



Munich Personal RePEc Archive

**State Development Interventions versus
Indigenous Resource management
institutions: Whose Reality Count?
Evidence from Borana Pastoral system of
Southern Ethiopia**

Belayneh, Demissie

16 April 2016

Online at <https://mpra.ub.uni-muenchen.de/70780/>
MPRA Paper No. 70780, posted 19 Apr 2016 02:34 UTC

State Development Interventions versus Indigenous Resource management institutions: Whose Reality Count? Evidence from Borana Pastoral system of Southern Ethiopia

Demissie Belayneh¹

D.Belayneh@cgiar.org)

¹ International Maize and Wheat Improvement Centre (CIMMYT), Ethiopia office, Addis Ababa

Abstract

The main objective of this paper is to explore the extent to which government policies geared towards “transforming” pastoral way of living into sedentary agriculturalists in pastoral communities of southern Ethiopia had eroded social capital, customary institutions, and livelihoods and deteriorated the living conditions of the very people they are intended to benefit and the resources they are meant to manage. While the essence of building on social capital and local indigenous institutions in the management of common property resources is gaining grounds in the recent times, most government policies in pastoral areas of Africa are drawn on the over-riding dominant narrative of the theory of ‘tragedy of commons’.

It is argued that important as these explanations could be, they do not fully illuminate the underlying causation of social and ecological calamity, institutional degradation and the erosion of indigenous resource management and conflict resolution mechanisms. Based on extensive literature review on the Borana- a predominantly pastoral community inhabiting the dry lands of Southern Ethiopia and Northern Kenya - this study contends that contrary to the "tragedy of the commons" thesis and other neo-Malthusian explanations, the weakening and disintegration of communal resource management regimes in Borana is a crucial factor behind rangeland degradation, increased livestock mortality and rising vulnerability of pastoralist and agro-pastoralist communities in the Horn of Africa. It attempts to expose how this ill-intentioned government policy have eroded customary resource management, conflict resolution and livelihood resilience practices, and paved the way distrust and non-cooperation; rangeland resource degradation; livelihood vulnerabilities, and perpetuation of conflicts in the area.

The conclusion is that while the tragedy of commons narrative has some grain of truth in some contexts, scholars and policy makers should also look into how best common property resources can be managed by capitalizing on social capitals and customary institutions rather than destroying them, as successful management of natural resources require both an understanding of ecosystem processes and of the interactions between people and the ecosystem.

Key words: rangeland; natural resource management; social capital; Borana pastoralists; Ethiopia

1. Introduction

Change in the world's rangelands is proceeding at an unprecedented rate. Moreover, with current prediction of global climate change and the resultant decline in the intensity of rainfall and deteriorating rangelands, access to these resources is an issue of heated controversy, particularly in arid pastoral areas of Africa.

Historically, Ethiopian pastoralists have been the most marginalized groups in the policy arena (Helland, 2002). During the Imperial regime (1930 to 1974), pastoralists were seen as aimless wanderers who led a primitive way of life (Getachew, 2001). Moreover, they were considered to have been using natural resources wastefully (Gebre, 2001). Hence, during this time the main ambition of government officials, who were entirely from peasant or urban backgrounds, was to convert these 'primitive' societies into sedentary farmers who would utilize resources more efficiently. Various government policies emphasized that efficient resource utilization was possible if the vast and 'inefficiently used' resources in pastoral areas came under the control of the state, legitimizing government intervention in facilitating the gradual conversion of pastoralists into more sedentary livelihoods, reflected in the majority of its strategies for change.

This modernist discourse, guided by the dominant tragedy of commons paradigm, views pastoralism as a stage for gradual development towards agro-pastoralism and finally sedentary agriculture, had been the basis for most policy formulation under the socialist regime (1974 to 1991) until the nineties, and still causes great grievance and irritation in the public policy debates on pastoralists today. Chatty (2007) stresses the simultaneity of pastoralists' cultural persistence and resistance to sedentarization and farming, while also compromising and adjusting to modernization efforts and a globalizing world. Modernist thinking, characterized by a linear development path, has influenced the pastoral situation in the past through forced diversification, while today we observe voluntary farming activities. On the one hand, with its increasing involvement in land-use politics since the 1960s, the state as a powerful external force has inflicted severe changes upon the property right regimes that govern pastoralist life. The influence of the state policies has forced the institutional arrangements of the rangelands into diversification. On the other hand, the traditional rangeland management and conflict resolution mechanisms have been eroded as a result of which persistent conflicts over deteriorating resource bases are rampant.

