" 'A Comprehensive Approach to the Study of the Housing Sector in Iraq; With Special Reference to Needs, Standards, Inputs, Density and Costs as Factors in the Analysis of Housing Problems in Baghdad' by M.B. Al-Adhami, B.Sc., M.A., Thesis submitted to the University of Nottingham for the degree of Doctor of Philosophy, November 1975".

CONTAINS

PULLOUTS

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Iraq has a stock of buildings, particularly dwellings, many of which are neither physically fit nor capable of meeting the economic and social needs of today. Many people, particularly in the cities, live in overcrowded and insanitary conditions. Many dwellings are badly located and mixed with derelict land. Population is expected to grow and even without any rise in standards, this would greatly increase the need for building and works of all kinds.

At the macro level the main cause of the housing problem must be attributed to the process of migration and urbanization, which have contributed to the creation of slums and squatter settlements. At the policy level, the existing machinery of planning is scarcely adequate. Housing has conventionally received only scant attention in national development plans and this central neglect is mirrored by a similar failure at the municipal level. At the micro level, with which this study has primarily been concerned, it must be emphasised that housing is not simply an economic commodity but has deep social and political as well as environmental implications. The increasing gap between incomes and housing costs has to be contained and this can only be done by operating on a number of fronts simultaneously.

The purpose of this study is to examine the housing sector in Iraq with special reference to the city of Baghdad from the point of view that housing is not only a shelter which provides protection from the elements but a synthesis in which social, economic, physical and political forces interact. The study also develops an

argument that housing density is not simply another planning index to be used with others in the formulation of town plans but a crucial variable which once fixed will have far reaching effects not only to the inhabitants of the housing areas but also to the social, economic and physical environment of the urban structure as a whole.

The study adopts two related approaches. The first approach is a general survey of the causes and effects of housing problems and the interrelationships of housing aspects. Then, having identified particular topics of concern, the study examines some of these, such as housing needs, standards, housing inputs, i.e. land, finance building materials, labour and the construction industry, housing densities and costs relationships, in some detail. The study stresses the need to establish principles and processes of comprehensive analysis stems from the importance of housing as a community problem area, since housing is a major land use and its form reflects and influences, in a critical way, the pattern of urban experience and activity.

Throughout, the aim has not been to produce a model or concrete figures so much as to analyse present trends and suggest some likely future developments in the hope that, with modification and improvement, this study could act as a basis for further detailed study of the housing sector and assist in the formulation of long - term housing programme.

L I S T O F T A B L E S

L I S T O F F I G U R E S

L I S T O F A P P E N D I C E S

I N T R O D U C T I O N

It is the avowed aim of most of the developing countries to raise their people's standards of living. After food, the chief factor determining living standards is housing. In this connection, housing is a synthesis of social, economic, environmental, technological and political considerations as applied to human control of the environment. A study of housing, therefore, calls upon the contribution of a number of specializations falling within and related to the entire sectors of housing, building and planning. Each of these specializations can contribute towards making housing more acceptable as well as more economic under a given set of conditions.

Housing constitutes the physical environment in which the family, society's basic unit, develops. Its improvement represents a concrete and visible expression of a rise in society's general level of living. Housing is often called shelter, particularly in economic textbooks; from the family's perspective, however, it is not shelter alone but comprises a number of facilities and utilities which link the individual and his family to the community. Housing and urban development in general, therefore, are activities where social and economic progress meet.

The housing problem is a universal one. It exists in countries where the economy is centrally planned and in countries of free economies; it exists in the most developed countries and in the newly developing countries. The reasons are that "Housing is a process, not a product"; see, Prof. D. Turin's statement in an interview published in "Building Design", 8 May, 1970.

The developed and developing countries, though they represent different levels of wealth and technological development, have both experienced and are still experiencing the impact of population growth that has created slums, over-crowding, and urban land problems. Both are suffering from the stubborn disparity between incomes and housing costs, the competition for urban land, chaotic urban development, and the many other distortions caused by rapid urbanization, population growth, and substandard living.

Yet, though the symptoms are similar, the nature of the malady and its prognosis are of different orders. The developed countries have acquired greater political stability and can better afford to make mistakes; and experiments that fail are not fatal. Their population have skills and higher incomes and the supply of used housing allows for a turnover of dwellings among residents as their circumstances change. Though housing cost is usually beyond the average worker's means, a construction industry and techniques function for those who can pay the price, while the government can better afford to bridge the gap for lower income families. There is generally also an established legal framework in the developed

countries within which the problems of urbanization can be tackled. Land ownership is respected or restricted according to certain norms and is usually subject to compulsory purchase for public interest. Also there are well established private mortgage mechanisms for investors and for buyers who can pay the going costs such as, for instance, the building societies in the UK. Contracts are enforceable by courts, and if rights and duties are not always clear, they can at least be roughly approximated, and when the government has intervened with sterner measures where the private sector and mechanisms has faltered, the line between governmental and private action is more or less plainly drawn. All these refinements of power have taken place over a long period of time marked by crisis and debate, trial and error, experimentation and amelioration.

