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Land Tenure — Social Organization and Structure
LAND TENURE - SOCIAL ORGANISATION AND STRUCTURE
A comparative sample study of the socio-economic life in the three Libyan oases of Ghat, Mourzouk and Ghadamès
Preface

This research report is a summary of a dissertation for the degree of Ph. D. - STRUCTURE FONCIÈRE, ORGANISATION ET STRUCTURE SOCIALE; Une étude comparative sur la vie socio-économique dans les trois oasis libyennes de Ghat, Mourzouk et particulièrement Ghadamès.

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LAND TENURE - SOCIAL ORGANIZATION AND STRUCTURE

A comparative sample study of the socio-economic life in the three Libyan oases of Ghat, Mourzouk and Ghadamès

by

LARS ELDROM

Possibilities of economic development

The aim of the present, comparative, detailed study has been to elucidate as far as possible the different economic systems, social structures and organization of the three Libyan oases of Ghadamès, Ghat and Mourzouk. Already from a relatively superficial investigation it is easy to ascertain that these communities differ greatly from each other in regard to their exterior form: Ghadamès is a compact closed oasis - an "island" surrounded by a sea of practically sterile sand, gravel and rocks; Mourzouk is a scattered oasis, with widely spread cultivated areas, whereas Ghat, finally, has an intermediate position with both compact and widely spread gardening areas. As has been seen, this is primarily a result of the different systems of irrigation in the oases.

Fig. 1. The oases of the Sahara.
The internal functional organization and mechanism—i.e., how the economic and social (including political, religious and cultural) cogs function and interact with each other—are considerably more difficult to analyze.

It is most hazardous to express an opinion as to what extent the external form can have exercised a direct influence on the economic and social structure and social organization. However, a certain connection can be detected. Thus, for example, the compact and "closed" community, Ghadamès—which for its existence originally has been ultimately dependent on one single spring—exhibits an exceedingly more regulated and complicated social organization than Mourzouk with its scattered wells and widely spread cultivation and building structure: the absolute necessity of the water from this single spring in Ghadamès together with the practically collective allotment of this water is conceivably the ultimate cause of the consolidation and intricate pattern of the social organization. As a rule, concerning the relation between external and internal structure, it is probable that the general character of the oases is formed by the interplay of the external, economic and social factors, where the external constitute the foundation on which the economic and social build a richly faceted relief.

The differentiation in proprietary and social structure between these oases shows up glaringly, in like manner the more or less total decadence of these communities in all phases of public life. Local commerce still flourishes to a certain extent in Ghadamès and Mourzouk, whereas gardening in the former oasis is obviously on the decline. In Ghadamès and Mourzouk gardening is still a necessary evil for the subsistence of the remaining inhabitants. In Ghadamès the major part of the returns go to the well-to-do, exactly as in Bled Mourzouk—although to a lesser degree than in Ghadamès—whereas the smallholders around Mourzouk dispose of their meager harvests themselves. In all the oases the emigration of men in the age groups 15 - 30 and 30 - 45 is very high.

Fig. 2. The land tenure and social differentiation of Ghadamès, Ghat and Mourzouk.
Social classes:

I. Large peasant-proprietor, higher-grade officials and wholesale dealers.

II. Lower-grade officials and retail tradesmen (small scale), craftsmen and workmen.

III. Garden-proprietor (who cultivate themselves).

IV. Gardeners (tenants and day-labourer).

<table>
<thead>
<tr>
<th>Social classes</th>
<th>Ghadamès (per cent)</th>
<th>Ghat (per cent)</th>
<th>Mourzouk (per cent)</th>
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<tbody>
<tr>
<td>I</td>
<td>17.5</td>
<td>8.1</td>
<td>5.0</td>
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<tr>
<td>II</td>
<td>19.7</td>
<td>24.7</td>
<td>23.8</td>
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<tr>
<td>Persons taking an active part in gardening</td>
<td>32.8 [III]</td>
<td>67.2 [IV]</td>
<td>71.2 [III]</td>
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<td>IV</td>
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<td>46.7</td>
<td>9.9</td>
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What are the possibilities of economic development within these regions? In which sectors of the economy should one invest? Is it worthwhile at all to start extensive and expensive projects or should one concentrate on smaller limited relief measures? Concisely expressed: what is best for the common people (excluding here big merchants, higher public officials and feudal lords) in these three oases?