In this paper, interest will focus on the discussion of how these state-sponsored policies have deteriorated long established indigenous communal rangeland resource management institutions, livelihood resilience and conflict resolution mechanisms and resulted poverty, livelihood challenges, rangeland deterioration and conflicts among the Borana pastoral community in Southern Ethiopia.

The paper is organized as follows. The next section presents the nexus among social capital and management of natural resources. This is followed by overview of the current state of pastoralists in the Horn of Africa. This is followed by brief outline of the Borana social institutions in section four. Section five provides state development interventions

and their impacts on existing social capital and rangeland management among Borana pastoral community. Section five presents conclusion and future research implications.

2. Social Capital and Natural Resource Management

Enhanced social capital can improve environmental outcomes through decreased costs of collective action, increase in knowledge and information flows, increased cooperation, less resource degradation and depletion, more investment in common lands and water systems, improved monitoring and enforcement (Anderson et al. 2002; Danieri et al. 2002a; Danieri et al. 2002b; Koka and Prescott 2002). There is a growing interest in social capital and its potential impact for affecting collective action in sustainable renewable natural resource institutions (Rudd 2000; Sobels et al. 2001; Walters 2002).

Pretty and Ward (2001) identified that where social capital is well-developed, local groups with locally developed rules and sanctions are able to make more of existing resources than individuals working alone or in competition. Social capital indicates a community's potential for cooperative action to address local problems. As it lowers the costs of working together, social capital facilitates cooperation and voluntary compliance with rules (IPretty and Ward 2001). The norm of generalized reciprocity assists in the solution of problems of collective action. Adler and Kwon (2002) identified that it transforms individuals from self-seeking and egocentric agents with little sense of obligation to others into members of a community with shared interests, a common identity, and a commitment to the common good. Brewer (2003) believed that denser networks increase the likelihood that people will engage in collective action. There is also evidence linking social capital to greater innovation and flexibility in policy making.

Although there has been a number of different approaches taken for research in the area of social capital research, there is much fruit to be taken from a synthesis of the various approaches. There is considerable debate and controversy over the possibility, desirability and practicality of measuring social capital yet without a measure of the store of social capital, its characteristics and potential remain unknown. Many authors have identified that measurement attempts are flawed by problems with separating form, source and consequences, however, a large number of studies have applied questionable techniques to a very wide range of applications. Clearly there is disagreement over the validity of measures of social capital. There are many unresolved issues involved in the measurement of social capital. It seems from the literature that designing and applying context appropriate indicators of social capital can achieve useful measurement, however further work is needed to develop this area of the theory.

It is now widely accepted that social capital can be increased in the short term however there is a lack of understanding of the processes of how they operate to build or improve social capital structure. Although there has been very little work directly related to social capital and natural resource management, much work is required to understand the interaction of social capital and natural resource management.

3. Current State of Pastoralists in the Horn of Africa

Pastoralists, agro-pastoralists and the urban poor in the Horn of Africa face pressing challenges such as desertification, land and soil degradation, recurrent famine and terrorism. Forty-five per cent of the 70 million people in the Horn endured extreme food shortages at least once every decade over the past thirty years (Watson, 2003). The causes of persistent and widespread food shortages in the region are both natural and man-made. Natural calamities including droughts, floods and contagious human and livestock diseases disrupt food production. Concomitantly, poor infrastructure and inaccessible markets constrain trade. Violent conflicts drain limited resources and trigger massive human dislocation. As important as these explanations are, they do not fully illuminate the underlying causation of social and ecological calamity: institutional degradation. Based on a case study of the Borana - a predominantly pastoral group inhabiting the drylands of Southern Ethiopia this paper argues that, contrary to the "tragedy of the commons" thesis and other neo-Malthusian explanations, the weakening and disintegration of communal resources management regimes due to top-down development intervention comprises a crucial factor behind rangeland degradation, increased livestock mortality and rising vulnerability of pastoralist and agro-pastoralist communities in the Horn of Africa (Watson, 2003).