With very few exceptions, the developing countries are all experiencing, in varying degrees of severity, the problems of urban development which came in the wake of the dynamic revolution, which is urbanization. Housing, or more often lack of adequate housing, has been at the centre of the problems facing governments in this situation.

The problem of discussing housing in this situation is to isolate it from the numerous other aspects of the development process. Housing must imply towns and their growth and the resultant urban problems. A house is not just a self-contained entity but part of the fabric of neighbourhood social existance; it also correlated with industrialization and the location of economic activities. The social aspect of change and the immaturity of the legal, political and administrative devices, as well as the need for education in the widest

sense are also problems associated with rapid urbanization. Finally, one may include the place of private and public investment in building together with what are often inadequate taxation, land and transportation policies which together commonly form the background to housing development. This complexity makes the application of general theories to housing problems difficult.

The analysis of a country's housing conditions and projections of possible courses of future action must, by their nature, expose in the analyst certain sectoral attitudes. A politician, an owner occupier of property which is appreciated in value, an inadequately housed large household, a physical planner and government employee all hold sectoral opinions which not only differ but may be irreconcilable. Against such a background of variable outlooks, the search for an objective assessment of a housing situation is by no means simple.

The purpose of this study is:

1. To examine housing in Iraq with special reference to the city of Baghdad from the point of view that housing is not simply a shelter which provides protection from the elements but a synthesis in which social, economic, physical and political forces interact.

2. To develop an argument that housing density is not simply another planning index to be used with others in the formulation of town plans but a crucial variable which once fixed will have far reaching effects not only to the inhabitants of the housing areas but also to the social, economic and physical environment of the

urban structure as a whole. It is not, therefore, a matter for an arbitrary decisions by the planners.

3. To analyse the trends of housing costs in relation to housing variables such as size, form, construction standard, and densitites.

The study adopts two related approaches to the examination of housing in Iraq and Baghdad. The first approach is a general survey of the causes and effects of housing problems and the interrelationships of housing aspects. Then, having identified particular topics of concern, the study examines some of these, such as housing needs, standards, housing inputs, i.e. land, finance, building materials, labour and the construction industry, housing densities, and costs relationships, in some detail.

Throughout, the aim has not been to produce a model or concrete figures so much as to analyse present trends and suggest some likely future developments in the hope that, with modification and improvement, this study could act as a basis for further detailed study of the housing situation and assist in the formulation of long-term housing programmes.

The first year of the study was spent in collecting data, collating sources and conducting interviews, while the following two years were used for the analysis of the information gathered.

It so happened that during the period of the study Iraq experienced some quite profound changes in circumstances which had effects on the economic and social composition of the country. In turn, these

changes produced political responses which further complicate any attempt to produce forecasts of future trends as so many of the issues central to this study are essentially policy matters.

There are three distinct phases within the period covered by the study. The first existed up to 1972 and was a situation where the national income was increasing at a rate fractionally above that of population, where there was under-utilization of resources and those resources in use were just sufficient to support the needs of the population. In the period 1972-73, as a repercussion of the nationalization of foreign oil companies, austerity measures were introduced which had a very broad ranging impact on investment. This phase was succeeded by the present situation which resulted from the rapid increases in oil prices where the major policy consideration is how to invest to optimise benefits from the oil revenues.

As a result of the massive increases in the country's income from oil, demands are voiced on all sides, private and public, for more buildings, roads and works, for higher standards and for speedier development. Moreover, it is generally assumed that the standard of living will rise and that additional development will be needed to keep the built environment in line with rising incomes and expectations. At the present in Iraq there is no general consensus on suitable standards or the timing of improvements in standards, on priorities, nor about the locations and forms of future development. However, any solution will necessitate a very large allocation of national resources to the built environment. The resources available in future for urban development, which includes housing, will depend on the rate at which the national income increases in relation to population, and on the competing demands

for other public and private purposes; for example, for defence, for social services such as education, and for capital and consumer goods. There is, too, the problem of devising the right kind of financial and administrative machinery for shifting resources into the appropriate sectors of the economy.

In the short run, it appears that there is no absolute limit to the resources which can be made available for the maintenance and extension of the built environment: there is no specific sum which represents what the country can afford. It seems that it is a matter of choice and national housekeeping, a question of priorities in achieving objectives and of finding the right balance between expenditures of different kinds, so that each yields equally good value for money. On the one hand, expenditure on and returns from the built environment should be compared with those for other quite different uses; and, on the other, there is a need to make those comparisons between the various sectors of the built environment. If recent increases in the national income are to be used efficiently to meet the needs and wishes of the people, decisions about the standards at which to aim, the rate at which general advance towards them should be achieved and the most suitable forms for their attainment should be discussed and taken in the light of the maximum knowledge of the consequences of the alternatives available.

