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RAMS PROJECT

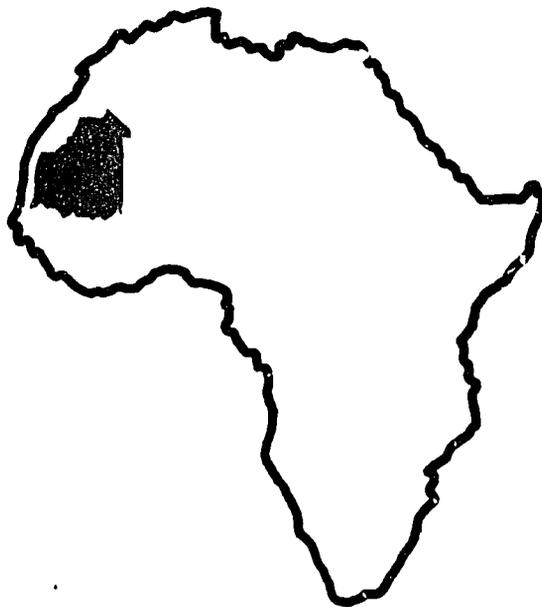
Rural Assessment and Manpower Surveys

SOCIAL CHANGE

SOCIAL ORGANIZATION OF

AGRICULTURAL PRODUCTION

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INTRODUCTION

The catalyst of change in all traditional societies has been the impact an alien monetary economy has had on all levels of their modes of life, their productive systems, their social structures and relationships, and their very mechanisms of self-sufficiency if not survival. A long history of conquest, domination and colonial policies have not spared Mauritania from that process. Added to all this, the drought of the 1970's burst the veneer of self-protective survival which the various social groups had given the illusion of maintaining to the outside world. Some survived better than others, but all were touched in the profoundest way possible : learning how to adjust to erratic change. Droughts have been recurrent cyclical phenomena in Mauritania every 30 years or so. Yet, it is essential to understand that the impact of the most recent drought and the adjustment to it have been very different than in the past, rendering the people's possibilities of survival far more fragile and tenuous. Both human and animal demographic pressures, a consequent process of degradation of the environment, a change in mercantile circuits and a greater dependence on monetarization have all led to a

striking difference in the effects of this last drought as compared to those of the past century.

Men and herds can move for better survival elsewhere, but agricultural land is immobile. Unlike men and cattle, it cannot reconstitute itself. It has already become obvious that, while agricultural production is decreasing each year, the commerce of livestock has dramatically increased even if this can be explained through the facets of economic and social exploitation. This impulse of exploitation has not been possible in the agricultural sector which allows no room for speculation ... as yet!

The traditional social organization of agricultural labor in Mauritania has been deeply shaken and is in an uncertain concentrated process of change: change in land tenure, change in the social and economic relationships between laborers and owners, change in agricultural habits and motivations, change in the role of women, change in the types of known migration patterns, change in habitat, change in the very concept of space, a basic premise both in relation to political power and control of agricultural production ... The list is endless and the outcome remains uncertain.

We will attempt to concentrate on three broad topics basic to the problems of agricultural development in Mauritania: traditional concepts of land ownership among the three major ethnic groups (Moors, Toucouleur, Soninke) and their subsequent change through agricultural projects; the traditional agricultural labor force which fits so strictly in the various hierarchical social systems and its mutations; and, lastly, the various impacts which agricultural development, principally irrigation, have had on the general picture of social change.

I. LAND OWNERSHIP, THE TRADITION

The traditional land tenure systems of the major ethnic groups of Mauritania - the Moors, the Toucouleurs and the Soninke - are well known, and much has been written about them in the old and current historical and anthropological literature, and especially in various reports dealing with development projects. Moreover, a National Commission on Land Tenure was formed in the past year, and is still studying the problems posed by the application of the 1960 Land Ownership Law. To avoid unnecessary repetition, we propose to present an outline of the traditional land tenure systems as a necessary background to the understanding of the changes that have taken place in the social organization of agricultural labor.

In spite of the great difference between the social structure, historical background and ecological environment of the three main groups mentioned above, similarities do exist and, indeed, create a link with the rest of traditional African land tenure systems. This does not lead us to assume, however, that unified new laws could then be enacted. Quite to the contrary, the problems that led to the failure or standstill of many a development project linked to land redistribution are due to the lack of understanding of the particularities of the different concepts of, and attitudes to, ownership in the various systems.

The most common characteristics of the African land tenure systems relevant to the Mauritanian context may well have implications for the attempts of implementing uniform land reform

projects.¹⁾ We will see below, however, that more important and more difficult to pinpoint are the differences. We insist on this point only because it is through the understanding and consideration of such differences that attempts at reaching the peasants most concerned will be made more successful. The traditional characteristics which we perceive as being common to Black Africa and in particular to the Sahel are the following :

- a. Individual utilization of land is within the general concept of collective ownership and is conditioned and controlled not only by the community as a whole but by the ethnic power structure;
- b. A highly defined hierarchical social structure and a correspondingly defined system of rights of ownership and usage of land are strictly adhered to.
- c. Shifting cultivation is integral to the traditional agricultural system of production in rainfed areas. The strong impact which the drought has had and continues to have on the decline of cultivation has affected the concept of ownership on these lands. Land, everywhere, is a factor of territorial integrity. The social, religious, economic and political unity, if not survival of the group depends on it. While land sale is somewhat more commonly encountered today, there is still a great reluctance to undertake such transactions with outsiders to the group.
- d. The unwritten character of the law or free interpretations of land tenure laws (ex. of Malikite law in Mauritania) result in the difficulties of its application and its variability. This does not imply that written

1) See Podedworny, passim.

laws mean better laws. Indeed, we maintain that the modern laws enacted today are far less sophisticated than customary laws that take into account variations and particularities of different legal situations pertinent to the group.

- e. Ownership is assured through a system of imposed taxation, gifts or performance of rituals on those accorded usufruct of land by recognized owners.

In 1928, the French colonial powers tried to impose a land ownership act that would recognize owners only after official registration of the land. Though this was a period which helped expropriate one ethnic group for the benefit of another, especially in the South, it did not succeed in overcoming customary laws for, today, original owners of the land return to claim their right now that irrigation, as well as the drought, have increased the value of certain lands. In August 1960, the newly independent state of Mauritania, in an attempt to enforce a land reform procedure, enacted a new land ownership law, which is much contested today, not only for its very vagueness but also for the lack of consideration it gives to the diversity of customary laws and for its lack of recognition of the most basic of Islamic tenets: ownership of land is based on work, the "vivification" of the land, and on historic circumstances. This rule is based on one of the hadiths (sayings of the Prophet which hold as much importance to theological interpretations as the Koran itself) which legitimizes ownership by the mere fact of vivification of the land. However, land lost by owners can always be a basis of reclamation of rights to this land.²⁾ Indeed,

2) Toupet, p. 257-258; Chehata, p. 124-125.

from all reports, evaluations and analysis of land ownership problems, it is not the difficulty of the recognition of ownership that is at the heart of the problem but rather the political institutionalization of that ownership.

A. LAND OWNERSHIP AMONG THE MOORS³⁾

Moors, unlike other ethnic groups, own land of various types of cultivation in Mauritania : oasis, dryland, irrigated and recession. This ownership, traditionally defined along social lines (beidane owning land, haratine working the land with various rights of usufruct), is strictly confined to clan affiliations (for both beidane and haratine). This pattern of ownership is determined by either right of conquest of land or by right of first clearing and cultivation of land. Because of the diversity of the types of ownership based on ecological conditions and historical circumstances of acquisition, customary laws differ from region to region, especially in relation to imposed clan taxation giving rights of usufruct to those without land (rental fees varying from giving 1/10th to 1/2 of crop).

In principle, the land tenure system of the Moors is based on Islamic law, on the Maliki rite, but most often customs of the different origins have given it its own characteristics or have adapted Islamic rules to their own benefit and circumstances. The golden rule in Islam that the land belongs to the one who

3) See Sociological Profile on the Moors for a detailed description of society and laws.

cultivates it is rarely adhered to anywhere in the Muslim World and almost never in Mauritania. Indeed, the assumption that Islamic law accords rights of ownership exclusively to "free men" can be interpreted to be correct only in the event that the concept of "unfree men" refers to slaves who have not been converted to Islam. It is therefore incorrect 'theologically' to say⁴⁾ that Islamic law allows haratine, who are Muslims and recognized even if peripherally as members of the group, to be excluded from ownership. It is rather customary laws and social habits that enforce such restrictions and such interpretations. Actual land ownership is at two levels: the communal and the individual. The chief distributes communally owned land to heads of families who have freedom of decision over their plots, except for giving it away. It is only upon the approval from the chief that strangers or outsiders to the clan or ethnic group may be permitted to settle and own land. This form of ownership requires payment of a yearly fee or tithe to the clan's chief in recognition of the original ownership rights and has become a far more frequently observed phenomenon in the past ten years.

Very frequently, because of irregular rains, land is redistributed every year by the drawing of lots after the first floods or rains, by the chief of the clan,⁵⁾ a highly egalitarian gesture giving all the opportunity of better crops. This egalitarian strain is also seen as an expression of gratitude to services rendered by others but situations such as these are very difficult to translate into a nationally-devised law. For example,

4) Maurel, p. 24.

5) Toupet, p. 257; Dubié, n.d., Maurel, p. 27.

before the 1960 land ownership law, the inhabitants of Tidjikja, subdivided into 4 fractions of the Idawali clan, participated together in the construction of a dam at Ederoum in which they were helped by the Public Works department. Because of the historic recognition of the valiant defense by the chief of one of the fractions, Ould Abouhoum, of the interests of the Idawali against the Kounta, it was decided that that fraction would be given an extra 1/6ths of the land allotted to them and the other 5/6ths would be equitably divided among the four fractions.⁶⁾

Different expressions of recognition towards complete outsiders through bequethal of land have been known throughout the history of the Moors in Mauritania. Thus, in gratitude for the support of the Wolof against a common enemy, the emir of Trarza not only married a Wolof noble woman in the 18th century, but also gave them large segments of land which is now partially included in the irrigated Plain of M'Pourie. Such generosity consequently assured the emir's political domination in the area.

Where oasis cultivation - palm groves - is involved, the traditional legal rules regulating collective and individual ownership are far more strict and more protectionist than those for recession cultivation. Clans long specialized in palmtree cultivation ruthlessly defended their territory and any outsider would find his trees cut down and his wells filled with sand. We see more clearly in the oasis cultivation an Islamic code, the habous, adapted for a purpose other than that for which it was originally intended with definite benefits for the group's protectionist interest.

6) Toupet, op. cit.; p. 258

The religious institution of habous properties (meaning locked in : indivisible and inalienable) for purposes of charitably assuring and perpetuating usufruct rights to the poor has fundamentally changed in meaning in Mauritania. As a means of excluding outsiders and of preventing the parcelling of land, habous is declared on the collective or family property upon the death of the owner and only usufruct benefits are shared by his descendants (in principle only, sons obtain two parts and daughters one part of a property). Thus again, property remains within the clan's family's domain and in no instance can it be sold.

A traditional and more generalized custom forces the owner to give the cultivator of his land (most frequently a hartani) half of his property if that co-planter worked for five years on the land. Yet, such a custom is in direct contradiction to the inalienability of habous. Where such habous property exists, the customary law of sharing property is rarely applied.⁷⁾ On the other hand, in areas where palmtree property is not governed by habous rights, as in Tidjikja for instance, another protectionist measure is used. The palm groves usually have several individual owners within one family and when one of them wants to sell his share, priority to purchase is given to the other co-owners rather than the outsiders. In some areas, a hartani, who has been sharecropping for over five years, may himself have rights to that sale. Indeed, it is felt that it is better to give to a hartani who is part of the social and family structure than to outsiders, who may become an economic and power threat.

An important consequence of this inalienability and in-

7) Ibid., p. 276.

division of land ownership is seen on productivity. It appears that though these rights protect land from being parcelled, minimal production still prevails on most habous properties. Because they are frequently badly managed, they attract little investment by the numerous owners who only gain usufruct benefits for the property and are not directly involved in its management.⁸⁾ The djema (clan council) has, however, the power to enforce penalties on the owners for not maintaining good productivity.⁹⁾

The Moors, unlike other ethnic groups, do not consider that the lack of cultivation of land over a long period of time justifies loss of ownership. Land, once acquired, remains part of the communal property unless it is lost through battle, expropriation, or weak political control. Indeed, traditional Islamic law asserts that ownership (milk) of land, once acquired, can never be lost even if land is left long uncultivated, unless land is freely disposed of (by sale, for example) by owner.¹⁰⁾ Yet, it is not everywhere that land is so sacred to the clan or collectivity. If it is so observed in the R'Kiz area, it is otherwise among the Moors in the Chemama region, the Senegal River area, where land sale is undertaken without constraints.¹¹⁾ Such contrasts are not a result of the extent of land availability but rather because of the difference in the socio-political relationship between owner and cultivator, i.e. beidane

8) Ibid, p. 275 and BDPA, 1968.

