

## The Nature of Land: Tenure in an Uncertain Environment

### CHAPTER NINE

#### Summary, Synthesis and Speculation

##### Summary

This research has sought an understanding of the logic, structures and practices that underlie customary land tenure in the study villages. While it makes no claims to offer an exhaustive explanation of the phenomenon, it is reasonable to assert that a robust understanding of tenure cannot be achieved without extensive reference to environment, culture and power, conceptualized in this study as: *environmental uncertainty*, which manifests itself in perceived threats from drought, fire and animals, and which leads to a set of management practices, land use and tenure practices that serve to minimize or distribute the implied risks; a *subsistence ethic*, evidence for which comes from the culture--language, proverbs, normative understandings regarding the nature and use of property--and which is consistent with social practices playing important roles in reciprocal exchange, community relations and the avoidance of conflict over land; *patriarchal control*, which is reflected in patrilineal transfer of land within patriarchal households that serve as the basic social unit of production, and which reflects as well control over the production process and explains affinal women's marginal status in the household with respect to land access and control. The broad scope of social life entailed by these three variables suggests that land tenure is not an isolated phenomenon, but rather an integrated feature of village culture, economy and social structure.

The reported lack of interest in land improvements and agricultural commercialization can be explained with reference to the environmental uncertainty that places a premium on low variance (versus high-risk labor and capital investment), and by patriarchal control, as household heads are responsible for providing household grain. Tenure security is perceived as less important than access to land for purposes of cultivation, largely because of the cultural norm that land should be made available to those who can put it to productive use, and because it is one of many media through which reciprocal relations express themselves. In effect, risk management addresses environmental uncertainty, and reciprocity addresses the threat of famine through social and economic organization favoring redistribution over accumulation. Thus land is a central organizing feature of production, consumption, exchange and distribution in the village economy.

However, historical changes affecting the villages have exposed the vulnerability of a customary tenure suited to a subsistence economy. These changes seem to represent the rationalization of various spheres of rural social life. Illustrations from the study include: the increasing formalization of lending and borrowing; an increasing dependence on market exchange (versus land-based production or reciprocity and redistribution within the village); changing strategies of securing household subsistence, based as much on accumulation within the household as on reciprocal or redistributive networks reinforced by a subsistence ethic (i.e., a narrowing scope of goods, services or even courtesies circulating via reciprocal channels); the transformation of a set of agriculture and husbandry activities to reflect technical and scientific (versus indigenous) knowledge bases; land registration initiatives that base access to land not on community or household membership, or the difficulty of sustaining a subsistence livelihood, but rather on the authority of the state to issue title, at least nominally in the interests of increasing agricultural production (at the *expense* of access to land for subsistence forest, range and agricultural production).

Rationalization itself was characterized as a process by which communities become embedded in networks of power, increasingly organizationally "outflanked" by formal institutions such as the state and market. Rationalization here represents the reconfiguration of power networks. The changes have led to an increasingly intensive exploitation of the resource base (particularly the commons), which has had environmental consequences, and a social stratification within the community increasingly based on wealth, and within households on gender. Michael Mann's (1986) theoretical framework provided a useful analytical venue from which to view changing political and economic power networks.

What this study attempted to make clear was that customary land tenure is an embedded concept. It cannot be fully understood or appreciated without reference to broader environmental, social and historical contexts. Hence the importance of examining aspects of rural social life not directly related to tenure, such as lending and borrowing, market pull, etc. Rational actor perspectives are ill-suited to the examination of a phenomenon best approached from multiple levels of analyses. The three rational actor models discussed in detail all offer insights. The neoclassical version is in a sense correct when it asserts that customary tenure is inflexible. However, its methodology is ill-suited to an explanation of the mechanisms that render customary tenure "resistant" to change. It assumes that the key obstacle is a lack of tenure security for individuals. The results from this study suggest that security of tenure is an important consideration (as evidenced by the women's tenacity in Benbaliyabugu in farming the draw, or the annual cropping of *sokofeforow*, or backyard fields, by household heads), but that even where farmers attempt to increase security it is not with the intention of increasing their level of commercial investment. There are environmental constraints that make commercialization risky, cultural constraints that discourage the often more permanent land use entailed by commercialized agriculture, and social pressures placed upon the patriarchy, which controls household food production, to devote household resources first and foremost to subsistence.