So far, the government response to all these changes has been far from adequate, and confined mainly to trying to achieve stability linked with haphazard advancement economically and in the standard of living.

Rent controls, have, for example, been introduced to try to counter the effect of inflation on the housing market. The real incomes of the population have increased but the range and number of commodities to absorb the additional income have not increased proportionately. Some policies, such as the indiscriminate issuing of housing loans, have disproportionately benefitted the upper and middle income groups.

There has been some previous work on housing in Iraq, but this has been deficient in various ways. Estimates of housing need have suffered from inadequate population figures and lack of agreement on minimum acceptable standards over questions such as building materials, e.g. whether reed construction is desirable, and the necessity of amenities such as private baths.

Previous studies have failed to draw together the several components of housing into complete synthesis. There have been very general studies in the context of the large scale process of urbanization, but, most importantly, no studies have examined the significance of housing densities in conditioning living standards and no studies have examined the relationships between housing costs and factors such as house size, form and density. In all these cases, when the present study has turned its attention to them, the discussion has been developed without benefit of any previous material.

On conclusion of the study it is clear that as well as achieving the objectives which formed the basis of the work, other features of the housing situation deserve mention.

Iraq has a stock of buildings, particularly dwellings, many of which are neither physically fit nor capable of meeting the economic and social needs of today. Many people, particularly in the cities, live in overcrowded and insanitary conditions, without modern amenities for washing and cooking. Many dwellings are badly located and mixed with derelict land. Many commercial and social buildings are obsolete and are no longer suitably situated in relation to other buildings to form efficient settlement patterns. Many roads are inadequate to handle the increasing traffic wishing to use them, and parking spaces particularly, in the central areas, are insufficient. Increasing distances between places of employment and places of residence add to the need for transport. Population is expected to grow and, even without any rise in standards, this would greatly increase the need for buildings and works of all kinds.

At the macro level the main cause of the housing problem must be attributed to the processes of migration and urbanization, which have contributed to the creation of slums and squatter settlements. The control of urbanization is, therefore, necessary before this impact can be reduced.

At the policy level, the existing machinery of planning is scarcely adequate. Housing has conventionally received only scant attention in national development plans and this central neglect is mirrored by a similar failure at the municipal level. Coherent planning at all levels is absolutely necessary before any large programme of housing construction or improvement can be carried out.

At the micro level, with which this study has primarily been concerned, it must be emphasised that housing is not simply an economic commodity but has deep social and political implications. The increasing gap between incomes and housing costs has to be contained and this can only be done by operating on a number of fronts. The reorientation of existing building technology must be accompanied by fiscal activities in the form of subsidies or tax relief to put adequate housing within reach of low income groups.

The study of housing densities undertaken clearly demonstrates the complex interrelationships involved in housing. Densities are usually determined through considerations of factors such as land, building technology and form, and costs, but once determined must have a profound impact on a wide range of social, economic and public health circumstances of house occupants and the community as a whole.

The study is divided into four Parts, Part I deals with the main problems of housing in Iraq and Baghdad so as to provide a clear picture of the context in which housing policies and problems be evaluated. This part is divided into three chapters. The first chapter examines the problems and scope of urbanization in Iraq and its impact on the city of Baghdad particularly on housing. The chapter also examines the effects of urbanization and migration on the social structure particularly the family, since this unit is of direct relevance to the problems of housing in general and housing costs and incomes in particular. The second chapter concentrates on the problems facing planning in Iraq and the main planning machinery and institutions at both central and municipal levels and the prospects for their improvement. The third

chapter concentrates on the examination of the present housing situation and the government policies to overcome housing problems while emphasising the priority problems through the analysis of the socio economic structure of the people and their capabilities to pay for accommodation. It must be stressed that this chapter concentrates upon the housing problems in Baghdad, because it is the city which has experienced, and will experience, the greatest development and the most difficult problems. The main objective of this Part is to provide a background to the housing situation and problems, their causes and effects, so that subsequently a more detailed analysis can be made, particularly in the fields of the analysis of housing imputs, needs and standards.

Part II, gives an account of the main housing programmes and proposals designed to overcome housing problems in Iraq and Baghdad in particular; in addition it attempts to estimate housing shortages and needs in Baghdad, as well as, analysing the main factors involved in the assessment of housing standards. The objectives of this Part are first to demonstrate the government response to the housing problems and assess their achievements, and secondly, to analyse the magnitude of the housing problems and the rate of housing construction needed to meet housing shortages and the needs created by population increase; also to establish the criteria by which housing standards should be assessed.