The Borana are caught in vicious cycles of deepening poverty, conflict, resource degradation and famine. Following successive droughts, the average household herd size is on the decline. For instance, between 1981 and 1997, mean household herd size fell from 128 to 72. In 1990, the total number of cattle per household was 43 before plummeting to just 14 in 1994. Additionally, between 1999 and 2000, the Borana lost 70% of their livestock, which left them with an average livestock lower than the minimum herd size - 15 to 20 head of cattle - that is needed for survival and post-drought recovery (Watson, 2003). This rapid drop in herd size may have to do with the fact that cattle husbandry, the mainstay of Borana livelihood, is under mounting demographic and environmental stress. But underlying this stress is the gradual policy driven "institutional erosion" of what was "an exceptionally efficient system of managing resources" and "remarkable social organization that has often been cited as a model of pastoralism in sub-Saharan Africa (Watson, 2003)

Evidence for weakening of the social institutions of the Borana can be found in Angessa and Beyene (2005) - a survey of the perceptions of a total of 288 Borana pastoralists from six communal grazing areas in three districts (Yabello, Dirre and Arrero) of the Borana Zone. Ninety two percent of the respondents indicated that Borana customary resources management was more sustainable than state management. Similarly, eighty nine percent thought that the communal grazing system was more productive than state management. An overwhelming majority (ninety four percent). indicated that household income is deteriorating. These findings suggest that "the traditional management system is becoming unstable and pastoral livelihood is becoming more insecure.

From “the Tragedy of the Commons” to Institutional Erosion.

There are diverse perspectives on why the Borana are increasingly vulnerable to droughts. In the past, scholars and policy makers resorted to the "tragedy of the commons" model to explain the plight of the Borana. First proposed by Garrett Hardin this model states that common property resources (hereafter CPRs) are prone to degradation since they lack clearly defined and enforced tenure rights. Open access eventually results in overgrazing because grazers, facing little perceived or actual individual cost, want to keep adding more cattle to the common pasture. In the process, they shift the costs of adding one more head of cattle to the community. Proponents of this model recommend two likely policy approaches to governing the commons: privatization - defining and enforcing private property and/or nationalization - state control, ownership and management of CPRs(Watson,2003)

Neither private property nor state control was a plausible response to the kind of social and ecological crisis that the Borana faced because both approaches relied on erroneous assumptions about the nature of CPRs. Hardin's analysis, for example, does not distinguish CPRs from open access resources where lack of coordination and unrestrained entry results in overexploitation. That is, each user in a common property regime rushes to maximize individual gains at the expense of the common resource. Far from being chaotic and prone to overexploitation, however, CPRs possess flexible self-governing institutions that sanction "free-rider" behavior and reward cooperation. Due to their exclusive emphasis on formal institutions, the dichotomous approaches of privatization and nationalization overlook informal institutions - social customs and norms - that govern CPRs. Informal or socially embedded institutional arrangements not only enhance cooperative solutions to the commons dilemma, thereby preempting the tragedy of the commons, but also regulate access to, and use of, scarce resources and act as incentives for collaborative action (Swallow and Bromley1995, Watson2003). Thus, CPRs are not necessarily open access resources.

Yet early analysts treated the Borana communal rangeland as open access, arguing that the plight of the Borana was largely a crisis stemming from overexploitation. Declining livestock productivity and increased susceptibility of die Borana cattle to droughts was attributed to deteriorating quality and quantity of rangelands due to overstocking. This typical "tragedy of the commons" narrative overlooked the possibility that external interventions may have created a commons dilemma by eroding social institutions and, thus, exposing the Borana rangelands to overuse. Nevertheless, policy makers invoked this paradigm as a rationale for nationalizing the commons of the Borana rangeland.

