the extent to which women actually benefit from these opportunities.

On the whole, however, we found that having a beolga is considered a positive thing by women who both have and do not have their own fields. Furthermore, cultivating millet and sorghum is also desirable, as is illustrated in the following explanation by a surprisingly honest middle-aged farmer/gold miner who answers why his women do not cultivate millet in their beolga fields:

Extract 4

- *how many wives do you have?*

¹³ At the other hand of this spectrum, we found the case of a 50 year old woman, whose husband is the son of the compound head, and who claimed to be working in exchange of money on the pugkeenga field (156).

- 2 wives
- do they have beolse?
- yes they do
- do they do sorgho and pearl millet?
- oh no! they do cowpeas, groundnut and sorrel
- why do they not do millet and sorgho?
- [embarrassed smile] well, because if they do millet, then they'll never accept to work hard in my field
- is that so?! so is it you asked them not to do millet??
- yes its me who forbade it..

Amade's embarrassment came from the fact that he knew that his decision not to let his wives cultivate millet is penalising them, which suggests that while cultivating millet may in some cases imply harder work and less control over their production, it is still also associated with more autonomy and empowerment. Indeed, we found that the women who cultivate millet exercise a certain degree of control, often through deception, over what they produce. This comes forth in Extract 3; the interview with Adjara took place in the presence of her co-wives, and she laughed when asked whether she sold her millet because she was embarrassed by the presence of her co-wives, knowing she was not going to be entirely honest with us. Indeed while groundnut is a product mainly sold and grown by women, it has a lower market value than millet, and women prefer to grow the latter for sale. Women tend to hide their production, and under-report their sales for fear of mockery and criticism that their entrepreneurial endeavours may lead to their neglecting the family, or in order to avoid men obliging them to contribute more grain for the family subsistence. This attitude was also encountered while undertaking the survey. One of our questions involved asking women if they sold the millet they produced, and it often took us quite a little bit of teasing and joking before they admitted selling some of it. This shows that while men have the authority to impose rules on women's management of beolga fields, women have the power to negotiate these rules around to their own advantage.

While our data point to positive changes in women's access to fields as a result of men's absence, conclusions about their improved economic independence and livelihood security are more ambivalent. Indeed, the increased involvement of women in grain production nowadays means that they are expected (or constrained) to contribute more to the household millet traditionally provided by men. On the other hand, since the grain produced in beolga fields is traditionally managed individually, women who feel constrained to contribute more than a fair share of household millet have the possibility to manoeuvre certain control, through deception, over their resources. In this sense, the material changes that occurred at the intersection of male outmigration and individualisation of household farming institutions opened land access opportunities for women that encourage a renegotiation of gendered roles and power relations within the nuclear family.

VI Conclusion

This paper aims to present the complex implications of out-migration for stayee farmers. Migration is usually presented in livelihood studies as an innovative and adaptive strategy of farmers, but a much less enthusiastic picture is often drawn of its implications at home, which may partly account for why it has not been a particularly popular research area to date. A common view is that migrants leave because of unsatisfactory living conditions, which are further exacerbated either by the labour gap they leave behind, or by the erosion of family ties that results from the separation

with family members. This paper presents a contrasting picture, one of farmers negotiating constraints and seizing opportunities in ways that encourage social cohesion. Indeed while there is a certain amount of material and emotional tension between migration and subsistence farming at home, whether this becomes a problem depends on the ability of household members to claim and shift resources around to meet both individualised and collective livelihood strategies. Comparing the perceptions of different generations of farmers allowed us to realise the changing meaning of pugkeenga, which reflects a heterogeneity of practices embedded in the specific circumstances of families, including their migration history. Through the farming history of a family in the village of Sima we showed that the migration of peers is not always a consensual process, but it may offer an opportunity for the contestation of existing rules, and the redefinition of roles and responsibilities in a way that is better adapted to changing household socio-economic circumstances.

At the same time, material transformations (labour gap, more fields available) at the intersection of individualising agriculture and outmigration seem to have occurred in parallel with wider transformations in women's involvement in agriculture. While causality linkages are difficult to establish, some connections can be made at the household and regional levels. Firstly, the women we interviewed tended to gain access to individual fields following the departure of a son. Secondly, women's land access has been found to be deteriorating in other parts of the Sahel where migration has not been such a strong feature of livelihoods. Our analysis goes further to show that the extent to which this represents a development for women is mediated by gender relations of authority versus power over household and individual production.

Concerns about the emergence of a more individualised form of subsistence agriculture and about household fragmentation have been raised in relation to previous studies that show that in rural West Africa, extended households are generally better able to manage and accommodate environmental and socio-economic shocks (Mortimore 2003; Toulmin and Gueye 2003; Courade and Deveze 2006). However we must be careful not to essentialise family values, and thereby present farmers as helpless victims of change. There is of course among farmers a certain amount of nostalgia and regret about the impossibility to continue to rely on large pugkeenga fields for subsistence, but there is also a general consensus, even among old farmers, over the idea that a more individualised form of farming is a positive step towards more modern village agriculture, and is better suited to the entrepreneurial aspirations of younger generations, for whom migration is a particularly attractive option. Understanding the significance of these transformations in defining farmers' priorities and projects is crucial for the formulation of meaningful questions about the future and the development of Sahelian agricultures.