Part III concentrates on the close examination of housing inputs, i.e. finance, land, building materials, and labour and the construction industry, with the objective of assessing their problems and the ways

in which they are interrelated to each other and effect the volume and type of housing development.

Part IV is divided into two main chapters. The first chapter puts forward the argument that housing densities are not simply a planning index designed to accommodate a given number of people in a given area within the urban structure, but rather a synthesis by which present and future living conditions will be affected and determined. And once they were set within the urban structure they will have far reaching consequences on public health, social relationships, visual qualitities of the area, and above all the cost at which community facilities and utilities will be provided and maintained. In the second chapter, an attempt is made to analyse the main factors which are directly affecting housing costs, and the pattern in which housing costs are related to aspects such as housing size, form, maintenance, and densities. The main objective of this Part is to emphasize the point that housing is a synthesis of a host of issues and any decision on one of them will have to effect the others, and not necessarily in the same direction of impact.

Since the study has concentrated its analysis on the housing problems and development of the city of Baghdad, two Appendices are enclosed; the first deals with the evolution and development of the city of Baghdad and the main factors which have determined and influenced its present urban structure. The second reviews the main planning attempts which were initiated by the government and proposed by

different planning consultants to control the rapid development of the city. At the end of this Appendix, a brief appraisal is made of the recent master plan for the city prepared by Polservice.

Finally, it must be appreciated that because of the nature of the study and the dramatic and totally unexpected changes taking place in Iraq during the study period, the analysis has required continuous adjustment and even so may no longer adequately reflect the up to date situation. Nevertheless, where possible, comments and information have been incorporated to express the rapidly changing situation and likely future trends.

PART I

Urbanization, Planning, and Housing Problems

C H A P T E R 1

URBANIZATION AND CHANGE : PROBLEMS AND CHARACTERISTICS

This chapter will examine the scope and characteristics of urbanization and urban growth in Iraq in general with particular emphasis to the problems and change resulted from the lack of adequate measures to control urban areas particularly Baghdad. The main objective of this chapter is to demonstrate the main causes of housing problems and provide a background from which more detailed analysis would be made. It must be appreciated that the state of numerical data on population in Iraq allows only for a general presentation of the problems involved in urbanization. This is mainly due to the lack of reliable data which would illustrate the demographic events in the years between the general censuses, [1] scientific elaborations of the results of the censuses are not available, and the successive censuses show essential differences in methodology, classification and organization. Therefore, the obtained data are comparable only to a limited degree and the conclusions should be evaluated with great care.

Among all the problems that Iraq is currently facing, perhaps the most significant is impending urbanization. As it is, more than half of the country's population is now living in so called urban areas, so called because most of these areas are urban only by the name rather than in terms of the activities which they house; see Appendix (1.1). [2]

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1. Iraq general censuses were held on: 19th Oct. 1947; 12th Oct. 1957; and 14th Oct. 1965.
2. The government defines urban areas in Iraq as any habitation containing a minimum of 2000 inhabitants, or any place which may be declared as a Municipal area. As such, according to data obtained from the Ministry of Municipalities in Baghdad, there were in Iraq by 1973 some 256 municipal units regarded as urban areas.

While it is possible to identify most problems facing the cities as problems of urbanization particularly when one examines most of the literature written on urban problems in Iraq, one discovers that four issues have perhaps generated the most concern:

1. Rpaid urban growth and rapid rates of urbanization;
2. Overconcentration of urban population in primate cities, i.e. Baghdad, Basra and Mosul;
3. Shortages of housing and community facilities particularly in the large cities;
4. Social changes and problems, such as family disorganization and crime.

The existence of cities in Iraq is by no means a new phenomenon, for certainly no other area in the world has had as venerable an experience with cities as Iraq "Mesopotamia" where, indeed urbanization first began - Ur, Babylon, and Nineveh - , and where, during the height of the Arab Islamic Empire, such cities as Baghdad and Basra outdistanced any of their European rivals nurturing a highly sophisticated intellectual and artistic life. [3]

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3. Many studies have been done on the historical and social aspects of Iraqi and the Islamic urbanization, but the best description of Iraqi urbanization during the medieval Islamic civilisation was made by a 14th century Arab social thinker and historian, "Ibn Khaldun", where he stated, in his monumental study of medieval Islamic civilisation, that the most important factor in the growth and rise of Iraqi and Islamic urbanization was the substitution of religious affiliation for kinship as the rationale for social organization; see, Ibn Khaldun, "The Muqaddimah: an introduction to history", New York, Pantheon Books, 1958, 3 Vols., Translated by Franz Rosenthal. This thesis has been well elaborated and discussed also in the work of the French historian, Fustel de Coulanges. For a concise summary of Ibn Khaldun's analysis of urbanization; see Mohsin Mehdi, "Ibn Khaldun's Philosophy of History", London, George Allen, 1957, Chapter IV.