It is impossible to give an unequivocal answer to these questions. For such the difference between the oases - seen from an economic, social as well as political point of view - is entirely too great. That which may seem possible in the one oasis cannot be conceivably realized in the second or the third. However, the present detailed study can serve as the basis for a summary evaluation of the possibilities and also give certain suggestions concerning the direction and most appropriate form of any future aid project.

Ghadamès

For this oasis the problem appears to be particularly complicated. Gardening, as has been shown, is obviously strongly on the decline and only less than one third of the present working male inhabitants are employed in this branch of the economy. The disparate ownership of the old cultivated area is extreme - even "internally" within one family group; moreover, each individual garden is surrounded by high clay walls which prevent any significant mechanization. The proprietary status of the gardens is generally "habous", which implies that they are inalienable and that the returns must be divided collectively among the members of - in many cases - very large family groups, with 50 to 100 persons. Furthermore, the spring Ain el Fras is drying up and the extra contribution from the "French" artesian well is entirely too small for a realization of an intensified cultivation. All these negative factors contribute understandably to the situation that the majority of landowners believes that it is unprofitable to till the soil within the old cultivation area.

For these reasons there has been a concentration of cultivation in the new region (in the winter 1961-62, 25 per cent was cultivated compared to a little more than 7 per cent of the old cultivation area). On the one hand, the gardens are larger (0.5 and 0.2 hectares) and the water supply more abundant through irrigation from the "French" as well the "Italian" artesian wells; on the other hand, the gardens are "melk" - privately owned - and therefore the landowners themselves dispose of their own harvests, without having to divide them with the whole family.
Despite the fact that the new cultivation area is being subjected to relatively intensive culture — more than 9 hectares cultivated land during the winter 1961-62 and approximately more than 4 hectares during the spring and summer 1962 of a total of 37 hectares available arable land — plus the approximately as large cultivated area in the old gardens this is not even enough for reasonable self-sufficiency of the present 1880 inhabitants of the oasis; as previously mentioned there is a considerable importation of foodstuffs.

Fig. 3. Ghadamès in 1962 (The map was drawn in 1962 by ELDBLOM).
Fig. 4. The winter-cultivations of Ghadamès in 1961-62 (ELDBL OM 1961-62).

Fig. 5. The spring- and summer-cultivations of Ghadamès in 1962 (ELDBL OM 1962).
Under the present circumstances it seems completely meaningless to invest in intensified garden management. The boring of some more artesian wells would of course increase the amount of arable land, but proportionally the intensity of cultivation would probably not be any greater than at present: the inhabitants who conceivably could increase the rate of cultivation resulting in greater yields - namely the men in the ages of 15 - 45 years - have largely emigrated and, therefore, the manpower necessary for a new cultivation is lacking in the first place. Moreover, the economic gain from this gardening, even with an intensified irrigation, would be entirely too small to entice these emigrants to return to the oasis or to persuade others to remain there.

![Population Pyramids](image)

Fig. 6. Ghadamès: population-pyramids in 1961-62. The left pyramids indicate the total population, that is those who were registered in this area. The right pyramids indicate those who were permanently staying in the area during the research period.
The date palms are a definite asset for the oasis inhabitants from an economic and nutrient point of view, but much remains to be done for a more rational utilization of and a direct economic profit from these fruits. Date cultivation is exceedingly laborious and, for financial returns in parity with the work involved, date varieties of the very best quality are required. As has been shown, there is a lack of both manpower and date palms that yield excellent fruit suitable for export. Deglat Nour, for example, is less common in Ghadamès, even if many of this variety have been planted within the new cultivation area. In addition, the distance to the consumers is discouragingly great: 300 km of terrible "pistes" to more densely populated areas in Djebel Nefousa, and another 300 km of asphalt road up to Tripoli.