An examination of the rational choice perspective leads one back to Polanyi's (1957) criticism of Adam Smith, who contended that humans had a natural propensity to "truck, barter and exchange." To what extent is the rationally acting individual a product of Western civilization? Rosa's (1995) viewpoint is unambiguous:

Seeded by classical Greece, rooted by Renaissance Italy, cultivated by philosophers of the Enlightenment and pruned by the utilitarians and their intellectual offspring, the idea of rational action survives as a central legacy of Western thought.

The idea that, in a fairly undifferentiated agrarian society, individuals' behavior can be examined as decision calculus taken out of the context of the social milieu, is tenuous. Even in Western societies, one must question whether the emergence of the individual as an abstract entity is a cause of rationalization, or one of its main effects (Friedland and Alford 1991). Rosa (1995) notes the pervasiveness of rational choice not just as social theory, but as theoretical orientation and world view.

The softened rational actor and Boserupian perspectives are improvements over neoclassical economics, however, in that each emphasizes in certain ways customary tenure's persistence, rather than its resistance to change. However, the softened rational actor version, though it recognizes customary tenure as a potentially dynamic phenomenon (which is supported by the study), overemphasizes the importance of economic variables in shaping its dynamic character. Boserup addresses this by stressing the importance of demographic factors, and Netting's research on households improves its power in explaining the relationship between population and technology. Yet the analysis doesn't go far enough in

emphasizing the effect of environmental variation on customary tenure, and it fails to fully appreciate the distinction between population density and carrying capacity as obviously mediated by the environment.

Rational actor models are valuable, in that decision making of villagers is clearly a key factor in understanding resource use and land tenure. This study does not represent a rejection of rational actor models. Especially where the unit of analysis is the individual (for instance in understanding risk management to address environmental uncertainties), rational choice perspectives complement the results of the study. However, the cultural ecological approach places more emphasis on understanding the specifics of environmental constraint, rather than merely acknowledging it as an exogenous factor influencing decision making. Table 5.2 suggests that the concept of environmental uncertainty is multi-dimensional, and that it provides insight into the relationship between the type of risk and the implications for resource use or agriculture.

Boserup's thesis in particular has held up remarkably well over the last thirty years, and is applicable to the study in a number of ways. She (1965:12-13) acknowledges the messiness (at least to the outside observer) of tenure on the ground:

. . . many types of primitive agriculture make no use of permanent fields, but shift cultivation from plot to plot. This fact, which seems to have been ignored by classical economists, is fundamental for our problem, for it follows from it that in primitive types of agriculture there is no sharp distinction between cultivated and uncultivated land, and that it is impossible, likewise, to distinguish clearly between the creation of new fields and the change of methods in existing fields.

Another passage from Boserup's (1965:14) rings particularly true and suggests the problems of rationalizing land use (implicit in the granting of title to agricultural lands by the state):

. . . most or all of the land added to the sown area as population increases in a given territory was used already, as fallow land, pasture, hunting ground, or otherwise. It follows that when a given area of land comes to be cropped more frequently than before, the purposes for which it was hitherto used must be taken care of in a new way, and this may create additional activities for which new tools and other investment are required.

Boserup (1965:80-81) also discusses how the assertion of household rights can come about, leading to "pledging" (referred to in this study as a distinction between proximate and ultimate control).