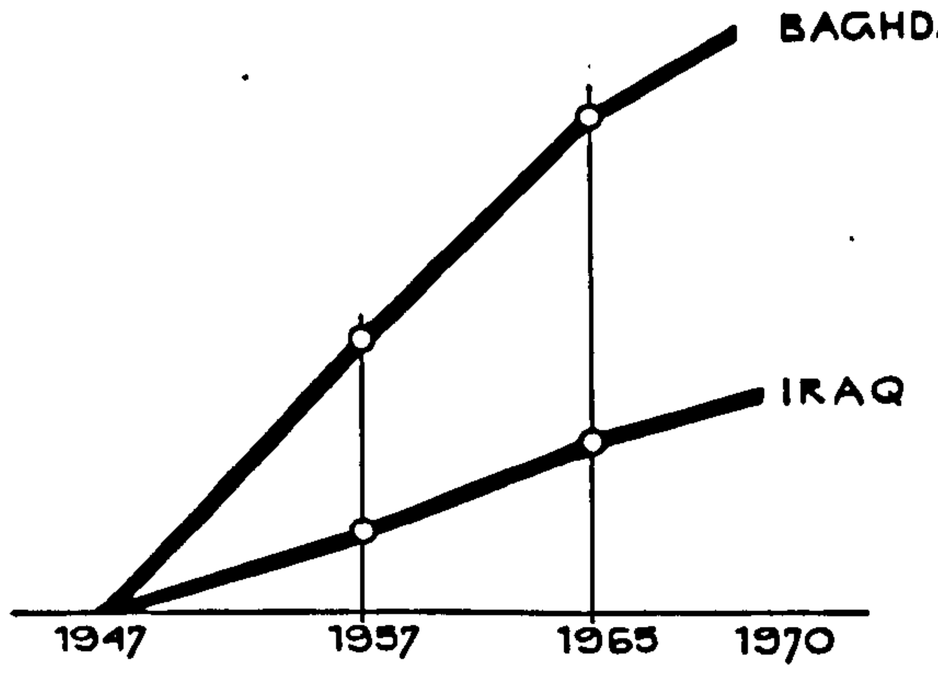
In Islamic civilization, cities have always occupied an important and positively valued position in the hierarchy of settlements. But in recent years there is no denying that a subtle change in attitudes has come about and it has become more fashionable particularly in the professional circles to decry urbanism. Both the new gigantism in size and the rapid rates of urban growth have been blamed.

1.1.0 Scope, Characteristics, and Problems of Urbanization:

Present urbanization in Iraq is characterized by a rapid population growth. This growth has been the result of major improvements in public health and the conquest of epedemics and health hazards. Although these increases are nationwide, nowhere have they been more pronounced than in the urban areas. To illustrate this, it has been found that during the period between 1947-1970, the population of urban areas increased by about 240 per cent, and the city of Baghdad by about 430 per cent as compared with the increase in Iraq population as a whole which was estimated at about 97.9 per cent; see, Appendix (1.1) and Fig. (1.1).

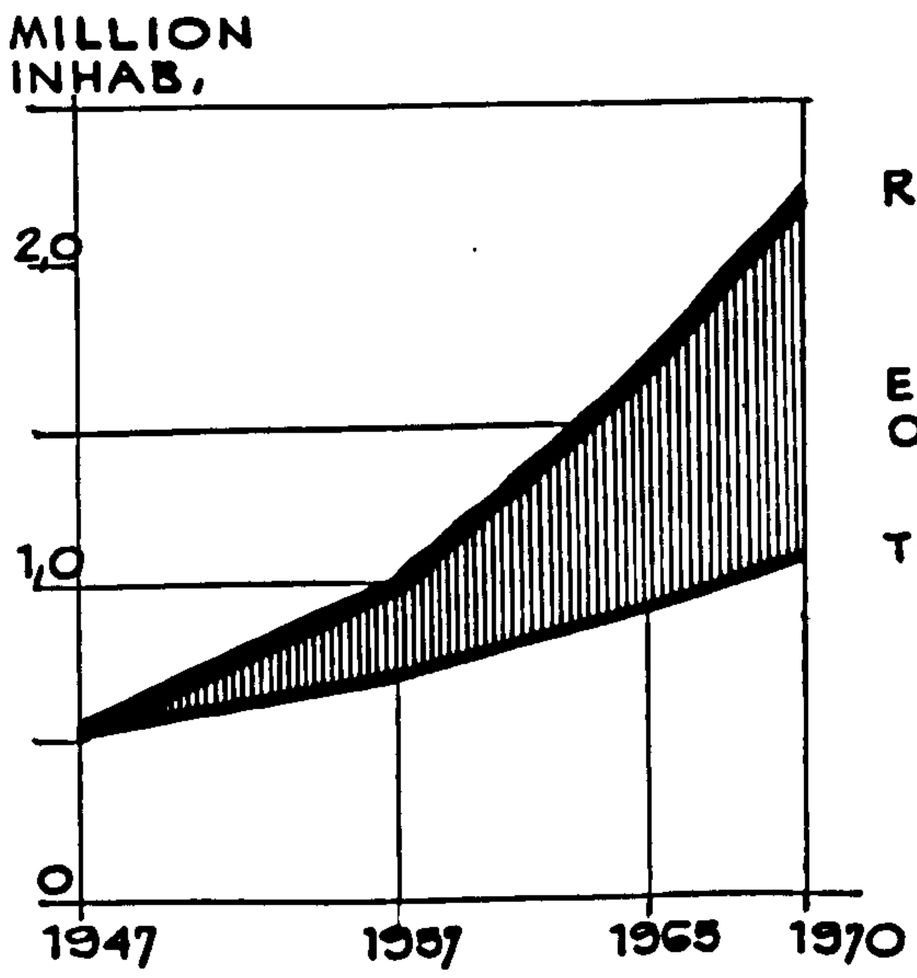
Another index of the extent of urbanization in Iraq is that in 1965, when the total population was around 8.26 millions, about 29.9 per cent of the population were living in localities of over 100,000 inhabitants, and about 40.6 per cent were living in localities of over 20,000 inhabitants. For comparison of this urbanization with other countries in the Middle East region; see, Appendix (1.2).