9) Toupet, p. 276.

10) Chehata, p. 127.

11) Maurel, p. 27; Boutillier, et. al., p. 38.

and haratine. Such a relationship changed much earlier and far more dramatically along the river valley than elsewhere among the Moors, because of the more direct and more obvious pressures by the colonial powers. Today, economic pressures and migration are the factors conditioning an evolution in the traditional system of land tenure.

All land tenure systems comprise two rights : rights of ownership and rights of cultivation through renting, sharecropping, leasing ... Among the Moors, these rights are traditionally defined along clear social divisions. In general, owners are the beidane, cultivators are the haratine,¹²⁾ the abid, (sing. abd : domestic servants or slaves) may be allowed to cultivate but often strictly on behalf of their master, therefore they are not obligated to pay the master or share in the expenses of the land.

All contracts between owner and cultivator are verbal and most frequently done between a master and his hartani, thus assuring the retention of land within the clan and making it easier for the owner to obtain his fee or share of the crop because of the strong social and economic, if not also psychological ties, established between masters and servants.

Usufruit rights of cultivation vary considerably from region to region and from clan to clan. We will cite here only a few contractual arrangements for purposes of contrast, while

12) In Arabic Haratine is the plural for harath meaning, the one who cultivates. Hartani is the singular form of this word in hassaniyya, which is the arabic dialect of Mauritania. Hartania is the singular feminine of hartani.

keeping in mind that with the changing situation today, however, many a heïdanè owner has been forced to cultivate his own land :

- a. After five years, the cultivator of a palm grove (not under a habous) obtains half of the palm trees, except in the Adrar where he would obtain only a third of the plot. The owner provides the land and the wells while the cultivator provides the seedlings.
- b. The cultivator, in the Tagant, would have the right to only half of the secondary crops under the palm trees (wheat and barley) :
- c. The hartani cultivating a rainfed plot in the Adrar would sharecrop in equal portions with the owner who would provide the seeds.
- d. In the Tagant, the cultivator of rainfed plots provides the seeds and keeps 9/10ths of the crop.
- e. At R'Kiz, the conditions of land rental differ according to whether the cultivator is an outsider to the group or a hartani : 13).

- i. In the case of outsiders to the group, the owner is entitled to 1/4 of the crop from the cultivation of the plots with difficult clearing conditions and as much as 1/3 of the crop obtained from land where some vegetation exists.
- ii. In the case of haratine tenant farmers, the master is generally entitled to 1/3 of the crop.

13) Maurel, p. 50 ,

This amount, however, increases to 1/2 for which seeds have been provided by the master-owner and as much as 2/3 if he also assumes responsibility of feeding him.

iii. In the case of abid tenants, as much as 9/10 of the crop is provided to the master who has the responsibility of providing the abid with food.

f. In practically all cases, the cultivator or hartani must pay the zakkat, the religious tithe (1/10 of the crop) to the owner or the marabout of the clan.

B. LAND OWNERSHIP AMONG THE TOUCOULEURS

Traditionally, the possibility of the individualization of land ownership appears to be far easier and more acceptable in the Moor's social structure. Habitat (the tent), mobility, commerce, social relationships, all created conditions of individualization or, at least, have led to a greater importance of the nuclear family. For the Toucouleurs' highly centralized social structure,¹⁴⁾ such a possibility was far more difficult to conceive. It is only since the colonial imposition of land registration on the basis of individual ownership that such a trend was made possible. Irrigation projects along the Senegal River are also enforcing a new form of land ownership, at least on paper, for it is not always so conceived by the community.

14) See Sociological Profile, Black African Mauritania.

Land tenure traditions among the Toucouleurs are complex and are inextricably linked to their social and political structure and to their knowledge of soils and their usages. Along the Senegal River, three main types of soils are commonly known. Walo (fertile recession land), dieri (dry land), and fonde (rarely inundated land between Walo and dieri). Yet, six other types are classified within the traditional terminology and each conform to certain rules and regulations.¹⁵⁾

Two characteristics appear predominant to the customary law : (a) the intricacies of the laws only seem to affect the walo lands which are the most limited and most fertile, the dieri, easily available and depending on rains, belongs to whomever cultivates it (the family unit, galle, or individual), thus possibly becoming individual ownership; (b) except for the dieri, all lands are collectively owned, diowre and are inalienable, transmitted within the lineage or clan through the dean or chief of the lineage, known as dyom lenyol or maodo, who has absolute power on land and decisions within the lineage.

The protectionist measures are even more defined than with the Moors by a complex duality of law allowing usage of land, dyom dyengol, literally meaning right of fire (implying rights of the first to clear land), and dyom leydi, master of the land, or right of receiving fees or "redevances". In general, both dyom dyengol and dyom leydi are imposed on the same plot of land. The cultivator, therefore, must pay the master of the land (land owner), usually a member of the aristocratic class of Torobe, three forms of fees : the assakal the religious tithe of

16) See Oumar Ba, 1976, p. 9-14,

1/10th of the yearly crop, the n'dioli, the yearly fee for "entering the field"; the tiotigu, form of tax to compensate for inheritance rights by the descendant of the owner. In the past, both the n'dioli and the tiotigu were usually paid in form of cattle, or, for artisans, a product of their speciality.

When only rights of usage, dyom dyengol, are imposed, one of three types of sharecropping contracts are chosen:

- (a) assakal, 1/10th of crop, theoretically; the religious tithe;
- (b) rempetien, 1/2 of crop;
- (c) thiogou, a maximum number of years (up to 10) decided upon against which a lump sum of money or riches is paid, as well as the yearly assakal.

All these forms of taxation¹⁶⁾ are an expression of domination by one class on all others. It appears, however, that the oldest inhabitants of the Valley, said to be the Sebe, ancient kings or soldiers, or Subalbe, the caste of fishermen, were able to retain their rights on their land as first occupants¹⁷⁾ thus remaining free from paying fees unless they cultivated outside of their land. These rights of lineage domination vary from area to area according to the strength of the lineage and the size of their land. The importance of that concept of lineage as related to land is old but still very much alive in the Mauritanian

16) Other forms also exist such as doftal, payment through one day of work in the owner's or chief's field, Hore Kossam, payment every Thursday by portions of milk for the dead; a payment by cattle breeders, etc.

17) de Chassey, 1977, p. 213.

Fouta Toro. Domaines were acquired through conquest or gifts to the dominant political class, the Torobe, whose most powerful sub-group are the Lawankobe. Indeed, the area is divided into seven territories,¹⁸⁾ each of a different size and of a different importance; where redevances and parcelling of land varies considerably. This point is very significant in the understanding of the reasons for differences in the nature of land tenure problems today as they exist in different irrigation projects, as for example, between the Gorgol and the Boghe plains.

The differences between the Gorgol Perimeters at Kaedi and the projected perimeters in Boghe are particularly important because of the reactions to land redistribution. Three quarters of the Gorgol perimeters remain uncultivated because of an effective boycotting by the owners. No such problems are foreseen for the Boghe plain. While four major clans traditionally control ownership over the Gorgol Plain and three at Boghe, the importance of the clans is far more domineering and assertive in the former because of the historical significance of Kaedi and of these particular clans, of the great concentration of fields, as well as the richness of the walo land. The economic dynamism of Kaedi, its demographic growth and traditional commercial significance have all given the traditional leaders an important advantage over the possibility of control on agricultural production as well as on commerce. While Kaedi made strides in economic diversity, Boghe, especially since the 1960's, has diminished in population and thus in economic and agricultural importance. The traditionally greater parcelling of the land, escaping the

18) These are known to be Dimar, Toró, Lao, Irlabe, Ebiabe, Bossea, N'dyenar, Damga, inhabited by specific lineages.

domineering control of a few owners such as in Kaedi, as well as the greater presence of cultivators - owners on their own lands (contrary to a high degree of absentee owners in the Gorgol), have made the problem of land redistribution in Boghe far easier to manage, both to the cultivators and the legislators.¹⁹⁾

Land tenure customs have greatly evolved in the Mauritanian Fouta Toro, diminishing in 1958 (the inalienable properties) to only 10% of cultivated lands. But the domination of the aristocracy as landowners, the Torobe, is still very obvious, with 60% of land owned by them and 9% by their dyabe, slaves and ex-slaves.²⁰⁾ Though these figures date some 20 years back and the proportions must have changed since then, an indication for the resistance to change, however, is very obvious with the creation of irrigated perimeters, even though the latter are usually placed on the least productive lands, except for the Gorgol. We see here a similarity in the expression of power in both the Moorish and Toucouleur social structure - power through the control of land and through the inalienability (diowre or habous) of that land.

We cannot exclude from this brief presentation the importance of another aspect of the Toucouleur social organization in relation to land organization or management : the galle the extended family unit with its galle Chief, through whom all important matters concerning home and field must pass. He is the link par excellence between the chief of the lineage, dyom lynyol, and the latter's constituents, so to speak. Though he may gather all elders of the village or family to make a decision, he is

19) See SONADER, 1979, 1978, 1974; SOGREAH, 1972.

20) See de Chasse, 1977, p. 214 and Boutillier, *et al.*, p. 116-117.

the most important and thus his control on all matters of production and distribution can be great.

In practice, the Moors, though they do not admit it in most cases, do not follow the Islamic law of granting partial inheritance rights of the land to women. Similarly, the Toucouleurs and the Soninke, as will be seen below, exclude women from inheritance rights on the land. These two ethnic groups admit it to be against their customs and justify it by erroneously saying that it is so prescribed in the Koran. It is not always easy to determine the difference between actual belief in a custom and conscious manipulation of this custom. What is important for us to know, of course, is the practice. In this case, it is a reflection of a highly centralized power structure as well as an expression of lack of understanding of the Islamic code which, if applied, may revolutionize the social structure as it did the Arab world of the 7th century A.D.!

C. LAND OWNERSHIP AMONG THE SONINKE

All that has been said about the Moors' and Toucouleurs' land tenure system can be applied to the Soninke with the provision of multiplying by ten-fold the aspect of social control and political protectionism.

Traditionally, Soninke land ownership is in direct relationship to the political power of origin. Rights to land are determined by the right of conquest and thus the right to rule which is in the hands of two noble families dominating the political and social structure of the Soninke in Mauritania, the

Camara and the Soumare, from whom only the Tounka, the political head and master of the land is chosen. The land, in principle, is strictly owned by the Tounka families who delegate their powers to the descendants of the founder of the village, its master of the land, the nyinyagumme, who controls all land distribution. All members of the village, besides the ruling class, have only usufruct rights to the land which is indivisible and inalienable. No selling is possible though changes have been observed, but exceptionally so. No land can be kept if the cultivator leaves the village.

A difference exists, however, in the degree and attribution of land according to the types of soils known to the area: dieri, fonde, walo, falo.²¹⁾

Even though the dieri is abundant and is, in principle, free to whomever clears it, in practice, it is under the responsibility of the head of the village who perceives a payment of 1/10th of the crop. These lands are known as free lands, dyaman-kafoninye, and being the farthest from village and river, they are usually cultivated by the servile classes.²²⁾ The more fertile lands, known as the lands of the clans, Khaabela-ninye, are under rigid control of the chief of the clan and master of the land, nyinyagumme, and on them three forms of usage are allowed

21) Dieri : non-alluvial areas; fonde : levee (includes three types of soils) · walo : sedimentary basin behind levee; falo : upper segment of the river bank. See Bradley et al. p. 153, where an interesting list of 18 terms is presented denoting topographic forms known among the Soninke and Toucouleur (p.53) and a list of 7 terms denoting soil types of which 6 are particular to the Soninke. There is no better proof than that to express the knowledge a people have of their environment and its use.

22) See Sociological Profile on Black African Mauritania, section on Soninke, for a more detailed discussion of land tenure and social organization of the Soninke,

loaning of land on renewable contract every year; leasing up to three years; and a new phenomenon of the selling of land only on fonde. This is only possible on the highest parts of the fondé which are now very hard to cultivate since the drought. These payments, nyinyantiekhe, vary greatly from region to region and can go from nominal, symbolic payments to large portions of the crops.

Within these customs of general land ownership holdings have a definite organisation reflecting the family structure: each extended family, the Ka, has a collective field, the te-Khore, under the authority of the family head, Kagumme. On the other hand, the husband's field is known as salumo and the wife's field as Yakharinte and though there is mutual help in each other's field, the wife in principle, is completely free to do what she wishes with the produce.