Clearly she is also aware that pressure on land and resources can come from adoption of more efficient tools as well as from increases in population density. However, she does not fully address them. Capital intensification among even a sparse population, driven by a desire to "overproduce" in the face of agricultural risks, could quickly lead to a negative impact on carrying capacity (especially if surplus production was converted into livestock investment, as is often the case among the wealthier villagers). Respondents in the study suggest this is the more likely cause of the assertion of clearing rights by households--use of machinery, rather than adoption of labor-intensive practices. Boserup also proposed the relationship between land use and land tenure--that variation in land use may correspond to different tenures--which in the study area certainly holds. *Sokofeforow*, horticultural gardens, cultivated fields, fallow and forestland all have different sets of rights and social scopes of usufruct.

In general, much of what Boserup had to say is relevant for contemporary analyses of tenure dynamics. Attributing all of this change to population density and returns on labor is both the thrust of the argument, and however its major weakness. Boserup is interested more in internal dynamics than in

exogenous change. She emphasizes innovation, which comes at the expense of a more complete treatment of diffusion, assuming a fairly benign technological clearinghouse from which farmers can pick and choose as they please. The reality for agriculture is probably much closer to a top-down imposition of technology by those holding privileged positions in political and economic power networks. Netting's work on households offers an important corrective that strengthens Boserup's argument that farmers attempt to optimize labor, and won't innovate unless forced to by declining living standards (because of diminishing returns to labor). The argument doesn't hold at the level of community, but when one disaggregates the community, the household as the unit of production is the salient unit of analysis for understanding the dynamics of labor allocation.

In addition, while her data (see Table 2.1) often shows strong correlations between density and intensification, carrying capacity will vary from one ecosystem to another, thus affecting the level of density at which carrying capacity would be reached in a given environment. Where rainy seasons are shorter and/or rainfall averages lower, less biomass may be produced, and the environment likely will not sustain the same density of human population as a region where average rainfall is higher and more predictable (although this obviously depends on other factors as well, such as soil type).

In general, what is interesting in studying tenure and change is not what changes people's minds, as the rational actor models propose, but rather what factors transform the structures that shape decision making. Let us assume that no changes are in the offing, such as groundwater irrigation or super drought-resistant varieties of mango trees, that would lessen environmental uncertainties related to resource and agricultural production. Then is change due to "defectors" who calculate that the benefits of pursuing cumulative household strategies outweigh the costs of severing reciprocal ties? Or is it due to changing structures that can be interpreted within traditional norms (e.g., income generation, rather than food production, as a means of subsistence and a justification for appropriating community resources)? Rational actors can only choose between options of which they are aware. Yet who decides on the range of options? I have suggested that pursuing even heavily qualified answers to these questions requires a methodological approach ill-suited to the rational choice paradigm's narrow focus on individual actors' decision making.

The case study approach employed here has produced a framework for understanding the logic underlying customary tenure. The three factors--environmental uncertainty, subsistence ethic and patriarchal control--are in essence constants across the two study villages. However, I have made the argument that in understanding customary tenure in Africa, these must be considered as potentially important variables, whose presence or absence in a given setting may depend on the degree to which rural communities are being or have been subordinated in networks of power via a process of rationalization.

Some leverage is obtained by analyzing relevant differences between the study villages as well. The importance of topographic variation is key in a couple of ways. First, it suggests that valuable lands might be treated differently in different villages based more on their proximity to the village than the overall population density (as Boserup suggests). In Cekorobawkunda, space in the valuable draw, less than a kilometer from the village, has been appropriated by the village patriarchs, and is no longer available to the women of the village to cultivate upland rice. In Benbaliyabugu, women occupy sections of a draw where they farm vegetables, however the draw in question is five kilometers away, which may make it less valuable than closer-in areas, at least for the time being. In contrast, "backyard fields" or *sokofeforow*, located directly behind compounds at the edge of the residential areas in both villages, are exclusively controlled by household heads. The draw five kilometers from Benbaliyabugu may become more valuable (and the women evicted by the customary claimants) either as the perception of drought worsens, or as the

productivity of fallow nearer the village begins to decline with insufficient fallowing. A second way in which topographic variation is important rests on the fact that resources are not randomly distributed. This tends to reinforce reciprocal relations between villages. Resources on one village's territorial claims may be unique to the area and harvested by several villages, which between them may share kin ties and thus be reluctant to exclude each others' members from exploiting the resource base.