FIG.(1.1) RATE OF POPULATION AND MIGRATIONS GROWTH IN BAGHDAD AND IRAQ



	1947	1957	1965	1970
BAGHDAD	100%	187=100%	166=100%	131
IRAQ	100%	131=100%	128=100%	117

A. RATE OF POPULATION GROWTH_ Preceding year 100



B. MIGRATIONS AS A FACTOR IN BAGHDAD'S GROWTH

To illustrate the process and pace of urbanization in Iraq during the last hundred years, the population grew from 1.3 million in 1867 to 8.8 millions in 1967, this presents an increase of almost seven times, while during the same period, the urban population multiplied itself over thirteen times, and its proportion to the total population went from 24 to about 46 per cent. This trend represents very clearly the pace of urbanization which is taking place in the country; see, Appendix (1.3).

In the last three decades urbanization in Iraq has been felt mainly in terms of the constantly accelerating movement of population from rural to urban areas and a corresponding movement from undeveloped or neglected urban centres, particularly from the south of the country, to the capital Baghdad. This shift has created depressed rural areas, retarded the growth of necessary urban centres and rendered inadequate almost all major public utilities of the big cities.

Unlike the developed countries of Western Europe and North America, where the growth of cities, though it produced many problems and was not painless to the urban migrants, was roughly correlated with industrialization and economic development; urbanization and the growth of cities in Iraq have preceded the economic growth necessary to sustain urban agglomeration. There is a headlong rush to move to the cities and particularly to the capital Baghdad, even though natural resources are underdeveloped and the tools of production and capital resources are inadequate.

In the developed countries, the employment pattern has been to move from an agricultural economy to an industrial economy, and then to a service economy. In Iraq, because of mass migration and the natural increase in urban areas accompanied by the lack of clear policy on urbanization defining the role of the towns and cities in national development, or on the distribution of population, employment movement has been largely in the direction of a service economy and, consequently, unemployment and underemployment become common features of the cities. Instead of an active and socially productive service sector, a large proportion of the urban population consists of a myriad of odd job men who live on the rim of near starvation. Moreover, manufacturing industries have not been able to absorb the increase in population; it has been estimated that by 1970 only 5.44 per cent of the total employment in Iraq was in manufacturing industries; see Appendix (10:1). And, hence, the size of the service sector is completely out of balance with the income and development attained in the cities and towns.

In spite of considerable development of industries and services in Iraq mainly during the last fifteen years, it has not been possible to absorb a large proportion of rural man power in the cities. Any increase in urban employment opportunities draws an ever increasing number of unskilled migrants, who, once in town, are reluctant to return to their villages. Moreover, those who move to the cities to continue their education tend also to stay there because they cannot find an outlet in the rural areas for their newly acquired knowledge and interests. Thus in addition to the problems directly related to rapid urban growth there are those arise from the aspirations of the people for a better life.