Inheritance practically does not exist within the Soninke customary law further reinforcing the concept of political power, inalienability and indivisibility of the land. The land belongs to the clan, to the community, and returns to it. In relation to the family fields, the land belongs to the family and at the death of the head of the family, the Kagumme, another family elder replaces him and takes control of family affairs. Indeed, it appears that in some Soninke clans, men and women distribute their properties and other material goods while they are alive to the point that it is sometimes said concerning the death of a very old man that "he was so old, he had no possessions anymore."²³⁾

23) See Pollet et Winter, p. 402.

Outline of Traditional

Moors

- Common property of clan.
- Distribution of plots by chief of clan to heads of family.
- Indivisibility of property for protection against outside sale
- Possible collective redistribution of plots each year
- Outsiders allowed only through permission of Chief and Djemaa with tithe considerations.
- Selling possible in limited areas (ex. Chemama)
- Land acquired in recognition of services performed
- Habous property, esp. of palm groves
- Uncultivated land remains communal property
- Role of Djemaa in cultivation decisions
- Contractual arrangements vary from region to region between cultivators (haratine) and owners (beidane)
- Great variety of tithes from 1/2 to 1/10th of crop goes to the owner

Toucouleurs

- All lands, except dieri, common property of lineage (diowre)
- All decisions by Chief of lineage
- Lands inalienable and indivisible
- Head of extended household, galle, has control of land distribution. Intermediary between lineage and village
- Individual ownership possible on dieri.
- Selling is recent phenomenon
- Sharecropping contracts set according to rights of usufruit
- Predominance of aristocracy as large landowners
- Great variety from region to region in relation to usufruit taxation

..... Land Tenure Systems (cont'd)

Soninke

Wolof¹⁾

- All land owned by political ruling class and thus belongs to the clan
 - Head of family has final authority on family lands but not on fields owned by women
 - All land is indivisible and inalienable
 - Right of usufruct for all clan members regardless of social class; no individual ownership
 - Selling of land still exceptional
 - Land acquired through conquests, gifts or colonial acquisition
 - Inheritance on collective family basis only
 - Tithes vary from region to region
- Land tenure varies from community to community, depending on demographic pressures and land availability
 - In general, Chief of village has final authority on decision making, on land distribution and has first choice on land
 - Land is collectively owned by village with individual plots for family units which are contracted by the head of the extended family, Keur
 - No inheritance allowed to women, but division made between male inheritors, except for collective plots
 - Land closest to village for "free" men; land farther away for servile classes (same applies to Soninke)

1) As already noted elsewhere (see Sociological Profile on Black African Mauritania, section on Wolofs), very little is known on the Wolofs of Mauritania. We therefore present only in outline form information gathered principally from field interviews.

D. SOCIO-POLITICAL POWER AND THE CONTROL OF SPACE : A CONCEPT OF LAND-OWNERSHIP :

Upon this background of tradition, what do the various land tenure systems of Mauritania imply? What do they mean in today's world of abrasive change, of mobility, of imposed and alien power structure? How are they perpetuated? How fundamentally did they change?

We have seen that, in principle, the traditional land ownership system of the Moors is based on the Maliki rite which institutionalized ownership through effort : land belongs to the one who cultivates it. But in practice, this is not the case, and we see that a striking similarity between all the ethnic groups is the fundamental relationship established between the acquisition of land, that is control of space, and political and social power, not necessarily economic power. All the rules and regulations will emanate from that concept of power which is reinforced by a rigid perpetuation of social hierarchies. Consequently, common to all the ownership systems, similar mechanisms and patterns of control will prevail :

- a. inalienability and indivisibility of the best lands (indeed, this is a most logical measure of self-protection in a region where fertile land is scarce and where, historically, land was acquired through conquests, razzias, usurping of power) :
- b. yearly payments for the privilege of usufruct : a constant reminder to users of the presence and status of the owner, thus perpetuating servility and a clientele

relationship of dependency between master-owner and servile class (slaves and ex-slaves), the backbone of the agricultural labor force. The original religious implications of most of these payments - helping of the poor through the tithe of zekkat or assakal - were overridden for the purpose of reinforcement of ownership; rigid control of the sale of land to outsiders of the community as a means of excluding them from a possible integration in the socio-political power structure. If sales are far more frequent today, they are, in rural areas, still strictly controlled and only exceptionally is land sold, under certain conditions, to outsiders.²⁴⁾ The reinforcement of lineage is through loans and sales to one's own kind.

- d. Traditionally, the extent of space - thus control - was set by the extent of lineage ties which, in turn, set frontiers of land ownership. Thus attitudes to national frontiers still have little meaning to most communities along the river but changes are occurring more as a consequence of the drought and economic self-defense than because of national policies.²⁵⁾

24) We know of specific examples of such sales and in each case it was an outsider who married from the predominant ethnic group after having proven himself to be a successful merchant (examples in Atar, Caralla, etc.), thus economically useful to the community.

25) Diallo, p. 13, notes however that some families cultivate on both sides of the river: "If we were to consider the notion of nationality, we would say that the relations between Mauritanian and Senegalese cultivators ... are that of kinship, neighborhood, work and, on the economic side, of complementarity rather than competition."

Change through the colonial imposition of written land rights, independence, migration, drought and new development projects have all helped bring about a major impact on the traditional attitudes toward ownership. The individualization of land ownership is still not very widespread, yet a beginning has taken place - especially on irrigated lands - though it is frequently neither clearly planned nor clearly comprehended by the communities.²⁶⁾

The new economic independence of the haratine has weakened a link within the traditional Moorish social structure. But it has only weakened it. It has not broken it. Though the "redevances" or imposed yearly tithes have diminished, especially since the drought and since the greater migration of the haratine towards the walô areas in the south, the psychological link which is the only social reference available - the heidane ex-masters - is maintained through these payments. These are frequently very reluctantly admitted today to outsiders.²⁷⁾ No matter the economic independence of the servile classes (whether Moorish, Toucouleur or Soninke), the deeply engrained concept of political and social hierarchies place barriers to social mobility. Through this we can better understand the success of the landowners' resistance to change. What we are not sure about is how long that holding back of change can be perpetuated.

Political power is still the only justification for ownership and not the fact of actually working the land. The numerous problems that have arisen in the past, and today, around land

26) See below section on Agriculture and Development, III. B.2.d.

27) See below section, II. The Cultivators A: Changes in the Agricultural Labor Force, and III, Agriculture and Development B. 2. f (v)

disputes! What is at stake here is the perpetuation of a defiance, on the one hand, against restrictions imposed by tradition and, on the other hand, against still-contested privileges imposed by colonialism.

A civil servant recently told us in Kaedi that the most difficult, most unmanageable and most constant of problems are those related to land tenure. Speculation, claims, anarchic squatting, anarchic constructions, are all daily occurrences which most frequently escape official control. The most obvious reaction to all this is that the original political classes are forming a front of solidarity (not only in Kaedi) in opposition to any change which may risk unsettling their power base thus also their privilege of social control.

It is not our purpose to go into the historical details for an explanation of land tenure problems of today - or yesterday. Yet, it is important to note that most ownership claims have historical arguments brought forth by the parties involved. The validity of all these claims is not always easy to determine. This difficulty in resolving these disputes highlights the urgency of studying such cases as those of Lake R'Kiz, Magta Lahjar, Gorgol, Aftout of M'Bout, Dar el-Barka, Boqhe.²⁸⁾ The identification of who the owner of origin is should not be the only goal of the research. Rather, for how many years the land was cultivated and by whom may be a far more pertinent question to solve.

28) Several documents have been written concerning these problems of which the following should be consulted, Hervouet, 1975; Maurel; Toupet, Boutillier et al. SOGREAH; SONADER 1974, 1978, 1979. Some studies should be redone such as the one on Dar el-Barka (BDPA, 1978) in which the heart of the land tenure problem was not dealt with.

As already noted above, it is the political - and legal - institutionalization of ownership which will help solve the critical question facing policy-makers : that is, what is the combination of tenure rules and institutions most conducive to reaching small holder-based agricultural goals?

II. THE CULTIVATORS : CHANGES IN THE AGRICULTURAL LABOR FORCE

It would not be an exaggeration to say that the bulk of the traditional agricultural labor force in each of the ethnic groups of Mauritania is composed essentially of slaves and ex-slaves. The fact that there is a great percentage of slaves and ex-slaves in relation to "free people" in most of the groups is a confirmation of that reality. The Soninke of Guidimakha and Kaedi support the fact that there are more slaves in their compounds than any other social class. A recent report on Tamourt en Naaj indicates that among the Kounta fraction there are as many haratine (34%) as there are beidane (37%) while there are 11% of slaves or abids and 18% of zenaqas, tributary herbers.²⁹⁾ This, however, does not mean that the noble classes do not cultivate. Among the Soninke, everybody works the land and among the Toucouleur, the upper class Torobe are the most involved in decisions related to agricultural work and are said to be the ones to migrate the least, for manual labor or artisan work is considered socially demeaning for them. For them, there is still

29) FAC, p. 17.

more honour in working the land. Even the heidane are beginning to cultivate, out of economic necessity though certainly not with the sense of pride of the Toucouleurs or Soninke.

Yet, the slaves and ex-slaves of all the ethnic groups are still obligated in most cases to pay various kinds of tithes for the privilege of cultivating a land that had been cultivated by their great grand-parents. A religious justification is found to reinforce the order established. Indeed, the order is so accepted that ex-slaves have their own slaves as long as having slaves expresses a betterment of one's social status, slaves being equivalent to luxury goods.³⁰⁾ Whether they are called haratine by the Moors, dyabe by the Toucouleur, dionkou-rounkô or Komô by the Soninke, the institution exists and in spite of definite changes, it is perpetuated by a strong atavistic sense of tradition.

A word of clarification should be added here to place into better perspective the meaning of slavery as practiced in Mauritania versus the more common appreciation of the problem as understood in the West. We will go into the historical explanations of such a social situation for it has been dealt with elsewhere (Sociological Profile : The Moors). It is important to realize, however, that slavery as understood in the western world does not exist in Mauritania, indeed in Africa in general. Domestic servants and field laborers are part of a social class which is servile everywhere yet they also fit in the family structure and, though exceptions exist, live in the same conditions, eat the same things, dress the same way, except for the Moors. Culturally, this servile class identifies with its master's cul-

30) See de Chasey, 1977, passim, p. 270 to 274.

ture for it also lives it and practices it. The physically inhuman conditions linked to the Western form of slavery are inconceivable here. What is at stake is the social and economic status of the individual who cannot move, either physically or socially, to another environment. This brings up another generalized characteristic of social classes in Mauritania, and, in fact, the Sahel : one is born in the social class of one's grand-parents and nothing can make one move up from one class to another, even modern education and an important civil service position. A two-tiered class system exists, in fact. On the one hand, the traditional system with its hierarchical social levels strictly defining traditional social and political behavior, and on the other hand, an urban-based class in which the modern sector evaluation system predominates : educational success, commercial economic success, good job, fancy house, etc. It is here that one can see an equalization of traditional social hierarchies but only in work situations and not in social relationships which are still heavily determined by traditional social ties and orders in Mauritania. We therefore see that all social classes, from nobles to the lowest class of servility, are locked into a social immobility that tends to perpetuate itself. The enormous difference, of course, is that slaves, ex-slaves and domestic servants are traditionally never completely in control of their destiny and are in a permanent state of dependency. Changes have taken place but much change remains to be seen.

A. THE HARATINE : A SOCIAL CLASS IN MUTATION

The abd (plural abid) is the domestic slave among the Moors and rarely does he cultivate. The haratine are the culti-

vators, freed in principle by their masters. They are free to migrate; they are able to become owners; some have created their own villages. Yet, in essence, they function as sharecroppers. In the psychology of the haratine, work is the measure of survival while for the beidane, idleness is an expression of self-esteem, at least when it concerns manual work. De Chassev' pertinently writes :

"Il ne faut pas oublier que sous l'aspect gratuit et désintéressé de la production théologique et poétique maure, il y a fonction, justifiée par les uns, acceptée par les autres, du surtravail d'une moitié de la population, selon les chiffres actuels les plus vraisemblables au profit d'une autre moitié, oisive." 31)

These characteristics of the Moorish society are important for they have a direct bearing on the impact of change on the society as a whole and influence the very process of that change not only as it pertains to agricultural production but to the modern sector as well.

Colonialism, independence, migration, the drought, education, all have generated structural changes within the various social groupings. Two important phenomena appeared; salaried labor and modern land legislation. The first precipitated a rural exodus and a shifting of interest from agriculture (forcing some beidane to cultivate themselves because of the loss of traditional labor) to modern urban manual work. The second brought out in the open,

31) Ibid, p. 148, "It should not be forgotten that under the cloak of gratuitousness and impartiality of the theological and poetic output of the Moors, there is a function, justified by some and accepted by others, of the overworking of one half of the population, according to the most recent figures, to the benefit of the other idle half."

by allowing the confrontation to be heard, the tensions long stifled concerning land use. In fact, it is since the drought and the small beginnings of development : projects that change has accelerated and, indeed, has set in.