**Implications for Theory:** *Environment, Risk and Tenure*

Probably the key theoretical insight to emerge from the study specifically related to land tenure is the capacity of the natural environment to play a central role in shaping productive practices, rights in and use of land, even social organization around the exploitation of the resource base.<sup>1</sup> The dimensions of uncertainty were explored in chapter five, and have implications for not only the applicability of the variable to other regions, but for understanding the specific ways in which uncertainty may affect management practices and/or tenure. The uncertainty of rainfall (and to a lesser extent, the threats of damage by fire and animals) seems to be the primary factor limiting agricultural and resource production in the study villages, which in turn limits the commercialization process by narrowing the range of ecologically possible crops with market value and imposing investment risks with drastic consequences for those living on the margin. Hence the commercial value of land, the increase of which (due to increasing scarcity or expanded productive opportunities) is hypothesized to drive the process of individualization of tenure rights, remains below a point where subsistence farmers are likely to embrace commercialization, or where they are in immediate danger of being displaced by commercial investors. Measures to decrease the need for fallow (and increase the output on a given plot of land per unit time, or *intensify production*) are not likely to be adopted *where they do not address the fundamental environmental constraint*. Soil-improving measures will not bring rain.

This is not to suggest, however, that environment always plays such a prominent role in shaping the social and economic structure of production. Yet as Marvin Harris (1979:57) puts it:

. . . priority for theory building logically settles upon those sectors under the greatest direct restraints from the givens of nature. To endow the mental superstructures with strategic priority, as the cultural idealists advocate, is a bad bet. Nature is indifferent to whether God is a loving father or a bloodthirsty cannibal. But nature is not indifferent to whether the fallow period in a swidden field is one year or ten.

Furthermore, this study suggests a relationship between agricultural production and risk, that is mediated by and has consequences for the environment. In the Industrial West one is likely to find risk management taking technological or institutional forms, embedded within sociotechnical systems of food and commodity production, processing and consumption. In a fairly undifferentiated rural agrarian society, risk management is more likely reflected in management practices, land use, social organization and culture, situated within a social context where community and kin relations predominate. The risk to commercial farmers in the West is still mediated by environment--drought, floods, hailstorms, pestilence, etc.--but usually experienced as financial hardship that threatens their substantial investments. For

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<sup>1</sup> The studies of Scott (1976) and Park (1993) are good examples of studies in tenure that lend support to this claim.

subsistence farmers living on the margin, the stakes are higher and more immediate--starvation. Technological innovation does not make agricultural risk disappear. It merely transforms its nature, and can insulate the farmer from signals of environmental degradation. In other words, technology can reduce some types of risk associated with agriculture, but often at a cost to the environment (e.g., irrigation can lead to salinization, aquifer depletion; fertilizer and pesticide use depletes fossil fuel reserves and pollutes surface runoff and groundwater). Subsistence farmers who are unable to draw upon resources outside of the local ecosystem receive more immediate feedback from the environment.

Furthermore, it seems rather clear that, even though aspects of customary tenure can lead to unsustainable practices, in the absence of technological change, any increased level of commercial activity involving the exploitation of land-based resources, above and beyond the subsistence needs of villagers, is going to further decrease the sustainability of the resource production regime. By making fallow generally available to those who would put it to productive use, and by virtue of the fact that resources on forest and fallow land are open access, customary tenure has few controls on resource use and is thus vulnerable to overexploitation for market sale.

### *Property, Reciprocity and the Subsistence Ethic*

In addition, the evidence suggests that tenure security can have a cultural as well as economic dimension. It is true that in a subsistence economy, a premium may be placed on availability of property and resources that renders security of secondary importance. The right to use property whose access is controlled by others is so fundamental, that evicting someone who is using property in a productive way can be a delicate matter (and in the study area is often handled by invoking the need to produce subsistence).