On re-examination of the table on the socio-economic grouping, one is surprised by the dominance of social groups I and II in Ghadamès compared to the situation in the other two oases; this is particularly true of group II (public servants, smaller merchants, craftsmen and unskilled workers), which in Ghadamès comprises one half of the presently employed male inhabitants against less than one fourth in Ghat and Mourzouk. The occupational categories of lower public servants, smaller merchants and unskilled workers are particularly well represented; the craftsmen are few in number, represented primarily by shoemakers and tailors. This large category of especially government employees - a large number of caretakers, cleaners, secretaries and chauffeurs in the "moutasarafiya" (provincial government), "mouderiya" (headed by the moudir, a "chief sheik"), "balladiya" (city council chancery), in the elementary school, library and cottage hospital, so-called orderlies in the cottage hospital, electricians at the power station, caretakers, firemen, cleaners, masons and gardeners at the airport, and policemen at the fort - is entirely overdimensioned. Through suitable rationalization measures a large number of employees could be released and used in a sensible way. As the situation is developing at present (1961-62 and the fall 1966), Ghadamès represents something that could be called a community of merchants and civil servants, which - excluding minorities as merchants, craftsmen and garden workers - derives its livelihood from the government, without producing anything of value or performing a job commensurable to the payment.

At this stage it is very difficult to make any recommendations whatsoever for any activation of the economy in Ghadamès. If one excludes a few industrious big merchants, who obviously are doing good business in the local and neighboring commerce - incomes primarily from the above-mentioned lower public servants and a lesser number of nomads and military men from Algeria and Tunisia - and the office workers, craftsmen, unskilled workers and gardeners that are
essential for the very existence of the oasis, Ghadamès is a completely stagnant community which can continue its development only by artificial means — in this case indirect subsidies in the form of government grants.

Ghat

In contrast to Ghadamès a very large per cent — 67 per cent — of the currently working male inhabitants are employed in gardening, partly as smallholders (more than 20 per cent), partly as leaseholders or day laborers (almost 47 per cent). The isolated location of the oasis — 600 km of miserable "piste" up to Sebha, plus an additional 1,000 km of asphalt road to Tripoli — precludes at present any possibility of gardening for export. Over and above the gardening the economy is totally decadent: the local commerce is insignificant and the Handicraft is dominated by about ten smiths in the central oasis (Tadramt-Ghat), whose less artistic products nevertheless find their way to Sebha and further, even up to Tripoli. The possibilities of a positive economic development therefore lie entirely within the agrarian section, i.e., an intensified garden management with its products intended for local needs.

Fig. 7. The region of Ghat (drawn after a map by LEFRANC 1954-55).
An increase in the agrarian productivity clearly requires a more plentiful supply of water for irrigation. According to LEFRANC, who in his hydrological survey gives an account of less than 40 springs and approximately 140 wells in the Ghat region in 1954-55 (not including the Seredies oasis 120 km north of Ghat), the region belongs to the most favored in all Fezzan as far as water supply is concerned; only Ouadi Chati (central oasis: Brâk) 60-80 km northwest of Sebha, has a greater number of springs and wells. Lefranc emphasizes, however, that this fact should not give rise to the belief that for this reason the Ghat region is maximally exploited:

"On peut calculer que le tiers seulement des ressources hydrauliques locales disponibles est utilisé; et que moins de la moitié des terres cultivables est effectivement mis en culture."