Numerous examples can be found to express the tensions of such changes. Yet, it is interesting to note that the recurrent questions that come to mind after numerous readings and field observations, are whether the breaking of the ties of servility means the end of tithe obligations and, if so, does this mean the break with original social ties? With the original social identity? These are not questions that we can readily answer for the the cases vary greatly from region to region, and from individual to individual. Some examples may help highlight the diversity and difficulties of this adaptation to change by both beidane and haratine.

a. Salaried activities in the towns have led many a hartani (plural : haratine) to seek employment while leaving his family, or part of it behind. It is said that in some cases, the hartani must still pay part of his salary to his ex-master. This is done not only because there is the traditional habit of expressing respect in this fashion (giving part of one's production to the noble and religious classes) but, more important, because the man's family may have rented a field from the master and a total break between the hartani and master may lead to the taking away of the field from the hartani's family, thus is livelihood. ³²⁾

b. In Lake R'Kiz, millet production in normal years is considerably higher than in the Chemama region where

32) See also Maurel, p. 25-26, who adds that these payments serve the purpose of a "social security" for the hartani upon re-

land owners have gradually diminished the imposition of tithes because of the scarcity of production. This has led to a definite change in the master-servant relationship which have affected the concept of ownership of the Chemama land.³³⁾ The traditional richness of the millet production has not encouraged the owners of Lake R'Kiz to diminish their hold on land cultivated by others. The drought, however, has made cultivation a more arduous task while, at the same time, monetary needs have greatly increased, even for the haratine. To oppose the heavy fees imposed by their masters, the haratine actually refused to cultivate and went on strike.³⁴⁾ This event happened in 1972 and yet the problem to date at R'Kiz has not been resolved. The lake, considered for an irrigation project, is owned by 13 tribes and fractions who themselves contest each other's ownership. Here it is not a matter of ownership for the haratine but an elimination of tithes which is requested.

c. In Magta Lahjar, the problem has acquired national proportions and has strong political connotations. There are several renditions of the Magta Lahjar conflict all with various forms of justification. The most accepted explanation, however, is that some 8 to 10 hears ago a

32) See also Maurel, p. 25-26, who adds that these payments serve the purpose of a "social security" for the hartani upon retirement for he would be assured of being taken care of by his master's family. However, the economic situation today may change rather abruptly such an assumption.

33) Boutillier et al., p. 38-39

34) Maurel, p. 28

dam was constructed by the beidane and haratine of the Idawaich marabout tribe in the aim of reconstructing an old dam built at Oued Aneur in 1940. Contributions were made by all - masters and haratine - on the basis of equal redistribution of land for all participants. Only a small group of haratine were considered after the completion of the dam, however. This incited the haratine to go to Chogar, 7 km out of the area, to build their own small dam. The masters came and "convinced" the haratine, that cooperation was necessary and agreed to compensate them for some of the expenses made, if some beidane were included. The local authorities, the Prefecture, helped in this reconciliation. Up to this point there appears to be no conflict in the information received. However, witnesses confirm the haratine's assurance that they had received a written "Protocol d'accord", or agreement, which was verbally presented to them to the effect that the land around their dam was now theirs. Once returned to their camps, one of the illiterate haratine read the document in which only usufruit rights were accorded to them. Immediately, a violent revolt took place. The haratine leader was arrested and the dam was destroyed by authorities as a means of eliminating a contest of wills. The haratine declare having been betrayed while the beidane and the authorities claim never having made any such agreement with the haratine other than allowing them usufruit rights. For the past 3 years, no solution to the problem has been reached.

d. Bolladji is a haratine village, a few kilometers north

of Boghe. It was barely five years ago that the first houses were built. Until then, the five families which settled there remained in tents. Today, there are forty families. All the haratine came from one tribe, the Idey-djiba of the Aleg region, and all came to cultivate the walo of Boghe. It is interesting to note that while the walo belongs to the Toucouleur of the area, the land surrounding the periphery belongs to two Moorish tribes, the Hallailaba and the Ideydjibe, the latter being the haratine's old masters. The haratine claim that they do not pay any fees to their masters and in fact, few of them ever go back to their area of origin. However, all pay fees to the Toucouleur Wane family, a symbolic 7 ouguiyas, a tithe called dioldo, as a means of confirming rights of ownership of that family. This is, however, difficult dieri land which the drought has rendered even more difficult. Thus, many sharecrop on the walo for the Toucouleurs under rempoetien conditions, i.e., half of the crops are given to the owner. These haratine are not self-sufficient, yet they have managed to break their ties with their original social links. Their attraction appears to be stronger towards the town of Boghe. Indeed, their women marry Toucouleur men, but not one case of a hartani marrying a Toucouleur woman is known. A definite sense of a break with the Moorish culture was especially observed among the women, many of whom were wearing the Toucouleur "bouhou" (dress) : rather than the Moorish women's "malaffa". Though most of these haratine remained in an agricultural activity, many had already joined the army or gone to seek work in

Nouakchott. Many also worked as seasonal agricultural laborers in Senegal.

The point of this example is the recent attempt of related individuals to create an independent community. What identity this community will assume, they themselves are not sure. How long they will be able to remain as a community is also difficult to say, especially when one realizes that two-thirds of their lands will be taken by the embankment for the extensive Boqhe irrigated perimeters. What compensation they will obtain is still not very clear either.

- e. Sangue, a Toucouleur village along the Senegal River, is, in effect, a village of "Toucouleurized" Denianke Peulhs. The village has a mixed population of noble Toucouleur (Torobe), Peulhs, beidane merchants and haratine who come as seasonal laborers. None of the haratine however, has a set salary and very frequently they are housed and fed by the families for whom they work in exchange for work accomplished plus some sort of financial compensation if agricultural work is heavy. This is a village in which the migration percentage of male youth and adults is high and the presence of the haratine compensate for this lack.
- f. On the Plain of M'Pourie, apart from the Wolof owners, there are three Moor tribes with allotted portions of lands because of the historical ownership rights : Oulad Begnouk, Oulad Khalifa, and Oulad Bou Ely. Only the haratine of the different families cultivate the land and, in principle, would be the owners of the land they cultivate. Because sharecropping and traditional fees

to owners are forbidden in the Plain, it has not been possible to know if, in effect, any tithes are paid. We know, however, that in another case of expropriated property from the Emir of Trarza given to those who cultivated along the Rosso area, i.e. the haratine, the tradition of giving a good share of the crop is still maintained and, consequently, the de facto ownership of the Emir is recognized. Links through fees are maintained for the sake of social ties but the maintenance of such links is not openly declared. This, in itself, is a pressure towards change.

g The situation of the twelve haratine who managed to obtain plots in the Gorgol irrigation project is particularly interesting. As with M'Pourie, no fees are to be paid to the original owners. When one of the haratine found this out, he refused to pay the "assakal", 1/10th of the crop, to his old master, and went to the police to denounce him. As a result, the land was taken from the hartani! But as the original owner could not find anyone to cultivate for him -- though the reason for this difficulty was not clear from the interview -- the hartani was asked to return and cultivate. He went back on the condition of not paying the fee. This gave courage to the other eleven haratine who also stopped paying the tithe. Here, again, it is difficult to know whether this assurance is so absolute for, as an old Soninke of Kaedi maintained, the payments of "tithes" are absolute and widespread in the Gorgol perimeters and have gone over the accepted 1/10th because of the value of the land now irrigated.

These few examples are but an indication of the diversity in the attitudes and needs of the haratine, varying from a complete break with one's past to an unbreakable need to sustain that link. What is still significant, however, is that the haratine have remained the most productive force within the agricultural sector of the Moors. In the meantime, mobility, migration, new ownership, new laws have incited them in acquiring a consciousness that is making them aware of their rights under the laws, even if these are not clearly enunciated. Yet, migration does not appear to be a strengthening factor in group consciousness as it is with the Soninke. Typical of the Moorish culture of which they have been impregnated for centuries, the haratine frequently become highly individualistic and try to break from family and masters; often not sending money back to the community, a behavior in complete opposition to either Soninke or Toucouleur migrants. If this phenomenon may not help us answer, even if hesitantly, our question at the start of this section concerning the break with the traditional social identity of the haratine, it encourages us to add another question: Does this migration help the haratine into seeking a different identity? If so, which one and how?

The traditional relationship of dependency of the haratine towards the beidane is going through an agonizing process of change. Mutations of mixed dependence and independence are taking place. The most significant aspect of the change, however, is the new set of relationships which are becoming possible for the haratine as salaried workers and, at the periphery, small owners though exceptions of rich haratine owners do exist.

As the above was being written, a declaration was made on July

5, 1980,³⁵⁾ by the Military Committee for National Salvation (CMSN) abolishing slavery in the entirety of Mauritania. In fact, slavery was abolished under the French rule in 1905 and reconfirmed at Independence. This appears to be the first time since independence, however, that the official recognition of the persistence of slavery is admitted by the very fact of abolishing it. A commission of theologians (ulamas), economists and administrators will be formed to study the problem of compensation for the masters who will be losing a traditionally free labor. The situation is very new and the problems have not yet been raised but the implications of this declaration, not yet decreed into law, may vary greatly from area to area.

The burden of slavery was becoming mutually onerous to both slave and master, and particularly to those masters who were suffering under the drought through the loss of cattle and crops. It was becoming increasingly difficult, as seen above, for the slaves and haratine to pay their fees as prescribed by their masters and the tradition. An exodus of slave and haratine has appeared more widespread since the drought, but ties with the masters have always been maintained. How drastically will these ties break may be a question only the future can answer. Yet, the economic support was frequently mutual, even if at the greater expense of the slaves and haratine. The abolition of slavery would not fulfill its purpose unless the freed slaves are helped effectively into being integrated in the economic circuit - a problem which will not be easily settled in a country with as great an unemployment situation as that of Mauritania. Furthermore, in the context of this present study, a pertinent question which should be raised by the above-mentioned commission is whether the slaves and haratine are now to be automatically

35) Chaab, July, 7, 1980, p. 1 and 6.

recognized as owners of the land they have been cultivating for so many years or whether they will become paid laborers, or continue to be sharecroppers.

B. LABOR ALONG THE RIVER

It has been said that the social situation of the Toucoucouleur exists in function of a common destiny : working the land.³⁶⁾ There is absolutely no doubt, however, that that destiny is shared by all the other major groups along the Senegal River, including the Peulhs, today a group fated for a mode of life other than their traditional herding and forced into sharing - even if temporarily - this same destiny. Indeed, many Peulhs are becoming cultivators by necessity, but rarely owners of land, thus increasing the salaried agricultural labor force which is a growing and important factor of socio-economic change all along the Senegal River.

Theoretically, the social structure of all the ethnic groups of Mauritania resemble each other : highly hierarchical, with all having endogamous castes and slaves of various categories. Yet, they differ in one main aspect : in their socio-economic functions as reflected in their agricultural organization and production. Among the Toucouleurs, the noble classes do not till the land, but are the dominant decision-makers on its production and distribution of this land as are the Soninke. Among the latter,

36) de Chasse, 1978, p. 96.

however, traditionally everybody, old and young, slave and noble, works the land and the patterns of life - habitat, social relations, migration, agriculture, food distribution, etc. - center around the agricultural activities of the group.

Migration for the Soninke is a test of manhood. It begins at a very early age, when, before the rite of circumcision, boys of 8 to 11 years old are sent to work outside of their village, usually in a larger town (such as Selibaby or Couraye), for the sole purpose of earning money to buy their after-circumcision feast attire, the "houhou". This may take five to six months and is a tradition which still persists. Today, a Soninke young man cannot get married honorably unless he has been outside the country and especially to France. To migrate for work - particularly for an urban activity - is an old social and psychological necessity for the Soninke man and has become part of the general and accepted social pattern of behavior. The Soninke have a saying which highly values commerce, the most important activity of many migrants: "All trades are accented except stealing!" It is, therefore, understandable and not very surprising to note that a great majority of youth migrate for years on end for, putting aside the economic pressures today which have created a vacuum of males between the ages of 20 and 50 in most Soninke villages,³⁷⁾ the social pressure to leave is important.

In view of such an exodus, it may be a logical assumption to believe that social alienation and loss of identity may be increasing among the Soninke. Moreover, a loss of interest in agricultural activities is a normal consequence of such change. This is a typical reaction in most youth not only in the other ethnic

37) See Bradley et al., and War on Want reports

groups in Mauritania; but in most underdeveloped countries. Yet, if all the above is also true for the Soninke today, a striking and outstanding characteristic of this highly family and clan controlled society is the fact that migration reinforces this control on family life and on agricultural activities around which the family unit is centered. There is no escape from family and class among the Soninke;³⁸⁾ and there is no possibility or even desire to escape, for reintegration into family and village is the final ritual for social self-esteem.³⁹⁾

The high value placed on work and productivity is the core of the dynamism of the Soninke in and outside of their traditional environment. But it is also a very particular type of dynamism, for it refuses all social - though not economic - structural change and is viewed as a means of perpetuating the traditional system of control and power of the elders of the group. The youth and men, regardless of their modern or urban social functions, are under the moral obligation of accepting the decisions of their

38) See Ibid., also Sociological Profile on Soninke, (RAMS study B-5) and study on Migration (RAMS Study F-1).