I have, based on villagers' responses, defined tenure security as "control over access," because more restrictive control over access to land that removes it from circuits of reciprocal exchange runs counter to the idea of a subsistence ethic. More abstractly, I am proposing that a relationship exists between forms of exchange and property regimes. Notions of property will reflect communal interests within social groups in which reciprocity serves as a mechanism that is practiced extensively and enhances the members' chances for collective material survival. Where private property regimes are stronger, neighbors may share lawn tools, but probably won't make each others' house payments.

The subsistence ethic is a concept similar to Scott's (1976) "moral economy." In the moral economy, peasants' attitudes toward and relationships with landlords reflect the assertion of a *right* to subsistence. Under certain tenure arrangements, The landlord guarantees tenants a certain level of subsistence. When harvests are good, he fares well. However, when harvest is poor, the tenants may eat better than he. The subsistence ethic proposed here refers more to the right to *pursue* one's livelihood, and make productive use of idle property in so doing, within the context of community and household membership. This is why change that threatens control over land allocation and community membership, embodied in official land registration, changes the nature of social citizenship upon which the subsistence ethic is partly based (I alluded earlier to the role of environmental uncertainty).

Rational actor models are particularly inadequate when examining relations of power. The subsistence ethic also offers considerable explanatory leverage in understanding how wealth and power differentials between households are leveled (by making property *use* much less restrictive than ownership), and how conflict is reduced or avoided via the practice of *musalaha*. The subsistence ethic puts pressure on those who would otherwise pursue a path of household accumulation, to make their resources available. The suggestion is that underlying reciprocal relations in the village are potentially coercive forces--in this

case, the threat of fetish retribution, or what Michael Mann (1986) refers to as the "immanent morale" of ideological power organization, reinforces in this case social relations that tend to level wealth differences via the promotion of a subsistence ethic. Thus the study illustrates how power can be a potential basis for reciprocity.

It also sheds light on the ways in which customary tenure can lead to environmentally unsustainable practices. The ability of a claimant to manage his fallow is exchanged for the right of ultimate control over that fallow and its transfer in the patriline. Rationalization and the transformation of subsistence to include commercial activity threaten not only to erode the subsistence ethic, but to allow households to pursue more accumulative economic strategies, thus leading to a potentially greater degree of stratification.

Interestingly, the concept of reciprocity helps explain not only why individualization is not likely to occur on overexploited commons, but why the development of common property institutions is equally remote.

#### *Power and Tenure : Dynamics, Gender and Rationalization*

The notion that individualization is an economic process, or more generally that tenure dynamics are driven by economic forces, receives little support from the evidence in this study. As previously mentioned, the environment imposes production constraints that may limit land's economic value. However, where assertion of rights has taken place, it is more explicable in terms of power relations than economic factors. This can be seen in the assertion of customary clearing rights by patriarchal households, the acquisition of title by patriarchs in Cekorobawkunda in the name of patrilineal succession, and the acquisition of title to a large parcel by an economic elite from Tambacounda. The insights from this study can be added to the contributions of other authors who have proposed the relationship between tenure dynamics and power, serving as a basis for land concentration and social stratification (e.g., Berry 1988; Bruce 1988; Goheen 1988; Kerner 1988; Shipton and Goheen 1992).

The study also sheds light on the role of gender relations in customary tenure. Women's access to land is marginalized by a patriarchal social structure and by patrilineal descent. The problem becomes especially acute as valuable land becomes scarce, and women are relegated to the least productive plots. Using Mann's (1986) terminology, women are organizationally "outflanked" by the patriarchy. In essence, land tenure helps to explain, in this instance, one way in which men exercise power over women. This is accomplished not only by controlling productive assets, but through the very manipulation of the meaning of subsistence. The subsistence ethic, though it affords some protection against stratification between patriarchal households, offers women little protection. In fact, one important meaning of subsistence can be equated with communal grain production controlled by patriarchal household heads. This despite the fact that women's total labor contributions to food production and processing are considerably greater than those of men. "Subsistence" is invoked to refuse women access to land and to evict them. The manipulation of the meaning of subsistence in a way that favors the patriarchy provides evidence of a third face of power (Lukes 1974) that not only limits women's potential contributions to household production, but constrains their ability to participate in development projects.