- Adepoju, A. and W. Mbugua, 1997, 'The African Family: An Overview of Changing Forms', in Adepoju, A. (Ed.) *Family, Population and Development in Africa*, London: Zed Books.
- Arnaldi di Balme, L. 2006. 'La grandeur de la cite: Migration et reproduction politique dans trois villages Moose de la boucle du Mouhoun (Burkina Faso)' *Etude Recit No.9*. Ouagadougou: Laboratoire Citoyennetes.
- Batterbury, S. 1998. 'Local environmental management, land degradation and the 'gestion des terroirs' approach in West Africa: Policies and pitfalls' in *Journal of International Development* **10**: 871-98.
- Brock, K. and N. Coulibaly. 1999. 'Sustainable rural livelihoods in Mali' *IDS research report 35*, IDS, Brighton.
- Bryceson, D.F. 2004. 'Agrarian vista or vortex: African rural livelihood policies' in *Review of African Political Economy* **31**(102): 617-629
- Carney, D. (Ed.) 1998. *Sustainable Rural Livelihoods. What Contribution can we Make?* Nottingham: Russel Press Ltd. Dfid.
- Cordell, D.D., J.W. Gregory, and V. Piché. (Eds.) 1996. *Hoe and wage: A social history of a circular migration system in West Africa*. Boulder CO: Westview Press, Inc.
- Courade, G. and J.C. Deveze. 2006. 'Introuction Thematique: es agricultures Africaines face a de difficiles transitions' in *Afrique Contemporaine* **217**: 21-34.
- Dabire, B. 2007. 'Les determinants familiaux de l'emigration rurale au Burkina Faso' in *Etude de la population africaine* **22**(1): 108-35.
- David, R. (Ed.) 1995. *Changing Places: Women, resource management and migration in the Sahel*. London: SOS Sahel.
- Ellis, F. 1998. 'Household Strategies and Rural Livelihood Diversification', *The Journal of Development Studies* **35**(1): 1-38.
- Fiske, A.P. 1991. *The structures of social life: The four elementary forms of human relations: Communal sharing, authority ranking, equality matching, market pricing*. New York: The Free Press.
- Gidwani, V. and K. Sivaramakrishnan. 2003. 'Circular Migration and the Spaces of Cultural Assertion' in *Annals of the Association of American Geographers* **93**(1): 186-213.
- de Haan, A., K. Brock, and N. Coulibaly. 2002. 'Migration, Livelihoods and Institutions: Contrasting Patterns of Migration in Mali' in *Journal of Development Studies* **38**(5): 37-58.
- de Haan, L. and Zoomers, A. 2005. 'Exploring the frontier of livelihoods research' in *Development and Change* **36**(1): 27-47.
- Hammond, P.B. 1966. *Yatenga. Technology in the Culture of a West African Kingdom*. New York: The Free Press.
- Hampshire 2006. 'Flexibility in domestic organisation and seasonal migration among the Fulani of Northern Burkina Faso' in *Journal of the International African Institute* **76**(3): 402- 426
- Hampshire, K. 2002. 'Fulani on the Move: Seasonal economic migration in the Sahel as a social process' in *Journal of Development Studies* **38**(5): 15-36.