Despite the fact that Lefranc's so strongly expressed statement concerning the presumptive unutilized water and land resources is based on a relatively summary study and that all calculations of potential land reserves suitable for intensified cultivation are probably very difficult to make - among other things the important problem of resanding must be considered - the foregoing quotation appears to illus rate well the present intensity of land exploitation, at least in the Barkat oasis. However, the Bled Ghat, Tounin and Ti n G'eraben, where all the gardens are irrigated almost exclusively by springs of greatly limited capacity, a further expansion of the cultivated area can hardly be considered. At the time of this investigation (winter 1962-63) the total area under cultivation amounted to more than 100 hectares. Perhaps, if the hydrological structure is such that boring is worthwhile, the gardens could be enlarged by boring wells in the immediate vicinity of the areas already under cultivation. However, this is probably not any satisfactory and final solution of the irrigation problem, since all suitable land is already largely exploited. The expensive boring of new wells within areas which are well suited for new cultivation but situated far from the existing cases (Bled Ghat, Tounin, Feouet, Ti n G'eraben and Barkat) is hardly realistic in view of the present population trend - 20 per cent of the male inhabitants between the ages of 15 and 45 years have emigrated. At present (winter 1962-63) Barkat is probably the only region worth investment, if an increased area of cultivation is desired. The mapping of the area of the winter cultivations (1962-63) in the Ghat region supports this view.
Fig. 8. Ghat: population-pyramids in 1962-63.

What possibilities exist then for an increased cultivation? Lefranc asserts that the best method would be to replace the innumerable small, almost dried-up springs with a couple of large springs in each oasis. According to a briefly outlined five-year plan, 12 larger wells would be bored in the Ghat region, provided with pipes, water reservoirs and canals: 3 would be placed in Tounin, 2 in Feouet, 1 in Anreyan, 1 in Tin G'eraben, 2 in Iberkan and 3 in Barkat (see survey map in figure 7, p. 9). In addition measures were proposed for an enlargement of the parcels ("prairies artificielles") to enable a "mécанизation légère", a better selection of seed and vegetables, an intensified cultivation of vegetables and fruits, etc. Lefranc concludes with the hopeful assumption that:

"Actuellement en retard sur les autres régions fezzanaises du fait d'une utilisation médiocre de ses vastes ressources"
hydrauliques, le Fezzan sud-occidental peut arriver, dans les années à venir, à prendre une place importante dans l'ªonomie agricole du Fezzan" (LEFRANC 1954-55, pp. 75-77).

The agrarian rationalization problem has a technical side, in which Lefranc as a hydrologist is, of course, primarily interested, as well as an economic-social aspect to which - understandably enough - he has devoted less attention, even if he has cursorily mentioned the consequences of the high emigration. However, it is probably just the socio-economic complex - and then especially the pattern and structure of proprietorship in the region - that plays a decisive role through increasing the cultivated areas for the possibilities of improving the living conditions of the common man, i.e., the men who draw the water, garden workers, tenant farmers and their relations.

The present investigation on the proprietary and social structure within the Ghat region has shown that the major part of all arable land - and water and palms - lies in the hands of a minority of well-do Tuaregs and Arabian merchants, who employ a large number of tenant farmers and day laborers (representing more than 60 per cent of the present working male population). Even if a conceivable rational exploitation of the water resources can lead to a greater yield from the gardening, due to the existing conditions of ownership and prospective profits will go to the few landowners and not to the majority of those who take care of the gardens. Without a thorough land reform this majority of the population will continue to live near or under the subsistence level. The optimistic declaration of Lefranc previously cited concerning the potential agrarian development of the Ghat region appears at the present time (1962-63) - eight years later - entirely too optimistic, if not unrealistic.

Mourzouk

Exactly as in Ghat a very high per cent of the working male population is occupied in gardening in the Mourzouk region - more than 70 per cent of the total gainfully employed male inhabitants, of which more than 60 per cent are smallholders and 10 per cent day laborers. The local commerce is not insignificant but is dominated by big merchants who have moved in from other places; handicraft has declined totally. In view of the foregoing it seems reasonable that any subsidizing projects must be concentrated in the agrarian sector, especially as the large landowners - mostly native merchants and public officials - do not control more than 40 to 50 per cent of the cultivated land in Bled Mourzouk (winter 1962-63), and also since the smallholders dominate the outskirts. During the winter 1962-63 there was a total cultivated area of more than
100 hectares within the Mrouzouk region, which is the same as in the Ghat region. Furthermore, almost all the land is "marl" - privately owned - which ought to encourage private, intensified activity. Thus, in contrast to the Ghat region, a time-consuming and complicated land reform is not required within the Mrouzouk region; as a matter of principle any one who has the economic means and sufficient well water can procure a motor pump and in this way enlarge his cultivated area.