39) It does not matter how long a migrant stays away from home as long as he comes back. It is said that if a migrant does not return it is because he has failed to accumulate either enough money or material goods. In such cases, if he refuses to return, a decision is made by the family and the village elders to send someone to fetch the man. In no way would this person be demeaned or shunned. The goal is to reintegrate him in the social structure, not to reject him, even if he were unable to live up to the moral values of the group. In one such case at Diagountourou in the Guidimakha, a man in his fifties, having been away for 25 years in France and unable to manage either his life or his finances, as was expected of him, was brought back to his village, a house was constructed for him and he was given a position in the traditional assembly of elders, the djemaa.

elders and peers. This apparent traditional cohesion of the group has nevertheless, opposite effects on the inescapable process of change within the society, if not only through the impact of demographic pressures.

Diaguili, in the Guidimakha, is the stereotype of the Soninke village which makes every effort of rejecting change, and, by enforcing their traditional hierarchy of power, appears to withdraw within itself. Indeed, this can only be explained as a means of self-protection against an avalanche of uncontrollable change.⁴⁰⁾ The village occupies a smaller surface than Selibaby but has a denser population than that of that town. To prevent anyone from moving outside the village, and therefore changing the traditionally prescribed habitat positions, the elders have forbidden all construction outside of the village, except for slaves, and as there is no space in the village, compounds are literally asphyxiated by overcrowding.⁴¹⁾ Such a situation can only lead to tensions, explosions, and indeed, the present contra-

40) In Diaguili, as in other Soninke villages visited, there are signs at the various entrances of the village forbidding the entry of motorized vehicles for they disturb the peace of the village. It is also interesting to observe that unlike the villages of the Toucouleur, Peulhs and Moors, where space predominates, the compounds of the Soninke villages are incredibly close to each other and in Diaguili stiflingly so.

41) The closer one lives to the center of the village, the higher one is in the social hierarchy. Thus the Soninke villages are built in circular forms, the nobles in the center and the slaves at the periphery of the village. It can be said, hence, that those who have the most breathing space, so to speak, in Diaguili today are the slaves, for they can - and do - expand their habitats.

dictions of the Soninke appear full-blown in Diaguili : on the one hand, a seemingly self-supporting, cooperating society, where control and self-help express the pride of the group while, on the other hand, an internally tense group where conflict at all levels begin to become apparent, even to outsiders.

This socio-psychological structure of the Soninke is particularly important in understanding the problems which face this society and their present impact on agricultural production such as in relation to the creation and maintenance of cooperatives, reflecting inhibiting factors to constructive change. Yet, we also note that the highly organized and controlled social structure of the Soninke has helped many families in these drought-ridden years to survive in 1980 on harvests of 1979. Even more than in the Toucouleur and Wolof villages, the labor force in the Soninke fields has greatly changed, reflecting an evolution and adaptation in the social organization of production. In spite of the apparent attempts to maintain the traditional structure, four factors also typical of the changes in all the other ethnic groups are far more heightened among the Soninke, reflecting a greater change in the organization of their labor force :

- a. The increasing participation of children below the age of 15 years in agricultural labor, thus making it exceedingly difficult for children to regularly attend school or even have their families willing to send them to school;⁴²⁾
- b. because of the increasing demands for money ("today one needs money to eat") and for consumption goods, while there is decreasing profit from agriculture, the men migrate but are replaced by seasonal migrant laborers

42) War on Want, p. 39.

from Mali, Senegal or other parts of Mauritania who are paid by the funds sent by the migrants.

- c. women have an increasingly more involved role in the fields (but also in the children's education);
- d. a far greater participation and permanency of slaves in the fields of the noble class,⁴³⁾ where participation may have been less permanent in the past because of greater family and communal cooperation.

The position of slaves is far more subtle among the Soninke and the Toucouleur than among the Moors, yet, among the Soninke in particular, they are much more restricted in their social mobility because of the very nature of the social control which touches all levels of the society. The economic advantages of the slaves in these two groups are more obvious than for the abid or haratine, for the slaves in these societies can place heavy economic demands on their masters which are inconceivable actions in the Moorish society. Moreover, and particularly among the Soninke, the slave can replace the absent head of the family and has an important function in the education and discipline of the children, also inconceivable among the Moors. Yet, among the Soninke, revolts of slaves have taken place, not only in Mauritanian villages but in France among the migrant workers: The absolute reliance on slaves not only in agricultural labor but also in domestic activities is an important economic factor in these societies, especially where the majority of "free" men migrate for remunerated work.

43) Ibid., p. 41.

National frontiers have not succeeded in interrupting or curbing the constant movement across the Senegal River for the sole purpose of cultivating across the river. Whether on the right or left bank, the villagers still have their fields on the other side of the border. Similarly, frontiers have not succeeded in limiting the reciprocal use of agricultural laborers going back and forth on a seasonal basis.

The parcelling of land through the gradual imposition of irrigation projects, migration, exchange of property within the village, national frontiers, all have had a great impact on attitudes towards the traditional concept of communal ownership and have increased the acceptance towards a new form of individualization of property. This reliance on part-time farming has created a greater dependence on non-family labor, the family being the traditional backbone of agricultural work, and has weakened attachment, particularly of the youth, to agricultural work and eventually to village life. A vicious circle of needs is thus created, encouraging out-migration (though the drought was an increasingly important factor in these past few years) for the sake of monetary gain.

The decreasing availability of cultivable land because of the drought, of demographic pressures creating greater need for land, and irrigation, encouraging parcelling and individualization of land, has led to motivations of varied impact on the agricultural production, particularly along the river.

C. MOTIVATIONS AND AGRICULTURAL LABOR

The drought has created a similar reaction among both herders and cultivators : it has forced them to abandon even if

temporarily, their primary mode of life. Some herders, such as the Peulhs and Moors had to cultivate as a means often of reconstituting their herd, while some cultivators had to abandon their land, thus also their own primary mode of life, to migrate in search of another type of work. Many cultivators, however, especially among the Soninke, began to invest in cattle because of the growing realization of the fragility of the traditional agricultural system wholly relying on the availability of rains. All this created a set of positive as well as negative motivations which have not always been channelled into a productive use of agricultural labor.

If the history of Mauritania could be narrated partially through its religious evolution, which had a strong impact on the social and political orders of all the ethnic groups, one would find that it has not had as strong an influence on the social organization of agricultural production as religion has had in Senegal, creating there a dynamism of activities, though highly controlled, under the capitalistic impulse of marabouts. Few examples of such religiously-instigated agricultural production are found in Mauritania, yet they do exist, such as in Boudait, a Moor marabout (religious leader) leads a tightly-knit religious community into which he has introduced animal-drawn ploughs and more up-to-date agricultural methods.⁴⁴⁾ In Aoujeft, in the Adrar, a Mouride influenced marabout has developed his agricultural community and has his disciples - unremunerated - cultivate his oasis. Another even more striking and far older example is the highly secretive Soninke religious community in

44) See SONADER, Tagant report, Annexe 2, p.19.

Kaedi, linking eleven clans through ties of Hamallism, a generally rejected sect in Islam which led to outbreaks of violence in Kaedi in 1932.⁴⁵⁾ The small group of Hamallah Soninke in Kaedi, however, are said to have played an important role in the economic activities of the town and because of the religious control of the members of the groups, it appears that they are the most active and most consistent participants in the otherwise dramatically under-used irrigated perimeters of the Gorgol. All these are but few examples which confirm the lack of religiously-institigated agricultural communities in Mauritania.

The problem of the generation gap among the Soninke, as we have seen above, exists but is held under a tremendously severe system of social control which has greatly relaxed among the Moors, Toucouleurs, Peulhs and Wolof. Among the haïdane, usually unused to manual labor, the youth avoid working the land and prefer migrating to towns or going to school instead. The young Foulabe herders, become cultivators, are enticed into agricultural labor, however, by material incentives from their families. For instance, in the area of Kankossa, fathers may give their sons a heifer to encourage them to work with them while helping them start their own cattle herd. Similarly, haratine fathers may give radios to their sons as compensation for work done in the fields. This whole new incentive system, in complete contrast to the traditional expectations within the family units where individualization of incentives could only be channelled for the benefit of the community and the family, is a clear reflection of a certain amount of social and family disintegration. A growing reliance on a new system of monetary compensation appears as a reflection of an already accepted integration in an increasingly consumer society. The salaried labor force, as seen

45) de Chassey, 1978, p. 149-150.

above, is part of this motivation - but also the sole source of survival for many - for it is creating new forms of dependency and social relations and a heightened monetarization and proletarianization of agricultural labor. But in many areas, the environmental conditions are such that motivations to migrate become far more significant for, as has been observed all along the Senegal River area, the need to buy food to supplement, in part or in whole, family production has become one of the most important economic incentives for migration.

The enormous difficulties of merely acquiring cash as a means of survival, let alone investing in the land, have greatly limited incentives and initiatives and increased the dependency of the cultivators on the merchants. A vicious circle of indebtedness is frequently created and in one case, in a small village outside of Dar el-Barka, this indebtedness enabled a merchant to acquire land from farmers in exchange for heavy debts owed him. The implication of this bartering of people's right for land is of great importance in areas where irrigation is attempted at the village level. The indirect acquisition of land will reduce traditional small owners to becoming sharecroppers or laborers.

Personal initiatives of investing in individual irrigation projects are beginning to appear in various parts of Mauritania. This aspect will be further discussed below for it has important implications both on the meaning of investments and on the attitudes towards development. It is enough to note here, however, that the first interest in new agricultural motivations came through observations and travels. The constant travel back and forth across the Senegal River has allowed the Mauritians, es-

pecially of the river area, to observe, if not also participate, in the Senegalese projects which have become their basis of reference. The openness to change and the desire of newness are promising attitudes. What is often regrettable is the lack of apparent understanding of the problems of the Senegalese projects. Moreover, there appears to be very limited personal initiatives in self-sufficient gardening projects as, for example, a more widespread use of the river bank where irrigation is so much simpler and more controllable. The sense of waiting for motivations to be initiated by an outsider or an administrative power is an attitude which partially explains the lack of more generalized and more coherent personal investments in agricultural production. Yet, this is not always the case. We have observed at Sani, outside Kankossa in the Assaba region, an interesting situation at the experimental station initiated some years ago by French aid and the Mauritanian government. The station is technically opened though non-functional. Its extension worker remained and his determination and interest in pursuing the plantation of trees helped make survive that artificially-created oasis. Yet, the interest is also in the impact that activity has had on the Peulhs and beidane settling in the area. Now, small pockets of self-initiated activities under the influence of the Sani extension worker, have taken shape in the area. But such an example of success is due only to the personal interest and initiative of one man.

D. WOMEN IN AGRICULTURE

All the women in the agricultural areas of Mauritania had and still have an important role and function in the family's agricultural production, except for those in one ethnic group: the Beidane women. Beidane women, traditionally, are trained from their earliest years, to become women of leisure where having no activities of any manual nature is the ideal. This was not always done with their full consent. It is well known that the now dying tradition of "gavage", the gorging of young girls, included force and violence as a means of coercion. Today, the economic situation of the Moors in general, the very process of sedentarization, which is a consequence of economic losses, has forced many a beidane woman to begin to actively participate in agricultural work.⁴⁶⁾ All other women, the haratine, the Wolof, Toucouleur, the Soninke see their roles change by having greater responsibilities added to their lives.

Traditionally, women have always had specific functions along with their husbands and fathers in the field, in addition to cooking meal to take to the field either for the husband, relatives or friends in the community who come to help on specific occasions. Women participated in the clearing of fields, in the seeding and planting during harvest time. But, in most cases, among all Senegal Valley peoples, women also had their own fields, and generally, it was traditionally accepted that they could do whatever they wished with the produce; selling or exchanging it, to satisfy their personal needs. Yet, in most cases today,

46) See SONADER, Tagant report, Annexe 2, p. 19.

because of the great deficit in agricultural production, the women's fields are used to supplement the men's produce, which was at one time considered to be sufficient for family consumption.