One interesting finding of the study relates to access to land and power. If one observes that the most valuable lands are generally controlled by patriarchal households, then issues of control become clearer. The *sokofeforow* are exclusively controlled by household heads. The draw in Cekorobawkunda has been appropriated by a few powerful patriarchs, to the exclusion of the majority of the village's women. In Benbaliyabugu, women occupy the draw, but evictions have occurred. The draw is further from the

village, and one can expect that it will eventually be appropriated by its customary claimants as its value for cultivation increases in the face of increasingly frequent drought. This suggests that access to the most valuable land can be explained with reference to power relations embedded within social structure.

Yet this does not hold for commons resources, to which open access remains, despite their reportedly increasing scarcity. Why should this be so? The data point to the subsistence ethic, and to the importance of labor in the creation of tenure. The subsistence ethic is key because commons resources are made available to those who would put them to productive use. This is not unlike the case of fallow being made available, when it is not currently being cultivated. Even resources on fallow are open access, despite the fact that the fallow is claimed by the family that first cleared it. Yet why can't these resources be claimed, as the fallow on which they occur has been claimed, by patriarchal households? If one looks at planted trees (for instance, in fenced gardens near the village), one can find more individualized tenure. The fact that commons resources occur naturally, and not as a direct result of human labor, also seems important in understanding the contrast between land and resource tenure.

However, despite the fact that the subsistence ethic seems to explain this difference, commons resources have been commercially exploited. Yet this doesn't involve any change in management--merely their harvest and use for sale in markets. Thus there is no productive commercial *investment*, which would likely lead to more individualized tenure, but rather only exploitation. This underscores the analytical importance of distinguishing between access to land (for clearing and cultivation) and access to specific resources.

From a more macrosociological perspective, I have argued that, employing Michael Mann's (1986) framework of power networks to the historical changes taking place in the study villages, the capacity of the state and market organization to penetrate rural social life can be seen as processes of rationalization that in a sense extricates land and other property from its embeddedness in broader social relations. It has the potential to replace a system of production and sets of property rights that reflect the logic and limitations (the *substantive rationality*) of village productive and social life, with institutional mechanisms (such as formal credit, land registration) that are more responsive to the formal rationality that reflects the interests of institutions or institutional actors holding privileged positions in the power networks. Rationalization represents a process in which power networks are reconfigured. However, the expansion and contraction of commercial agriculture that characterized the pre- and post-drought Sahel (in 1969-74) suggest that rationalization is neither inevitable, nor irreversible. The degradation of the environment can erode the very base from which institutional elites derive their power.

Rationalization helps in understanding the character of change occurring in the study villages, which I have argued, are in many ways representative of rural Eastern Senegal as a whole. Mann's framework shows how change can be examined in terms of power, and rationalization provides the logic for understanding the character of changing power relations. The particular effects of rationalization, though the evidence is preliminary, would appear to be an increased level of environmental degradation and social stratification. Rationalization essentially disintegrates aspects of customary tenure from the broader social relations with which it was connected under a subsistence economy. Land and other goods are removed from circulation within reciprocal networks, paving the way for production units (in this case, households) to pursue more narrow accumulative strategies, in the process transforming the meaning and nature of subsistence from one where a premium was placed on the communal mobilization of resources, to one in which property rights may indeed become more restricted and individualized. Again, the point is not that individualization will not take place; it is that individualization may occur as a result of changing power relations.