While early analysis erroneously equated the ecological and social crisis in Borana Zone to the "tragedy of the commons", recent research has increasingly focused on ecological and neo-Malthusian narratives in which the vulnerability of die Borana is ascribed to environmental risks, mainly die high rainfall variabilityof the Borana rangeland, sweeping land cover changes such as proliferation of woody plants on Borana rangelands, which lead to degraded forage and explosive population growth.³¹ Researchers in this tradition are also interested in the socio-economic, demographic and

market underpinnings of institutional change - the change in land use patterns and property rights - on communal rangelands. Kamara et al., for instance, attribute the increasing pressure on Borana rangelands to rapid privatization of communal land and accelerated conversion of pastures into cultivation. Others attribute the deterioration of the Borana rangeland to increased access to external livestock markets and top-down development policies such as the establishment of state-owned and private commercial ranches, agricultural extension services and mandatory settlement programs that seek to forcibly settle pastoralists through centrally controlled Peasant Associations (hereafter PA).

4. The Social Institutions of Borana pastoral community.

In order to survive in the arid and semi-arid areas in Southern Ethiopia where the annual average rainfall varies between 300mm and 900mm, the Borana had to develop socially embedded rules and regulations to manage scarce water sources and pastures. These flexible social institutions define and enforce overlapping rights and entitlements - "bundles of rights" - to communal water and grazing land. In what follows, the various social institutions of the Borana pastoral system and the negotiable and tradable rights they prescribe are discussed.

The Borana communal rangeland system is a web of social codes, norms and practices that constitute a hierarchical social system known as the gada system (Swallow and Bromley, 1995, Watson 2003). At the helm of the gada system is the aba gada who is elected every eight years in an assembly that is open to all Borana men. The aba gada and his male councilors, the yea, comprise the main decision-making body of the Borana common property system. Each governing body serves for eight years. The governing body formulates and enforces general laws - the aada seera - that govern access to and use of communal water and forage. Each newly elected governing body revises existing tenure arrangements and Rangeland management in Borana is a social and political affair that primarily involves male-dominated governing councils headed by elders.

Rangeland is stratified into territorial units of differing sizes: households (smallest), settlements, encampments and grazing associations (biggest). Each rangeland unit has either an individual or a group of males responsible for enforcing and interpreting the aada seera and mediating disputes over water and grazing land. Since water is a crucial resource in the communal rangeland system of Borana, grazing settlements are established near water well(s) known as madda where a senior male descendent of the man who originally excavated the well(s), the aba madda, holds primary watering rights. Being the decedents of the pioneer of the well, the aba madda and his councilors can deny or allow outsiders, non-clan users, access to the well(s). Maddas are made up of smaller grazing areas called arda. An arda is a collection of encampments called ollas. An olla is the smallest level of settlement consisting of 30 to 100 warras. The head of ollas is called the aba olla ('father of the olla') who is usually the founder of the olla or the senior descendant of the person who founded the olla. The aba olla determines, in consultation with the other men in his olla, the seasonal location of the household. Like the aba madda, the aba olla also makes the final decision regarding whether to grant an outsider

access or user right. A group of ollas and ardas make up a wider unit of grazing area known as dheda. crafts new ones in response to changing availability of water and forage(Angessa and Beyene,2005).

In addition to herd splitting and seasonal movement of livestock, the Borana utilize supplementary risk management strategies. One such strategy is controlled burning of rainy season grazing areas. Burning ensures high quality pastures by clearing parasites and woody vegetation. It also facilitates regeneration of forage grasses. Elders' councils determine sites of potentially high grass value and coordinate burning of such areas. The timing of burning depends on availability of sufficient fuel wood and probability of rainfall. Certain high yield areas are burned and grazed more regularly than less productive fields. Finally, the Borana cattle, particularly the typical "large frame breed type" called Qorti, is drought-resistant. A product of successful breeding and selection, this breed is known for high fertility and milk production. Qorti is also well adapted to heat and long-distance trek. However, due to increasing scarcity of forage, Qorti are gradually disappearing from the Borana stock so much so that the average Borana household now keeps Ayuna rather than Qorti as the former require less forage than the latter(Angessa and beyene2005).