The settlements being affected by the rapid urbanization are generally very old cities, i.e. Baghdad, Basra and Mosul, which were originally founded and developed for the needs of a different style of life, and presented only two or three decades ago an appearance very different from their present state, They were mainly of radial-concentric urban form, with the city core centrally located, and most still contain the remains of the old segregation of activities and types of residential areas into quarters with distinct zoning, such as the old traditional residential areas of Baghdad; see, (3.2.2). At the present, most of these cities are characterized by a land use admixture which makes it difficult to trace a clear pattern in their spatial arrangement. No residential area can be kept strictly residential, small workshops or even larger industries find their way wherever space is available. And even where land use legislation exists it has not been strictly adhered to.

Appendix (1.1) shows the estimated rates at which the largest cities in Iraq have been growing in the recent decades. Clearly, these rates greatly exceed those of cities in the more developed parts of the world, but they are not particularly higher than those prevalent in the developing countries. These figures, rough as some of them may be, are impressive evidence of the fact that major cities in Iraq have been experiencing rapid rates of growth in recent years. It may help to gain a more concrete idea of this phenomenon if it is realized that a population growth at about 10 per cent per annum, doubles itself every seventh year and that a population increasing at the rate of 7 per cent per annum, will double itself every decade.

The configuration of the cities and their suburbs in Iraq as they are known today, dates from the establishment of the Ottoman Empire. With the attainment of independence after World War I, the cities of Iraq, particularly Baghdad, entered a period of accelerated growth. The discovery of oil in the early 1930s, the expansion of trade and commerce, the establishment of fledgling industries, all contrived to attract considerable migration from the rural areas. Unfortunately no census figures are available to calculate the extent of growth of the cities prior to 1947, first general census, but photographs and maps of the cities especially Baghdad at that time compared with those of today reveal an enormous spatial expansion to accommodate the increased population; see Appendix (1.4).

This physical expansion has been, for most part, unplanned or in contravention of whatever physical plans existed, and has brought with it the invariable problems of housing, provision of water and sewage facilities, provision of health and educational facilities, in addition to the eyesores of slums and shanty towns "Sarifa" areas.

Given this, it is certainly not surprising that, particularly in recent years, much attention has been directed to the difficulties attending rapid city growth and that planners who were invited to study this problem have often wistfully believed that if only the size and growth of cities could in some way be limited, the backlog of demands piling up so visibly in the large cities, particularly Baghdad, could begin to be met, see Appendix (1.5). What does appear surprising is that diagnosis of growth has been relatively superficial and, at times, even incorrect, so that policies designed to cope with or avert growth have been totally inappropriate.

The continuous flow of migrants into the cities and the resulting urban growth posed many economic, social and physical problems. Urbanization is most closely related to housing problems since the population movement means the abandonment of dwellings in one area with concomitant demand and overcrowding in the other. Attempts to meet this demand both by the private and public sectors have been dispersed and unconnected. In the private sector, rural migrants to the city, particularly Baghdad, have brought with them their skill at constructing, quickly and cheaply, one-room houses without any amenities "Sarifa", which quickly deteriorated into delapidated unhealthy slums. City dwellers, on the other hand, have shown a great tendency to invest in luxurious reinforced concrete houses which have served the needs of the well-to-do population. The greater bulk of the population, under these circumstances, have looked to the government to devise middle-income housing which would meet both their needs and finance; see, (3.4.0).

The measures taken in response to rapid urbanization in Iraq despite their inadequacy and shortcomings covered wide areas ranging from housing development, physical planning, land use legislation, Industrial location, and administration. One of these measures was the extension of the municipal boundaries of the cities to accommodate more people. In the case of Baghdad, for instance, its municipal boundary has been extended three times during the last twenty years; see, Fig. (1.4.D). Such expansion has invariably upset all previous estimates made by different town planning consultants who prepared master plans for the city; see Appendix (1.5), and has caused many jurisdictional problems, and in many

areas forced land prices up and created numerous problems in the provision of public services and amenities.[4] The validity and consequences of these measures, particularly those related to housing will be discussed and analysed in greater details in later chapters.

To assess the future scope of Iraq urbanization, one may refer to a study made recently by Mr. K. Ueda, U.N. Demographer, who was commissioned by the Central Statistical Organization in Baghdad to study and forecast the population trends of Iraq up to the end of this century, the study revealed that by 1990, the population of Iraq would range between 19.32 millions and 20.73 millions, while the urban population will be close to 15.25 millions.[5] The result of these projections, means that, if development is to be beneficial and human deprivation is to be deceased, the entire urban infra-structure as well as housing and related community facilities will have to expand proportionately. One must state here that any population projections for urban areas and urban facilities must not only take into consideration the existing urban areas, but also the possible incorporation of new areas and the growth of the communities already within them.

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4. The present area of Baghdad was estimated by Polservice - the current master plan consultant - to be around 825 sq.km.

5. see, K. Ueda, "Population Projections for Iraq: Urban and Rural", UNDP, Baghdad, 1970, also see Appendix (1.6).