Fig. 9. The region of Mrousouk (The map was drawn by ELDBLOM 1958 after aerial photos: Mission Fezzan 108 - 1954 Ngg 33; Inst. Géographique National, Paris).

According to the previously given account of garden management in the Mrousouk region, the motor pump may appear in an unusually favorable light and seem from the circumstances to be the best solution of the intricate irrigation problems. The actual increase in the number of motor pumps is 7 during the period 1958-63 (cf. figure 10 with figure 11, p. 14), i.e., more than one pump a year; however, 5 pumps have been abandoned during that time.
Fig. 10. The wells of Bled Mourzouk in 1958 (ELDBLoom 1958).

Fig. 11. The wells of Bled Mourzouk in 1963. (ELDBLoom 1963).
In an earlier publication the author - as like well as DOUCHEZ - has studied more in detail the technical and economical conditions necessary for an increased installation of motor pumps in Fezzan, particularly Bled Mourzouk. The results of this investigation emphasize the disadvantage in such a measure. Technically it is possible within large parts of the region, but economically it seems absolutely impossible for most of the growers to finance the great initial costs of the motor pump and its installation. As strongly emphasized, most owners of motor pumps in Bled Mourzouk do not have their major source of income from the meager profits from the gardens but from considerably more profitable occupations, such as merchants or public servants. In this way they have the economic background necessary for the starting of a more intensified method of cultivation with the help of irrigation through motor pumps; in other words, garden management has become for them an auxiliary occupation.

The development during the five-year period 1958-63 further supports this contention: all new installations of motor pumps have been undertaken by well-to-do merchants and office workers; smallholders are always too poor to pay the price of a motor pump. Despite the fact that the number of motor pumps has increased, the smallholders will never have the benefit of them. Their only alternative is to continue watering their gardens with "dalou" wells and "khettaras" or to emigrate. As has been seen, they often choose the latter.

![Graphs showing population distribution in Bled Mourzouk and Umland](image)

Fig. 12. Mourzouk: population-pyramids in 1962-63.
The main problem is thus an economic one. Douchez suggests certain possibilities for the solution of the difficulties involved in the procurement of motor pumps: among other things he recommends a modification of the time-payment system, which according to Couchez ought to be extended over a longer period than at present (see ELDBLOM 1961). Douchez says that in certain cases the leasing of motor pumps, through the mediation of the Department of Agriculture, would be more advantageous for the growers than the purchase of such. Collective wells and pumps are, according to Douchez, another way of solving the problem.

All these measures are undoubtedly essential if the distribution of motor pumps is to be increased. Furthermore, it may be added that for a wider utilization of motor pumps to function at all satisfactorily the Department of Agriculture, with help from the local authorities in each oasis, must obviously be able to give the small owner-farmers guarantees of assistance in the event of trouble with the motor pumps and of a continuous supply of motor fuel. In conclusion, it may be said that the present system for the distribution of motor pumps, without guarantees, instruction and information to the growers, is not any solution of the irrigation problem. For the time being there is no demand at all for pumps from the smallholders and there is no indication that this, certainly in itself excellent system has any future in its present form.

In the introduction to the present work the importance was stressed of studying in detail the socio-economic and political microstructure within the so-called "primitive" communities or regions where aid in one form or another is to be administered, whether the aid is financed and organized by the country itself or comes from the outside in the form of multilateral or bilateral supporting actions. A close examination of these three Libyan cases - whose proprietary structure, social organization and structure are far from unique within that part of the world called underdeveloped - further emphasizes the truth in the general assertion that without a thorough knowledge of the community mechanism and how it functions any aid programs are probably bound to fail.
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