5. State Development Interventions and Institutional Degradation among the Borana

Consistent with the fate of pastoral societies elsewhere in Africa, the Borana have been marginalized as a result of misconstrued land tenure policies and modernization programs (Swallow and Bromley, 1995, Watson2003). The impact of state policies and development interventions on the livelihood of Borana can be presented in three phases of policy changes corresponding to three distinct eras in Ethiopia's contemporary political history: pre-Derg(before 1974), Derg (1974-1991) and post-Derg (1991 -present). Each era saw the replacement of one regime with another and corresponding changes in tenure policies and governance that have impacted the Borana in many important ways. The least interventionist of the three phases is probably the pre-Derg feudal period when the Ethiopian monarchy paid relatively little attention to pastoral areas. But undoubtedly this era marked the beginning of the subjugation of the Borana as a distinct social and political identity, and the establishment of a precarious feudal tenure system whereby access to land depended on heredity and political affiliation(Angessa and Beyene,2005). Landlords loyal to the Ethiopian monarchy owned large estates while the natives mainly the Borana worked as tenants on those estates. The right to land, therefore, was a lingering political question that culminated in the downfall of the last King of Ethiopia, Haile Selassie II, in 1974.

The Derg period saw the peak of widespread land tenure reforms and aggressive agricultural modernization/agricultural settlement programs. The Derg, the Marxist-Leninist regime that evolved after the overthrow of the monarchy in 1974, implemented dramatic redistribution of land, establishing a defacto state property whereby the socialist state owned all land. Under this usufruct tenure system, land rights in particular and property rights in general were non-transferable. That is, land cannot be sold or leased or

mortgaged. This tenure system remains in effect in the post-Derg period, which, despite increasingly liberal discourses of participation, decentralization and democracy, is characterized by the interventionist legacies of the Derg. These ill-intentioned interventions have multitudes of ramifications on the livelihoods of the community as outlined below.

Reduced Mobility

The customary system allowed Borana pastoralists to move into a new grazing settlement after having secured the consent of the *aba maada* or his local representatives. In sum, PA-based local government in Borana Zone 1) severely restricted access to communal grazing areas outside one's administrative area; 2) encouraged appropriation of land for cultivation by new comers, which resulted in loss of grazing reserves, and 3) tolerated transgression of customary rules of watering and grazing, thereby weakening traditional authority by challenging the legitimacy of the *aba gada* and sidestepping his rulings on local conflicts (Swallow and Bromley 1995; Watson 2003; Angessa and Beyene 2005)

Consequently, appointed chairpersons of PAs were viewed as political agents of the state rather than legitimate enforcers of existing and new tenure arrangements. Even though PAs were formed to co-opt the *gada* system and employ its various layers of social organization for enforcing agricultural settlement programs, they have failed to fully integrate into the Borana sociopolitical structure. To the contrary, PAs have undermined the authority and advice of elders and local representatives, who are responsible for enforcing the customary laws of the Borana and sanction violators. As one Borana participant of the 1996 Borana wide legislative assembly put it:

The *aada seera* (the Borana laws) are becoming weaker. It is becoming weak because the government started interfering. They are putting pressure on the [traditional] administrators of the wells, who are no longer permitted to punish those who do wrong. The system is still there but it is weaker.

Further more, by focusing on cultivation and settlement ventures, Peasant Associations induced inefficient land use practices whereby loyal individuals appropriate common pastures for private use - mostly for private grazing since PAs did not formally endorse the use of private plots for keeping cattle. The cumulative outcome of this merely haphazard conversion of communal land into private grazing has been shrinking communal grazing reserves- key sources of survival and recovery for Borana cattle. The resulting shortage of dry season forage has unleashed intense competition and conflict between Borana and non-Borana clans who can no longer count on accessing distant reserves of pasture in times of scarcity.