We cannot yet speak of the feminization of agriculture anywhere in Mauritania, but it is important to note the impact which migration has had on women, not only in relation to the greater economic responsibility they now have within the home, but in the education of the children and the managing of family affairs. The widespread exodus of husbands for several years on end, except for brief visits now and then, has forcibly added a nuance of change in the social organization of agricultural labor. For example, the women of the fishermen's caste of the Toucouleur, the subalbe caste, were not used to cultivate the falo or dieri. Today, because of migration and a greater need to cultivate, the subalbe women of the Gorgol region have begun to do so. An even more striking example is that of the Soninke women who now have the possibility because of the lack of labor due to migration, of cultivating lands they were traditionally never allowed to use. All this should but reinforce the integration of women in the labor force and in the development process.

Yet, this is not the case. Development of agriculture is conceived as a realm of male activities. The error is serious and damaging. It emanates from the very conception of the development process. It is, therefore, not astonishing to discover that in an area where rice is traditionally cultivated by women - the Soninke of Guidimakha - the irrigated perimeters planned in the various villages for the sole purpose of cultivating rice, exclude women from having parcels allotted to them! The serious marginalization of women is certainly an unintentional consequence of development. Yet, the lack of realization that the delay

in integrating women in the immediate process of development, with the same emphasis as that done for men, without going out of the confines of the accepted traditional social roles given to both men and women, can only confuse and delay the motivations, initiatives and learning processes of the community concerned. Rarely are women, no matter where in the underdeveloped world, considered as important targets by extension workers whose role it is to improve through education and observation, the agricultural methods of farmers. Women who cultivate with husbands in their fields are farmers and cannot logically be excluded from that process. This is the situation which obtains in Mauritania even though the importance of agricultural extension workers has not yet made its imprint clearly or profoundly enough.

III. AGRICULTURE AND DEVELOPMENT

Apart from the mining and industrial fishing sectors, development in Mauritania is synonymous with agricultural change. The process is not smooth and faces some overwhelming technical, economic, and social problems.

Agriculture in Mauritania has been pertinently described as "raffle cultivation" ("une culture loterie")⁴⁷⁾ to denote the uncertainty of gain. Indeed, not even irrigation has improved this image of risk. The twofold problems of agricultural production are intimately and closely interrelated: the dramatic consequences of the drought have affected a large portion, if not

47) Toupet, p. 259.

the entire population, and resulted in profound social upheavals.⁴⁸⁾ Change, mobility and ethnic contacts have all been part of a long historic process of social and economic evolution in the country. Nonetheless, the drought of the 1970's has served as a catalyst to either reinforce certain tendencies - the great streak of speculation everywhere - or distort important bases of continuity among herders and cultivators in their respective modes of production.

Irrigation is the means of agricultural survival not only in Mauritania, but in the Sahel as a whole. Before getting into the problems relating to the predominant approach to irrigation and to the main organism in charge of implementing this process, SONADER, it is first important to touch upon some of the social constraints relevant to this very process of change.

A. SOCIAL CONSTRAINTS TO DEVELOPMENT

We do not imply here that development means only irrigation on a small or large scale, or that constraints are relevant only to irrigation. There are general constraints to change within any society in mutation and in the ethnic and social diversity of Mauritania the similarity of these constraints is striking. It is interesting to note, however, that Mauritania is one of the few African countries where deep-rooted magico-religious beliefs and customs related to agriculture are relatively scarce.

48) See both Sociological Profiles and Migration : Study in Social Changes, in: RAMS, Sociological Studies.

The role of the religious leaders, the marabouts, in all the ethnic groups are of extreme social, political and psychological importance, yet even this social class seems to have a diminishing importance in regards to irrigated land where their traditional role and function cannot serve the same purpose any longer.

Nonetheless, one of the most difficult and most sensitive problems to deal with is the relationship between cultivators and herders. How will herding persist in view of all these changes not only due to irrigation, but also to agricultural change which has increased the value of the land? Cultivable land, whether rainfed or irrigated, is in great demand and what is scarce, what becomes a rare supply, acquires an unforeseeable value.

1. HERDERS AND CULTIVATORS

In livestock, it is the big merchants and civil servants who have entered the mercantile circuit of herding, indirectly helping save part of the potentially lost herds due to the drought, but also abruptly changing the social relationships in that traditional mode of life - they helped trigger a process of pauperisation of herding by buying off herds and transforming herd owners into salaried help, whether in herding or in another sector. The positive outcome of an opening of the cattle market is that the ethnic groups, other than the Peulhs and Moors, began to see the greater stability in that sector and thus, because of fragile reliance on rains, Wolofs, Soninke and Toucouleur began to be more actively involved in the buying process.

This process created new problems for both herders and cultivators. The little land available for grazing and cultivation is now claimed by both groups with no real solutions of protection found for either herds or cultivated lands. Not one village along the river area or even more inland areas where recently built wells exist is spared from camels and cattle who ravage the land because of overgrazing, a result of rare pasturage,⁴⁹⁾ or of wells too distant from each other, thus forcing overconcentration of herds.⁵⁰⁾

These problems of lack of land and lack of water are combined with ethnic problems, the herders being predominantly Peulhs and Moors (beidane) and the cultivators being all the other ethnic groups. One should not think that this problem of spatial protection is new to Mauritania. We have seen above that the very justification of land appropriation was based on the control of space once in excess (thus the traditional acceptability of outsiders to intruding only upon permission) has exacerbated long-felt antagonisms.

The longer the drought persists the more difficult will grazing become and the more persistent and constant will be the

49) Of the many incidents recounted to us in the field, one is worth recalling : At Ouall, along the river in the Gorgol region, a herd of camels belonging to transhumant Moors transgressed several gardens cultivated by the women of the village. The women had the courage of catching one of the camels which they held and threatened the Moors, owners of the camel, with killing the animal unless compensation was made. The problem was still being studied by the regional court as we left the area.

50) See also SEDES, p. 302--303.

southern movement of herders. No possible agricultural policy, therefore, can be pursued without taking into serious consideration the social tensions that will continue to evolve, unless a technical and equitable solution for both herders and cultivators is found. Again it is to be recalled that even if the lifestyle of herders has changed and that herders, that is nomads and transhumants, have sedentarized to a large extent, the tradition has not and most certainly will not completely disappear. Indeed, its economic value has become appreciated by those who have rarely or even never had cattle before.

The effect of the drought and consequent migration and sedentarization has forced groups of different social classes and different ethnic affiliations to live more closely with each other, on a more permanent basis rather than on recurrent or sporadic traditional seasonal cycles. It is obvious that the opportunity exists to improve channelling various needs of the groups concerned. But it would be a lost opportunity if only laws enforcing restrictive behavior are imposed without giving these two potentially important economic groups in the country the necessary understanding of each other's needs. This can only be done by allowing them the means by which they can support their own economic survival.

2. SOCIAL AND CULTURAL HABITS

ALL societies have habits which reinforce, diminish or hinder the process of change. Before defining this process, it is imperative to be aware of and understand the depth of importance

of these socio-cultural habits to best adjust change to them or to best adjust them to change. Not all habits are so rooted that they cannot be discarded for the benefit of positive change. What creates imbalance and cultural incoherence, however, is when a social fact is either completely alien to the context it wishes to fit in or abruptly breaks the social relations necessary for the cultural continuity and identity of a people.

Apart from the profoundly important socio-economic and cultural problem of tensions due to competition between herders and cultivators, as noted above, we will briefly highlight seven social constraints, most of which have been touched upon elsewhere in this report, and which appear to be eminently important to consider in relation to all development processes. Undoubtedly many more exist, but these aim at expressing not only the need for more in-depth understanding of a people's habits and concerns, but also at reflecting on the wide variety and differences which exist and which must be taken into consideration.

i. Small details may appear irrelevant but are important to know : What is a group's concept of work? What does it consider a work week to be? Why are certain days taken as rest days while others not? Are they religiously-determined or economically defined? We know that among the Toucouleur, no one works in the fields on Thursday, while for the Soninke, it is Friday and Monday which are rest days. Such knowledge will become more relevant for example, during situations of organizing work in the fields and determining number of laborers/farmers or a certain amount of labor continuity.

ii. Social class relationships is probably the most sen-

sitive problem to deal with in Mauritania. A profound understanding of the nuances that shape these relationships is invaluable not only in the gathering of information but also in the introduction of constructive change. It has already been noted that land distribution is closely linked to social hierarchies and the tenacity to such deep-rooted divisions is probably one of the most difficult problems to overcome. An equal distribution of opportunities, means and information are the only outlet to a change which may lead to healthy competition between classes. For example, we know that among the Soninke of the Guidimakha, slaves who may be given plots of irrigated land, thus legally considered as owners by the State, will never dare socially consider themselves as full-fledged owners of that land. Not only would they risk being socially shunned by their group, but they would also risk being evicted from the village. It is very doubtful that the above-mentioned declaration of June 1980 abolishing slavery will, for a long time to come, be able to overrule the psychological and economic bounds of mutual reliance of slaves, ex-slaves and owners. Indeed, this is a serious constraint to modern day social change but the most important and consistent impetus to its breakdown will most certainly arise from the impact migration has had on individuals and consequently on

- their social ties.⁵¹⁾
- iii. Tithes are the clearest expression of ownership of one social class upon another, though the tradition has gone through a variety of changes. The maintenance of tithes, however, also expresses the impossibility of servile classes completely taking possession of their economic freedom, let alone social freedom. Yet, the symbolic maintenance of fees or tithes are said to be far more palatable to most than the onerous payments imposed in the irrigation projects. The important difference, however, is in the ties established. While traditional sharecropping imposes social ties or servility, State or public organisms establish economic ties of an equal burden to all social classes involved in the projects concerned.
- iv. Traditional craftsmanship, practiced according to defined social castes, has nowhere been effectively used in the development processes by integrating it on a

51) Information gathered by John Grayzel in Senegal in July 1980 reveals that an important movement of haratine settling is taking place not only on a seasonal basis but permanently, in the Ferlo area and in Dakar. Land is being acquired in great amounts to the point that haratine villages are developing here and there. It also appears in some cases that some of these haratine are making every effort to identify culturally with the Wolof; and to respond only to questions asked in Wolof. It should be recalled (see Sociological Profiles on Black African Mauritania) that the Wolof are themselves of a mixed ethnic origin, making it the most logical and easiest group to relate to for some of the haratine consciously making the effort of a cultural transformation. How profoundly social this process will become, only time will tell - for much depends on the Wolof's own acceptance of such an integration.

functional basis. A pertinent example is that of the blacksmiths of the Soninke living in the War on Want project area. This small-scale but successful agricultural project, has attempted to create initiatives in the use of animal traction. Metal ploughs were needed for this and there was the hope of involving the blacksmiths by asking them to copy the ploughs brought by the project, thus allowing for wider distribution among the farmers. This was refused by the blacksmiths whose argument was based on sound economic profitability as long as they did not observe the widespread success of the ploughs, they were not willing to invest or become indebted in the effort. So as not to marginalize crafts of all levels or render them only a product of folkloric importance, it is imperative that an effective economic and social integration of these already traditionally skilled craftsmen be planned within the projects. Yet, this also raises the basic problem facing developers all over the world : peasants will never be convinced of the necessity of change unless they observe for themselves - and having been involved in the process - the success of that change.

- v. The traditional family structure has greatly changed within all the ethnic groups, though with less intensity among the Soninke, who are known for their almost "dictatorial" relationship between elders and other age groups. The traditional importance of the decision-making process within the family and community, however, still persists and can be an impediment to the individualization trends in land tenure. Yet, personal flexibility or initiative among men is far more wide-

spread today while a growing marginalization of women is being imposed, on the one hand, by a conservative religious streak reinforcing traditional customs and, on the other hand, as noted above, by a one-side approach in agricultural development projects. It should be recalled, however, that the widespread migration of the male population has given women greater responsibilities. This alone is a significant social overture allowing for wider economic opportunities for women - if such opportunities are pursued once their men return home. 52)

- vi. Perhaps one of the most difficult constraints to development is the general attitude to individual and community investments in the agricultural sector. The present lack of reliability on agricultural production, irrigated or not, the lack of knowledge in other than the most archaic methods of cultivation, the growing sense of a general social instability, ... all encou-

52) A brief appreciation of the role of the Moorish women in the Tagant is made in an excellent report on the Socio-Economic situation of the Tagant by the Technische Universität Berlin, 1979-1980. In it is brought out the active and independent role of the women in all the productive sectors of the society from commerce to agriculture. It is pointed out, however, that unless a balanced policy of development is maintained, using in full the stabilizing strength of women, the efforts of adaptation and integration may be lost or misused. (p. 68-70).

rage investments in either speculative dealings or in religious edifices. In the case of the latter, the mosque becomes a positive symbol of both cultural and communal identity and cohesion. The question is how to best channel that cohesion for more economically constructive endeavors.

- vii. A recent but serious problem for agricultural development is the great percentage of absentee owners and family laborers everywhere in the country, due to migration. The difficulty of sustaining continuity in cultivation as well as the lack of family cohesion which are a consequence of this widespread phenomenon, lead to profound social problems which tend to place interests elsewhere than in agricultural pursuits.