## Speculation

The outlook for development and thus for social change, would seem rather bleak based on this study's conclusions. With respect to economic development of the country, the region's climate is too risky for its producers to carry a heavy burden without subsidies or technological interventions, neither of which would seem to be in the offing. The environment appears to be in a state of ecological distress--desertification and a loss of species diversity, coupled with drought and increasing intensity of use (via the diffusion of plow technology), pose problems from which, given the marginal material living standards of most farmers and the need to continually exploit the resource base to survive, recovery seems remote. Given that, in the process of rationalization, villagers seem to be losing some local control over land allocation, dispute settlement, and the local economy, and that this loss of control is being replaced by exogenous institutional control, which is less responsive to local environmental, social and political realities, one shouldn't expect development policies, given current trajectories, to ameliorate the situation.

There are areas where optimism is warranted, based on the study. Most of them involve enhancing the community's relative position within power networks. For instance, with respect to titling, one of the biggest problems is a lack of information, concerning its scope (e.g., what lands might be made available to outsiders?), the administrative process of registering land, the flexibility of granting title (e.g., could communities apply for tenure, or is the initiative restricted to individual applicants?), etc. Villagers are "outflanked" in part because they lack information, and few communities possess the collective wherewithal to resist titling as united social groups. Urban economic and political elites can take advantage of privileged access to government officials and to information to take full advantage of titling. A program of legal advocacy would both inform and direct villages toward means of achieving or protecting collective interests upon which they could agree. Members of government have addressed the notion of community-based *de jure* tenure over the radio. Other development interventions that attempt to organize at the community level (such as the cotton-weighing campaign) suggest a precedent for action at the community level. For, as overwhelmed as rural villagers and their natural environment may be by historical changes taking place, the state would be similarly overwhelmed if everyone with customary fallow rights decided to seek title.

One of the trends observed in this study was toward a greater diversification of sources of income, reportedly driven by market and environmental factors that increased the need for money. Many women have few options available to them to meet their needs for income. They generally have access to the forest products (usually food products) with the lowest returns, and even these are being overexploited and their market value declining with either oversupply or reduced demand, as changing consumer tastes favor more exotic fruits such as mangos, bananas, mandarins, etc.

Some have turned to petty commerce, but even with commerce the competition is great, as is the need to establish some competitive niche. Basically, rural commerce is increasing. However, outsiders' ability to acquire title to land makes rural commerce vulnerable to control by local merchants, who themselves could set up shop in rural areas where demand is sufficient.

The evidence points to at least two possibilities worth pursuing with respect to an increased need for income independent of agriculture. First is the issue of rural commerce, and how it can be promoted as a source of rural economic diversification. Villagers' practices that distribute risks collectively provide one avenue of potential worth pursuing. Organizing to reduce costs of merchandise transport, financing, travel, etc., would enable villagers to better defend themselves from "outflanking" by better organized and financed urban merchants. Neither must this imply collective ownership, but merely collective participation in reducing costs. There may be no need even to conduct commerce in a central

location--people operating out of their homes makes sense and "breaks up" the mass of property that, just sitting idle in a boutique, might be vulnerable to lending.

As for bridewealth, the potential to use it as a vehicle for increasing women's economic resources should be explored. Its changing nature reflects less the future productive needs of affinal women within their husbands' households, and more the proliferation of goods available from regional markets and the consumptive preferences of, perhaps the women themselves, or perhaps their male contemporaries within the patrilineage. It is likely that the allure of consumer goods is more reflective of young women's stage in the life course. An older married woman, presented with a range of choices regarding her bridewealth, would more likely express a preference for some income-producing capital. This might be a peanut grinder, a hand-powered grain mill, a sewing machine, watering can for gardening, perhaps even money to have a garden well dug, etc.