- Hendersen, H. 1986. 'The grassroots women's committee as a development strategy in an Upper Volta village' in Creevey, L.E. (Ed.) *Women farmers in Africa: rural development in Mali and the Sahel*. Syracuse: Syracuse University Press.
- Henry, S., P. Boyle and E.F. Lambin. 2003. 'Modelling inter-provincial migration in Burkina Faso, West Africa: The role of socio-demographic and environmental factors' in *Applied Geography* **23**: 115-36.
- Huskein and Nelson 1997. 'Sustainable livelihoods and livelihood diversification' *IDS Working Paper* 69. Brighton: IDS.
- Imbs, F. 1987. *Kumtaabo: Une collectivité rurale Mossi et son rapport à l'espace (Burkina Faso)*. Atlas des structures agraires au sud du Sahara 21. Paris: ORSTROM.
- IZARD, M. 1980. *Les Archives Orales d'un Royaume Africain. Recherche sur la formation du Yatênga*. Unpublished PhD Thesis. Université Descartes. Paris.
- Izard, M. 1975. 'A propos de l'identité ethnique' in *L'identité*. Séminaire dirigé par C. Lévi-Strauss. Paris: Grasset. pp305-11.
- Kohler, J.M. 1971. *Activités agricoles et changements sociaux dans l'Ouest-Mossi (Haute-Volta)*. Mémoires ORSTROM No. 46. Paris: ORSTOM.
- Konseiga, A. 2006. 'Household migration decisions as survival strategy: The case of Burkina Faso' in *Journal of African Economics* **16**(3): 198-233.
- Lahuec, J.P. and J.Y. Marchal. 1979. 'Mobilité et Peuplement Bissa et Mossi' *Travaux et Documents de l'ORSTOM no.103*. Paris: ORSTOM.
- Lawson, V.A. 1998 'Hierarchical households and gendered migration in Latin America: feminist extensions to migration research' in *Progress in Human Geography* **22**(1): 59-33.
- McMillan, D.E. 1995. *Sahel visions: Planned settlement and river blindness control in Burkina Faso*. Tucson, AZ: University of Arizona Press.
- Marchal, J.Y. 1987. 'En Afrique des savanes, le fractionnement des unités d'exploitation rurales ou le chacun pour soi. L'exemple des Moose du Burkina Faso' in *Cahiers des Sciences Humaines* **23**(3-4): 445-454.
- Mertz, O., C. Mbow, J. Østergaard Nielsen, A. Maiga, D. Diallo, A. Reenberg, A. Diouf, B. Barbier, I. Bouzou Moussa, M. Zorom, I. Ouattara, and D. Dabi. 2010. 'Climate factors play a limited role for past adaptation strategies in West Africa' in *Ecology and Society* **15**(4): 25. [online] URL: <http://www.ecologyandsociety.org/vol15/iss4/art25/>
- Mortimore, M. 2003. 'The future of family farming in West Africa. What can we learn from long term data?' *IIED Issue Paper 119*. London: IIED.
- Painter, T., J. Sumberg, and T. Price. 1994. 'Your terroir and my 'action space': Implications of differentiation, mobility and diversification for the Approche Terroir for Sahelian West Africa in *Africa* **64**: 447-63.1994
- Quesnel, A. 2001. 'Peuplement rural, dynamiques agricoles et régimes fonciers' in Lery, A. and P. Vimard (Eds.) *Population et Développement: Les principaux enjeux 5 ans après la Conférence du Caire. Documents et Manuels du CEPED no.12*. Paris: CEPED.
- Quesnel, A. and J.Y. Marchal. 1997. 'Dans les vallées du Burkina Faso, l'installation de la mobilité' in Gastellu, J.M. and J.Y. Marchal (Eds.) *La Ruralité dans les Pays du Sud à la Fin du XXème Siècle. Actes*

du de l'Atelier Montpellier 2 et 3 Avril 1996. Paris: IRD.

Radcliffe, S. 1990 'Ethnicity, patricarchy and incorporation into the nation' in *Society and Space* **8**: 379-93.

Rain, D. 1999. *Eaters of the dry season: Circular migration in the West African Sahel*. Boulder: Westview Press.

Reardon, T, J.E. Taylor, K. Stamoulis, P. Lanjouw and A. Balisacan. 2000. 'Effects of non-farm employment on rural income inequality in developing countries: An investment perspective' in *Journal of Agricultural Economics* **51**(2): 266-88.

Reij, C., G. Tappan, and A. Belemvire. 2005. Changing land management practices and vegetation on the Central Plateau of Burkina Faso (1968–2002)' in *Journal of Arid Environments* **63**: 642-59.

Reyna, S.P. 1987. 'The emergence of land concentration in the West African Savanna' in *American Ethnologist* **14**(3): 523-41.

Scoones, I. 1998. 'Sustainable rural livelihoods: A framework for analysis' *IDS Working Paper 72*. Brighton: IDS.

Serpantie, G., G. Mersadier, L. Tezenas du Montcel, and Y. Mercadier. 1988. 'Transformations d'un système agropastoral Soudano-Sahélien (Bidi, Nord Yatenga, Burkina Faso)' in *Les Cahiers de la Recherche Développement* **20**: 29-42.

Sumberg, J. 2003. 'Toward a dis-aggregated view of crop–livestock integration in Western Africa' in *Land Use Policy* **20**(3): 253–264.

Toulmin, C. 1992. *Cattle, Women and Wells: Managing household survival in the Sahel*. Oxford: Clarendon Press.

Toulmin, C. and B. Gueye. 2003. *Transformations in West African agriculture and the rôle of family farms*. London: IIED.

Watts, M. 1983. 'Hazards and crisis: A political economy of drought and famine in Northern Nigeria' in *Antipode* **15**(1): 24-34.

Woutereses 2008. 'Migration poverty and inequality' *IFPRI Discussion Paper 00786*. Washington, DC: IFPRI

West, C.T. 2009. 'Domestic transitions, desiccation, agricultural intensification, and livelihood diversification among rural households on the Central Plateau, Burkina Faso' in *American Anthropologist* **111**(3): 275-88.

West, C.T. 2006. *Pugkeenga: Assessing the sustainability of household extension and fragmentation under scenarios of global change*. Unpublished PhD Thesis. Department of Geography. University of Arizona.

Zanou, B. 2001. *Migrations. Rapport d'analyse du RGPH-98*. Abidjan: Institut National de la Statistique.

Zongo, M. 2009. 'Terre d'Etat, loi des ancêtres? Les conflits fonciers et leurs procédures de règlement dans l'Ouest du Burkina Faso' in *Cahiers du CERJESHS* **24**(33): 111-43.

Zoungrana, T.P. 1995. 'Sécheresse et dynamique des agrosystèmes dans la plaine centrale du Burkina' in *Revue de géographie de Lyon* **70**(3-4): 247-254.