B. SOCIAL CHANGE, IRRIGATION AND SONADER

The question must be posed from the outset. Does irrigation interest the farmers? Would they give up an irrigated parcel of rice if the rains returned to their normal levels? The answer is yes to both questions. The contradiction is great and should be understood at this stage of development.

One of the first large scale rice irrigation projects of Mauritania was started in 1967 as a consequence of a convention between the People's Republic of China and the government of Mauritania at what is now known as the Plain of M'Pourie. Since then, numerous large and small scale irrigation projects have been initiated and planned all along the Senegal River; there is also the prospective construction of the two large dams at the two extremes of the river, the Manantali and the Diama dams. It should

be immediately emphasized here that irrigation in Mauritania is synonymous with rice cultivation.

Literally, thousands of reports have been written on the impacts, consequences, importance and possibilities of these dams which will affect Mali, Senegal and Mauritania. Technical problems of all kinds, from geology to fisheries, have been dealt with as well as all the possible facets of socio-economic repercussions.⁵³⁾ The situation has been studied! There will be no attempt here to summarize the findings for the task would be truly overwhelmingly long. Our aim, however, is to pinpoint as clearly as possible, and as based on our own field observations and contacts, the positive and negative social aspects of the irrigation projects as they affect the peoples of Mauritania.

If we have just said above that irrigation is synonymous with rice, we should complete the statement by adding that it is also synonymous with SONADER, the initiator of all the present irrigation projects. The analysis which follows will therefore imply that actions taken refer to SONADER and the impacts discussed are a result of these very actions.

Were we to weigh the positive and negative impact of irrigation as currently conceived, would they equally balance each other? This is the question we will attempt to answer.

53) The OMVS (Organization pour la Mise en Valeur du Fleuve Senegal) is the all-encompassing body in charge of the studies for this tripartite development. Numerous other organizations, from USAID to the Kuwait Fund have also been involved in evaluation studies. In Mauritania, the SONADER (Société Nationale pour le Développement Rural), a public enterprise organism, is in charge of the implementation and feasibility studies for all the irrigation projects.

1. POSITIVE IMPACTS

It is undeniable that the positive impact of irrigation will have far reaching implications on social change in general and on the social organization of agricultural production in particular. Moreover, the agricultural production of the country barely covers 20% of the people's needs, which gives the government no other choice but to base its goal of food self-sufficiency on the control of waters (dams) and on irrigated perimeters. This was recently confirmed by the Minister of Rural Development in a newspaper interview in which he cautiously added that the battle announces itself to be long and difficult but its outcome will be seen as a consequence of the implementation of the next development plan.⁵⁴⁾

1. One of the greatest problems of agricultural methods of production in traditional Mauritania is that they are too simplistic, to use a phrase of Jean Arnaud.⁵⁵⁾

54) C'est d'ailleurs pour nous affranchir de cette insécurité climatique que nous portons tous nos efforts en vue d'acquies-rir la maîtrise de l'eau et développer les périmètres irrigués qui sont indispensables à notre autosuffisance alimentaire. C'est une bataille qui s'annonce longue et difficile mais dont la réalisation sera entreprise au cours du prochain Plan. Interview with M. Mohammed Ould Anar, Minister of Rural Development, Chaab, July 18, 1980, p. 3.

55) Arnaud, p. 108.

If the Mediterranean peoples still use archaic irrigation techniques, they have nonetheless proven to be efficient and productive. The Mauritanian peasants and peasant-fishermen have never known how to use their waters to cultivate the banks of their river. It is a striking realization to observe all along the banks, where land irrigation could be so easy and productive, the absolute lack of use of these lands for even part of the year, during the ebb of the river. One of the first and most positive impacts, therefore, of irrigation policies is the growing understanding of the different usages of water. A change in attitudes will certainly be seen once the success of small gardens will be observed. Such projects are planned all along the river and not only will they be important dietary supplements, but they will also increase the aptitudes of the various communities involved.

ii. Motivations at all levels are already observed a bit everywhere in Mauritania, from the oasis regions to the river. Most of these motivations, however, are individually initiated, even though communal initiatives of great interest, such as at the village of Dieuck near the M'Pourie Plain, are also taking shape. A timid attempt at investing in agricultural production is beginning to develop. Yet, if such motivations exist, it is because individuals have the means to take the risks involved. In individual cases, such as at Dar el-Barka and at M'Boya, two Toucouleur ex-servicemen of the French colonial army had made respectively their own fruit garden and rice perimeter. Their army pensions and commercial activities are their

strong basis of financial support. They have motorized pumps and at M'Boya, the farmer has bought a tractor. They live on dreams of farms they saw during their army days, in Indochina and Madagascar. The risks of disappointment, of course, are extremely great for the climates and water availability of these countries cannot compare with the meager means available in the Senegal River. Moreover, the continuous breakdown of the machines are practically beyond control, especially since spare parts and mechanical expertise are virtually non-existent. Yet, in spite of all this, one cannot deny that the personal interests and hopes created are immeasurable elements of influence on communal ambitions.

The case of the Wolofs of Dieuck is particularly interesting for it is based entirely on communal creativity. The Plain of M'Pourie had two traditional owners, the Moors (Oulad Bou Ely, Oulad Begnouy and Oulad Khalifa) and the Wolofs of several villages, of which Dieuck was the most important. The land was expropriated and redistributed to peoples of the entire area, including haratine, Peulhs and other Wolof non-owners, who had all been sharecroppers, with priority of land given to the original owners. These people profited early from the experience of the irrigated State Farm of M'Pourie and of their own individual plots given and developed by the State. The people of Dieuck decided two years ago to develop part of their own unexpropriated and unirrigated land, on the basis of their traditional ownership system : the land belongs to the village with individual families having

their own plots.⁵⁶⁾ The village formed a pre-cooperative through the initiative of one villager already involved in the State Farm Cooperative of M'Pourie. This is an important point for the experience acquired was of immense use to the group. That farmer is, of course, the president of this village's pre-cooperative. Irrigation was installed through the communal buying of motorized pumps and a tractor. Today, the villagers are planning to buy a rice mill and reject the manual and far cheaper system of the simple Chinese machine (it is too tiring!). The villagers of Dieuck leveled, developed and constructed their perimeter with no outside help. It is true that they only began with 9 hectares but are on their way to developing 30 hectares more. The self-help and independence of these villagers are highly commendable. Tice and mechanization, however, are the symbols of modernization. Nonetheless, the fragility of the soils and decreasing yearly paddy production in the area, will make self-sufficiency more difficult to attain.

iii. These motivations are creating a greater awareness of the need to know more. The advantage of the river peoples is that they can cross the Senegal River and

56) The village of Garak, also in the area of Rosso, has a similar small village irrigated field with 63 participants. It was divided into 7 plots with 9 men for each plot, each group having the right of one day of irrigation per week. The harvest was then gathered by all and put in one common stock, subsequently subdivided equally between all the participants.

go to the other bank where they often participate as salaried laborers in defined development projects in Senegal. The agricultural station at Richard Toll in Senegal has been an invaluable center of direct and indirect learning for the Wolofs of M'Pourie, for example. Such openness and interest can only mean that serious efforts of agricultural extension work are needed for practically none -- of any significance -- exists at the moment.

iv. A far reaching impact of irrigation is already seen in the concept of land ownership. Even if the individualization of land ownership is not unfamiliar to the traditions of Mauritania, as discussed earlier, in most cases such ownership is conceived within communal or ethnic property rights. With large-scale and small-scale perimeters and with the expropriation and attempts at redistribution of land, two elements appear: land is largely registered and owned by an individual and those who never owned land but cultivated it began to have the possibility of equal rights to ownership. This particularly touched the Haratine and the Peulhs, even though the percentage of their ownership is still very small, especially for the Peulhs, the group with the least access to land.

Improvement in cultivation habits, new motivations, growing awareness of needs, equality and individualization of ownership are seen to be the four major positive impacts of the trend towards irrigation along with an important psychological factor: hope. Where no cultivation was possible because of lack of

rain, expectations are being built up because there is no other choice possible. Here lies the danger of the situation. If this hope is not sustained by profitable actions to the peasants, the repercussions on the general problems of social tensions (owner versus non owner, herder versus cultivator, freed slave versus master, etc.) may be further exacerbated.

2. NEGATIVE IMPACTS

The list of negative impacts of irrigation is much longer and reflects the seriousness of the problems felt by all.

i. Land ownership problems have remained unsettled on irrigated plots

- (a) As a consequence of the increased value of the land because of irrigation, traditional owners who had allowed others to cultivate their land for many decades are now claiming their rights to the land. Two cases in point are the Grands Périmètres of the Gorgol in Kaedi and the small scale village perimeters of Dar el-Barka. In both cases, three quarters of the land remains uncultivated because of land claims,⁵⁷⁾ even though

57) See the numerous documents of SONADER on the problems of the Gorgol, and in particular : C. Ciparisse, 1974. Périmètre Pilote des Gorgol, Nov. 1978. The SONADER document on Dar el-Barka discusses the technical problems of irrigation while our field visit brought out clearly the still overriding land claims in dispute since 1968.

the Gorgol lands are on walo and the Dar el-Barka plots on fondé.

- (b) The problem of inheritance has never been well dealt with legally, and the general feeling on the large-scale Gorgol perimeter is that no one is a "real" owner for no one knows who will inherit it. The succession problems could be resolved if the producer were assured of rights retained by his family.
- (c) It is often said that land claims mostly affect irrigated perimeters which are on walo land, thus valuable and traditionally strictly owned, and that many perimeters are on fonde land, posing no problem, as it is the least valuable since it is the most difficult to cultivate.⁵⁸⁾ The generalization is erroneous for numerous cases prove the contrary. Dar el-Barka parcels are on fonde. In the War on Want project area, six villages along the river, there is no walo, and thus the fonde and dieri lands are valuable with the prospects of irrigation. In a society as strictly hierarchical as the Soninke's, where land appropriation is family controlled by the nobles, equality of parcelling and redistribution will never be put into practice unless compensations are made and even this is not an assurance of a change in attitude or a success in the acceptance of new ownership by traditional owners.

(d) Individualization of land rights has often increased the lack of cohesion in the community. At Goundel, a Toucouleur village, contrary to Garak and Dieuck, both Wolof villages, the attempt to collectivize the 25 hectares of irrigated land failed because of feelings of a lack of commitment of the individual to the group. The understanding of the differences in attitudes to land rights is important and can only be approached through a sociological analysis of the communal structure and of the decision-making centers. A unified approach may not always be successful in implementing change among such diversified groups even if the legal problems may be complicated as a consequence. At Garak, for example, a SONADER-initiated perimeter of 25 hectares was distributed among 60 families who wished to cultivate the land in common. The SONADER policy, we were told, prohibited them from doing so and they are forced to declare their work to be on an individual basis! The problems which will emanate in the future from such a double-standard will undoubtedly be great.

(e) Inequality does exist, contrary to theoretical claims, in land redistribution and in particular on the Gorgol Project and as is already foreseen in the Aftout of M'Bout project still under study. A regulation regarding these individualized parcels, as is also the case at M'Pourie, is that no salaried labor or sharecropper is allowed, thus priority is given to the owner-cultivator. The reality is quite

different, for civil servants have land cultivated by salaried laborers; a Marabout has his talibés (disciples) working the land for him. On the other hand, an old man with rights to ownership, who has no sons and is too old to cultivate the land, loses his plot because he is not allowed salaried laborer. Moreover, as has happened in land redistribution all over the underdeveloped world (cases in point being Egypt and India), the misuse of names for acquisition of land rights is also common.

(f) Lack of trust in irrigation projects, because of their lack of success, make some communities participate in them half-heartedly. The village of Sangué is a typical example where the chosen irrigation perimeter is on fonde land (thus rarely cultivated) which was given to the slaves of the village years ago. At the request of SONADER, the land was redistributed by the chief of the village ... to the slaves, but in reality only as an experiment. The feeling of "wait and see" is latent and no involvement of interest is apparent as the first harvests were disappointing.

i. Irrigation today depends on mechanization. The problems are overwhelming for the peasants. The complete reliance on motorized pumps which constantly break down is devastating, to say the least. SONADER does not have the personnel necessary to supervise tall the village perimeters along the river. During the rainy season, the mo-

bility of the existing personnel becomes impossible because of impassable roads. The lack of spare parts is also an overriding concern. Total dependence, which is created and instilled in the communities, is apparent. At Dar el-Barka, 40 out of 60 hectares are cultivated (original plan was for 250 hectares) because the pump is not sufficiently powerful to irrigate all the parcels. At Ouali, the pump was inadequately placed, in a low area of the river bed and thus the 35 hectares are irregularly watered and the villagers have been waiting for another pump for the past two years. Moreover, their one pump broke down last year and the rice dried out. It is said that SONADER suggested sending them a mechanic on the condition that his salary be paid by the villagers. At N'Djorol, a Sulbalbe village, Toucouleur fishermen have a small perimeter of less than 25 hectares for 65 owners. The first paddy campaign was a failure because the pumps had broken down. The list of such incidents is long. Aside from the technical upkeep of the machines, the expense of gasoil is becoming more onerous every year for the peasants.