There are also ways in which the scientific community can complement the indigenous knowledge of villagers in addressing some of the environmental problems observed in this study. For instance, the loss of food crops and the increasing dependence of villagers on markets may make worthwhile searches for both local and exotic tree species that produce valuable food crops. There may also be incentive to propagate economically valuable tree species that are resistant to the kinds of wildfires that inevitably sweep through the bush. Villagers should also be employed in an effort to systematically monitor changes to the environment--for instance, the disappearance or reduction of tree species--to better understand the causes. Encouragement of tree planting may provide an entree into the issue of fallow improvement. There is clearly a need to address this issue. It is also possible that the kinds of risk management strategies used for agriculture could be applied to management of fallow or forestland, or reforestation activities. For instance, the value of risk-sharing in adjacent farming may have a similar application to the establishment of horticultural gardens (specifically fruit tree orchards). More generally, development initiatives need to build upon consensus wherever it can be found. Common property institutional development may have to start at some sub-community level, among various groups with binding interests (for instance, women's interest in increased security of tenure to valued lands).

The theme that should come through in this discussion is one that recurs throughout the literature on development--that wholesale transformation of a society is inefficient and unpredictable and often a counterproductive means of realizing human potential. There is an abundance of institutional capital and indigenous knowledge upon which a foundation for what will in any case be a turbulent ride into the 21st century could be built. Development "experts" offering rational formulas for change and rational definitions of development, have too often dwelled on the resistance of developing societies to interventions that conventional development wisdom suggested were in the best interests of these countries.

In fact, what is more remarkable is the persistence of practices, institutions, cultural beliefs in the face of sweeping historical change, the persistence of societies, despite the often misguided efforts of development planners who did not have to live with the real-life consequences of their policies. The assumptions underlying economic policies that appear irrelevant to rural realities need to be examined and modified. To that end, rational choice perspectives have their role to play in a more responsive development theory.

Senegal is on a trajectory of development, however, it is an unknown trajectory. In lighter moments I laughed with villagers about the transparent attempts by SODIFITEX, the Government-run cotton campaign, to push cotton cultivation over the radio through staged dialogues between actors posing as farmers. The infomercial had arrived in Senegal. Others mentioned the growing interest in the lottery, at first glance detached, until a few villagers opened up about who was buying tickets. Another ticket game

played over the radio was the "horse races." Some villagers were being taken in by the allure of Western-style gambling, which seemed odd, considering the often conservative approach to agriculture that characterized both villages. There was also a game, played in Tambacounda, with three sticks. All one had to do to win was watch which stick had the piece of inner tube attached to it, and follow it as the quick-handed player shuffled the sticks in the deep sand. I was told the story of a villager from Benbaliyabugu who had tried his hand at this game, after picking the right stick every time while he watched others win money, radios, tape decks, etc. He was doing very well. A gathering crowd of friendly well-wishers urged him on as he won time after time. He tried to take his winnings and walk away, but the others who had won and were cheering him on convinced him to continue--convinced him that the eye, or at least *his* eye, was quicker than the hand. Finally the stakes included an expensive tape deck, and he had to put up his bicycle as collateral, at which point his eyes failed him, his luck ran out. He returned the next day to beg for the return of his bicycle, but the game was gone. It had relocated. He walked the streets and asked around until he found where they were playing. He begged the young men running the game to return his bicycle--it was his source of transport, income and wealth. They reluctantly relented, probably not because those who had hustled him felt any sympathy, but rather because the organizers of the game knew there would be plenty more customers. They led him to a shed stocked with the merchandise he'd seen the others winning the day before. They were just props in a low overhead variant of the shell game, which had come to Tambacounda.

Then, on a trip from Dakar, I couldn't help but read over the shoulder of the passenger in front of me (with seven passengers and a driver wedged into a compact wagon, there are few other places to cast a glance). He was going over a project prospectus from the World Bank promoting the cultivation of strawberries and flowers as export crops in Senegal. Strawberries and flowers? In Senegal?? And especially Tambacounda? Senegal *oublié*?? The gambling analogy seemed appropriate. It was as if the World Bank had invited all the countries of the developing world to spin the giant roulette wheel, and Senegal's spin came up strawberries and flowers. How else to explain the introduction of crops and market forces so foreign to the realities faced by most Senegalese?

How else indeed . . .