Rising Conflicts and Declining Cooperation

With the advent of top-down agricultural projects, competition among Borana clans and new comers - predominantly cultivators - intensified, leading to a noticeable increase in the frequency and magnitude of resource-related conflicts in the Borana Zone since the

1990s. Compounding this is the breakdown of the Borana conflict resolution system due to unbridled judicial interference of PAs. Besides allocating agricultural land and overseeing local government, PAs act as a local judiciary, evading and competing with the role of the aba gada as the highest customary judicial body. For example, if a herder were to bring his cattle to a grazing settlement other than his own, traditionally he would negotiate with the local elders. The elders would then render a ruling based on forage and water availability as well as the number of cattle already grazing in the area. If the elders refused to grant grazing rights and the claimant challenged the decision, he could appeal before the aba gada who either endorsed or overruled the decision of the local elders. PAs interfered in this process by granting newcomers grazing land often contrary to the decision of the aba gada or the local elders. (Swallow and Bromley, 1995, Watson2003)

Conflict has also constrained the capacity of Borana to coordinate rangeland management. It is now increasingly difficult to cooperate in such key areas of rangeland management as rangeland burning and rotational grazing between residential grazing areas and satellite pastures. Modern water wells, constructed in the 1970s with little input from Borana elders' councils, obscure cooperation over the management of dry season reserves, which are restricted for home-based grazing for weak and lactating herds. This is because the few Borana pastoralists who occupied the unevenly spread modern wells want to keep or possibly further expand permanent private grazing encampments near modern wells and are thus increasingly uncooperative in managing the communal water sources.

Declining Grazing Reserves

The size of communal grazing reserves is shrinking due to increased cultivation and privatization of land. According to Kamara's survey of 40 communities, 16.3 percent of the Borana rangeland has been turned into either cultivation or private grazing land, a significant increase from 1.4 percent in 1986. This trend, 'rangeland privatization', increasingly common in 17.5 percent of the Borana Zone, is the most noticeable post-1974 institutional change on the Borana rangeland (Angessa and Beyene 2005). The expansion of cultivation, along side communal enclosures of grazing land, hinders mobility, in turn causing a rush for privatization of communal rangeland. Cultivation also encroaches on the important grazing reserves, warra, which, despite rapid increase in cultivation, constitute the largest portion (48.7 percent) of the Borana rangeland. Private appropriation of communal land is also triggered by socio-economic differentiation - the increasing disparity between wealthy and poor Borana households. Since wealthy households have acquired land under the pretext of cultivation, they benefit by appropriating land for private use rather than staying in communal use. Consequently, a strong alliance is emerging between PAs and wealthy Borana households who want to take more land out of communal management.

Rangeland Degradation due to Ban on Bushfire

Bush encroachment, "the pervasive encroachment of wild plants species of no value to rangeland," is a major source of rangeland degradation and declining livestock

production in Borana. The main cause of bush encroachment is a long-standing government ban on the traditional rangeland management practice of controlled bushfire. Borana elders report bush encroachment, along with droughts and overgrazing, as the chief cause of range degradation and dwindling livestock wealth. There is limited information on the details of how the ban was enforced. But evidence from Angessa (2005) indirectly corroborates the tremendous impact of the ban on bushfire on the ability of Borana to burn, and consequently, reverse rangeland degradation. As the difference in relative grass yield between encroached and non-encroached range suggests the inability to burn impinge on grass production, which in turn adversely affects livestock health, productivity and ultimately the livelihood of the Borana. Existing participatory projects are beginning to recognize the utter disconnect between rhetoric and policy, on the one hand, and practice, on the other. The overall legal framework - state ownership of land and associated natural resources that prohibits transfer, sale or lease of land - is not conducive for bridging the gap and potentially adversarial relationship between formal state institutions, namely PAs and newly crafted local government organs, on the one hand, and the communal institutions of the Borana, on the other. Without an effective policy to modify the role of PAs from that of an administrative arm of the state to a more reliable ally of Borana elders, PAs will continue to be viewed as the political appendage of the state rather than valuable partners in development, which in turn adversely affects their credibility and ability to cooperate and work with Borana elders. In short, the post-Derg period has not offered a new institutional environment and a comprehensive tenure reform that not only formalizes post- 1974 tenure changes, but also reinvigorates the common property regime of Borana.