Mechhanization can succeed only if there is an organizational structure to sustain it. Moreover, in a country where animal traction is unknown and could be better used, where unemployment is high and could become more involved, where spare parts are non-existent, the encouragement of greater mechanization before searching for attempts at simpler and less costly procedures only leads to greater underdevelopment.

- iii. A contradiction exists in the agricultural sector. There is, in many areas along the river, a great shortage of labor, while at the same time unemployment is high in the country. Rural exodus is acutely felt.⁵⁹⁾ It is said that some irrigated parcels, planned with no consideration of the labor factor, were abandoned precisely because of lack of family labor.

- iv. In spite of technical problems and land claims everywhere, the interest in bigger perimeters is great. The village parcels are too small for the number of people who become individual owners. The parcelling of the land becomes minute. At Goundel, there are 64 requests for 25 hectares; at Quali, there are 145 cultivators on 35 hectares! At Sangue, there are 9 hectares with 158 participants ...! It is not difficult to deduce from this that even with technical perfection, the profitability of the parcels is not sufficient for an average family unit of eight people. Besides, it is doubtful that such small parcelling of the land is of economic value to a development process.

- v. The problems of fees, whether tithes to traditional owners or payments to the new "owners" (SONADER), are

59) See RAMS Study on Migration : Studies in Social Change.

overwhelming to most cultivators.⁶⁰⁾ In view of the limited profitability of the paddies, it is difficult to perceive how the owners manage at the end of the harvest. At Garak, the cultivators last year had to pay : 10,310 ouguiyas on 37 hectares. Each hectare produced 11 bags of rice which sold for 10 ouguiyas per kilogram; thus they paid one-third of their produce to SONADER. At Oualid, the situation is more acute, for the cultivators of the paddies owe a total of 250,000 ouguiyas to SONADER, plus 3,000 ouguiyas for each hectare for every campaign following the first year. At Sangué, the costs for each parcel is 1,250 ouguiyas and on 9 hectares the villagers had to pay 150,000 ouguiyas for their harvests. At M'Pourie, the expenses for seeding for each cultivator is between 2,250 to 3,000 ouguiyas while it is only 960 ouguiyas on the Gorgol project. Mechanisation costs per person are equivalent to 4,700 ouguiyas in M'Pourie, while it is 1,392 ouguiyas in the Gorgol.⁶¹⁾

Moreover, in many areas, tithes to traditional owners persist, regardless of the law, and on irrigated land, as on the Gorgol, they have simply doubled. All this only highlights the dependency and indebtedness problems of the small farmer who still hangs on to irrigation with the hope of survival while awaiting better rains.

60) Even though the cultivators on a rice paddy are theoretically owners of their part of the paddy, the general feeling of uncertainty towards this ownership is pervasive and SONADER, to a majority of them, appears to be the owner in practice.

61) Figures on Kaedi and M'Pourie are from Annexe 10, p. 33-39 of the Tagant Development Project 1979.

vi. Motivations are dampened as a result of all the above factors, added to which is a growing lack of trust towards SONADER because of the difficulties of communication existing between cultivators and administrators. Explanations are not given, advice is not taken, demands on farmers are great, and results are discouraging from year to year. Though the Plain of M'Pourie is not a SONADER project, it is nevertheless revealing of the future of the profitability of rice cultivation, for nowhere has there been more than one rice cultivation per year. Moreover, in the space of five campaigns, 1973-1979, rice production fell to 50% of its initial yields. This is due to several factors, the most important of which being bad water management, serious technical problems (growing salinity), inadequate administrative capacities, etc...

The positive sense of initiatives of investments mentioned above is therefore placed elsewhere than in the productive sector. The growing sense of dependence and insecurity in productive investments makes the farmers reject, for instance, the suggestion of paying for their own motorized pumps instead of waiting for SONADER to act. This is said in view of the fact that the villagers, with the aid of their migrant workers, helped pay for the construction of a mosque that cost, in one case, 30 million ouguiyas. Such cases are not exceptional in the Senegal River Valley but they are also an expression of a greater need for social and religious cohesion in the face of growing instability because of migration, dependency on food aid, dependency on a monetary system, the need to fit in a con-

sumer's pattern of behavior, and uncertainties in the profitability of investments in agricultural production.

vii. In all the years of irrigation experimentation in Mauritania, only rice has been the goal for production. Numerous varieties of rice have been experimented upon in the Agricultural Station of Kaedi, yet no serious experiments exist on other cereals. The argument of the profitability of rice has proven to be fragile for the Sahel.⁶²⁾ Moreover, in spite of the greater dependency on rice because no other choice exists -- and the change of food patterns it has forced upon people, quasi-unanimous declaration of giving up riziculture for the traditional dieri cultivation, at the first signs of good and consistent rains, was heard throughout the Valley. The seriousness of the declarations leaves no doubt about the people's honest appreciation of their situation and should not be taken lightly. Rice consumption has also added heavy burdens on the family budget for it demands the cooking of sauces, the use of oil and spices which millet or sorghum does not require.

viii. Problems of commercialisation and distribution of agricultural produce are an important disincentive to the cultivators. The efforts and pressures to pro-

62) See Food Research Institute, July 1979.

duce more are not matched by efforts to buy from the cultivators nor to distribute to the consumers. The lack and inadequacy of storage facilities only heightens the problem. If we said earlier that mechanization can be effective only through a working infrastructure to support it, the argument can only be stronger in relation to a new produce imposed on an agricultural population which has only one option of disposing of its production - selling it to the government. Before the agricultural produce increases enough to create a surplus for farmers, the importance of having an effective distribution system is far too obvious a necessity. Moreover, better prices for their produce is an important incentive for the cultivators.

In conclusion, we can only say that agricultural development based on riziculture and all that it requires does not reflect a positive picture. It has added to the vicious circle of dependency, speculation and misguided motivations while giving the cultivators little choice to do otherwise. Irrigation as such is essential for the survival of the Sahel, yet uni-directed and mismanaged irrigation schemes may only lead to greater destruction of social incentives and social relationships.

CONCLUSION

Irrigation projects were the mobile force in Mauritania which raised three major problems : (1) the meaning of a 1960 land ownership law as it affects traditional land tenure systems and, consequently, traditional political power structures; (2) the social relationships of servility which governed the strict hierarchical social structures within each of the ethnic groups; and (3) the effectiveness of irrigation in the agricultural process and needs of self-sufficiency in the country.

The traditional land tenure systems of the Moors, Toucouleurs and Soninke differ and render even more difficult the attempts at a unified modern land ownership law. Yet, each of the ethnic groups have its special organization fit around its particular concept of ownership rights. The Moors base their rights on the Islamic Malokite rite which accords communal and individual ownership while adjusting basic tenets, such as the hahous for purposes of political, individual and ethnic power rather than on its original rules of inalienability for the purposes of aiding the poor in the community. The Toucouleur, as the Soninke, concentrate land rights for the most privileged of social groups, the nobles, but while the Toucouleur have a system allowing the nuclear family independence in the decision-making process and accord individual ownership on certain lands, the Soninke's strictly defined control system enforces complete inalienability and indivisibility of all lands on which only usufruct rights are accorded to all clan members. The land remains within the clan. All the groups have important similarities : (1) inalienability and indivision of their best lands; (2) yearly tithes of various amounts for the privilege of usufruct rights traditionally directed mainly

to the servile and dependent classes who formed their labor forces; (3) a rigid control of the sale of land and if sale exists, as with the Moors, it is traditionally with members of the lineage and not outsiders; and, (4) an important concept of space, determined by the extent of lineage ties, ultimately limiting or extending the power base of each group. Political power in each case, is, in fact, the basic justification for ownership and not the mere fact of working the land.

It is not yet sure how profoundly the recent declaration of June 1980 on the abolition of slavery in Mauritania will affect the status of the servile classes of all the different ethnic groups. It is true that not all cultivators are slaves or ex-slaves, for even now the Beidane are forced into working the land because of labor shortage and economic pressures. Yet, traditionally and especially among the Moors, the haratine, or freed slaves who remained attached to their community, were the sole cultivators of the land. The situation has not dramatically changed as yet even, the drought, however, served as an impulse for a migratory movement of the haratine and increased the already existing embryo of independent villages, especially in the south of the country and even farther away from their original home base, in the Ferlo of Senegal. The most obvious expression of power over the servile classes is in the enforcement of tithes on agricultural production. A tremendous differentiation of the types of payments exists according to ethnic group, region, clan, lineage, soils, etc. Yet, winds of change or, more correctly, a breeze of change, has already been felt as indicated by the various reactions of the servile classes, and particularly the haratine and Soninke slaves, who have begun to independently react in small actions, against their masters.

Migration, education, the individualization trend of ownership through irrigation projects, demographic pressure, as well as new motivations in agricultural labor have all helped modify the organization of labor, especially in the south, along the river. The most important aspect observed is the shortage of family labor frequently substituted by salaried workers, young children and women. Women who have participated all their lives in agricultural labor - all except the Beidane women trained since youth for a life of leisure - now see added burdens in their lives not only in the home and family affairs but also in the fields. Women among certain groups have even begun to cultivate land once traditionally forbidden to them. This was made possible only because of the growing shortage of labor and the need to continue cultivating the family's lands. Yet, it has also been observed that, in spite of the growing participation of women in the fields, agricultural development projects still reluctantly approach the decision of directly reaching out to women. There is no doubt that were women included in projects on equal level of importance as men, the general process of change, both social and agricultural, would speed up more constructively.

Motivations in agricultural labor have been greatly modified since the drought, because many have found themselves forced to leave their lands to seek salaried work in the modern sector as a means of survival, while others, such as the Moors and Peulhs, found themselves forced into cultivating, also as a means of survival, after having lost their herds. A substitution and a reorganization of the labor force is gradually taking shape with salaried labor slowly acquiring an as yet unknown importance. Material incentives push youth towards the cities and outside of the country but also attract salaried laborers to the land by necessity. In both cases, new forms of dependency are created based on

a system in which the monetarization of social and economic relationships prevail and, indeed, lead to a greater proletarianization of labor (urban and rural) and a heightened pauperisation of the individual.

The hope, of course, is that agricultural development and irrigation projects can liberate man from that new form of servility. Social constraints, however, exist and must be taken into consideration before hoping to resolve agricultural development problems. One of the most urgent of problems, heightened by the drought, is the relationship between herders and cultivators who have always competed for the same terrain. The lack of pasturage and the fragility of cultivated lands as well as the increasing movement of herds - camels and cattle - to areas new to them, especially in the south, have threatened the cultivators' sense of territoriality. This has, however, increased the herders' own difficulties of survival.

The question which still need to be answered are why has riziculture been the only choice for irrigated agriculture, locking the peasant in an ever-tighter system of dependency? And why, in spite of the increasing attraction to irrigation and the great demands made for irrigated parcels in most of the villages, are the negative impacts of irrigation so serious as to have the peasant still prefer his dry-land agriculture?

The long list of negative elements by far outweighs the positiveness of irrigation in Mauritania and is a clear reflection of the ill-defined and ill-studied problems of social situations which should have been projected at the outset of all projects. The organizational mechanisms of support are either non-existent or not sufficiently experienced to sustain change of technical and human complexity. Land claims are not dealt with mechanical problems remain the greatest bottleneck for the

continuation of cultivation, motivations become misdirected and, because of the complete lack of trust in the profitability of the agricultural sector, investments are placed on surer and more speculative choices; fees emanating from irrigation render communities servile to an organization rather than to a social class but also take away from them all initiatives for self-sufficiency as long as the feeling of dependency heightens and eliminates any possibilities of personal or group initiatives. The very size of the parcels is so minute as to render any global or individual self-sufficiency highly doubtful. Another serious and difficult problem to solve is the stagnant circuit of commercialisation and distribution which renders all incentives for the peasants to increase their productivity void as long as they are incapable of selling their produce.

The positive aspects of irrigation and agricultural development cannot be ignored, however. The archaic system of cultivation of traditional Mauritania was forced to adjust to a new system of know how. Motivations developed merely through individualization of land ownership and, more important, the HOPE that irrigation will be able to sustain the intensity of productivity of its earlier beginnings.

The social organization of agricultural labor has gone through rapid stages of upheavals which are still being felt at all levels. Social relationships and economic ties have changed, modes of life have been adjusted to different ways, old social classes have taken new shape and new ones are being formed. How all these forces can best be channelled to positive purposes for agricultural development depends entirely on the level of support given to individuals and communities.

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