6. Conclusion

The plight of the Borana appears to be a case of institutional degradation, the neglect and gradual disintegration of the communal tenure system of the Borana as a result of inappropriate tenure policies and development interventions. The effect of state ownership of land as administered through PAs has been costly to Borana who have experienced dwindling livestock and rising conflicts in recent years. PAs have significantly undermined the traditional capacity of the Borana to cope with droughts and coordinate rangeland management through seasonal movement of cattle, herd splitting and planned rangeland burning. The expansion of cultivation and privatization of rangelands has resulted in shrinking dry season reserves, inflexible land use and property rights relations and increased competition as well as conflict over grazing land and water. The rise in resource conflict is compounded by the breakdown of customary conflict resolution. The underlying conclusion of this paper is therefore while the Tragedy of Commons approach that dominates the current development policy interventions has some grain of truth; scholars should look into the role of top-down government policies and the resultant erosion of customary social institutions and their implications resource management regime. What has been neglected is how policy-driven state interventions erode social capital which can be used to address the challenges of resource management.

References

- Adler, Paul S, and Seok-Woo Kwon. 2002. 'Social Capital: Prospects for a New Concept.' *Academy of Management. The Academy of Management Review* 27: 17-40
- Anderson, C. Leigh, Laura Locker, and Rachel Nugent. 2002. 'Microcredit, Social Capital, and Common Pool Resources.' *World Development* 30: 95-105.
- Angassa, A. and Fekadu Beyene 2003' Current Range Conditions in Southern Ethiopia in Relation to Traditional Management Strategies: The Perception of Borana .' *Tropical Grasslands* 37:53-59
- Brewer, Gene A. 2003. 'Building Social Capital: Civic Attitudes and Behavior of Public Servants.' *Journal of Public Administration Research and Theory* 13: 5-26.
- Chatty, D. 2007. Mobile peoples: Pastoralists and Herders at the Beginning of the 21st Century. *Reviews in Anthropology* 36:5–26.
- Daniere, Amrita, Lois M Takahashi, and Anchana NaRanong. 2002a. 'Social capital and environmental management: culture, perceptions and action among slum dwellers in Bangkok.' in *Social Capital and Economic Development: Well-being in Developing Countries*, edited by Sunder Ramaswamy. Cheltenham, UK: Edward Eglar.
- 2002b. 'Social capital, networks, and community environments in Bangkok, Thailand.' *Growth and Change* 33: 453-484.
- Gebre, A. 2001. *Pastoralism Under Pressure: Land Alienation and Pastoral Transformation among the Karrayu of Eastern Ethiopia, 1941 to the present*. Maastricht: Shaker Publishing.
- Getachew, N. K. 2001. *Tradition, Continuity and Socioeconomic Change among the Pastoral Afar in Ethiopia*. Addis Ababa: International Books in Association with OSSREA.
- Helland, J. 2002. Land Alienation in Borana: Some Land Tenure Issues in Pastoral Context in Ethiopia. in *Resource Alienation, Militarization and Development, Case Studies from East African Dry lands*. M. Babiker ed. Addis Ababa: Organization of Social Science Research in Eastern and Southern Africa.
- Koka, Balaji R, and John E Prescott. 2002. 'Strategic alliances as social capital: A multidimensional view.' *Strategic Management Journal* 23: 795-816
- Pretty, Jules, and Hugh Ward. 2001. "Social capital and the environment." *World Development* 29: 209-227.
- Rudd, Murray A. 2000. "Live long and prosper: collective action, social capital and social vision." *Ecological Economics* 34: 131-144.

Sobels, Jonathan, Allan Curtis, and Stewart Lockie. 2001. "The role of Landcare group networks in rural Australia: exploring the contribution of social capital." *Journal of Rural Studies* 17: 265-276.

Swallow, M and Daniel Bromley. 1995. "Institutions, Governance and Incentives in Common Property Regimes for African Rangelands," *Environmental and Resource Economics*, Vol. 6, No. 2. (September, 1995), pp. 99-118.

Walters, William. 2002. "Social capital and political sociology: Re-imagining politics?" *Sociology : the Journal of the British Sociological Association* 36: 377-397.

Watson, Elizabeth. 2003. 'Examining the Potential of Indigenous Institutions for Development: A Perspective from Borana, Ethiopia.' *Development and Change* 34: No 2