Very few studies have been made on the comparative cost of urbanization in Iraq. One of such studies was made in 1965, by Dr. N. Al-Jalili based on 1957 census data. This study estimated the cost of urbanization in Iraq as roughly 528 ID per person. The distribution of such cost on different facilities is as follows:

Table (1.1)

Estimated Rates of Urbanization Cost According to Major Urban Facilities:

Facility	Percentage
Housing	66.1
Infrastructure	14.3
Health	8.0
Education	6.0
Transport	5.6
Total	100.0

Note:

These estimates were based on the assumed family size of 5.65 persons, which gave an investment of about 2966 ID per family.

Source: N. Al-Jalili, "Urban and Regional Planning Policies for Iraq", University of Pennsylvania, Philadelphia, 1965, Unpublished Ph.D. Thesis.

Dr. Jalili also worked out estimates of costs for creating urban employment in various sectors of the economy, and found that it cost about 205 ID to create a job in small industries, about 113 ID in building construction, and a range between 197-400 ID for creating a job in public or government services. In large scale industry, the variation was even greater, a range from 480-4460 ID. [6]

In short, in order to accommodate rapid urbanization and population growth in cities, and to convert it into productive force which can contribute to development, the problems of finding enough land and space for shelter at reasonable cost, creating sufficient employment opportunities and providing an adequate standard of urban facilities have to be overcome. As for the planning of cities and towns, there is the problem of augmenting the basic infrastructure of the communities, to expand the municipal services, social and cultural facilities and other aspects which distinguish the urban areas from the rural. All these would require heavy capital investments, and that too within a short period of time.

Nevertheless, urbanization could be utilized as a progressive tool for national development, given a proper appreciation by both the government and the public of the problems involved and their extreme consequences. Left to itself, however, drift and planless development would be the outcome, which in turn would be extremely costly as well as being a potential for further structural instability and disaffection which will create serious inbalances in the society for many decades to come.

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6. see, Naman Al-Jalili, "Urban and Regional Planning Policies for Iraq", Unpublished Ph.D. Thesis, University of Pennsylvania, Philadelphia, 1965, pp. 250 - 256.

1.2.0 The Predominance of Baghdad:

In the last twenty years or so, Baghdad has been developed faster than the rest of the country. This development, which was accompanied by substantial increase in the population, is the direct result of the mounting migration and urbanization process taking place.

Baghdad also dominates over other urban centres in the country. This may be emphasized by the fact that the nearest cities, Basra and Mosul, from the point of the number of inhabitants, have both no more than half a million inhabitants each, while Baghdad comprise of about 2.17 millions inhabitants in 1970; see, Appendix (1.1) and Fig. (1.1).

The predominance of a capital city such as Baghdad over the rest of the cities in the country is also a well known phenomenon in other parts of the world, particularly in the developing countries. This is attributed mainly to the fact that the capital cities in the developing countries are the centres of concentrated economic investments and employment, as well as cultural and political activities, which stimulate people to move to such cities, thus contributing to their growth and dominance. This is in addition to the fact that these cities are the seats of the central governments, and in a highly centralized administrative and political system, which prevails in Iraq and most developing countries, these cities are bound to enjoy a dominating status with regard to other cities and towns.

To illustrate this point, a study made by the United Nations showed that in sixteen out of twenty countries more than half the urban population of these countries are living in the capital city, which in most cases is also the economic and industrial centre. [7]

The following table demonstrates the percentages of the population of capital cities of different countries to their total population:

Table (1.2)

Comparison Between Population Rates of Selected Capital Cities to the Total Population of their Countries:

City	Percentage to Total Population
Baghdad	25.9 - see, Appendix (1.1)
Beirut	26.3
Buenos Aires	36.8
Caracas	20.0
Havana	18.3
Santiago	25.0

Source: U.N. Year Book, 1970.

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7. Baghdad population has been estimated to be about 45.1 per cent of the urban population of Iraq; see, Appendix (1.1), also United Nations, "Urbanization in the Second United Nations Development Decade", U.N. Publications, Sales No. E70.IV.15.

An analysis of the various factors influencing the increase and dominance of Baghdad population and its trends, led to the following conclusions:

1. Migration played a decisive role in the population increase. It has been estimated that migration to Baghdad amounted to almost 50 per cent of the real population growth of the city. And the difference between the theoretical growth - based on the natural increase - and the real growth including migration, amounted to 1.2 million people; see, Fig. (1.1).
To demonstrate the impact of this migration on Baghdad, one may refer to a study made in 1958 by Doxiadis Associates on the slum dwellers of Baghdad "Sarifa" dwellers as part of a comprehensive plan to solve housing problems in Iraq, which indicated that about 18.4 per cent of Baghdad population were living in slums occupied by migrants from the rural areas. [8]

2. The rate of population growth in Baghdad in recent decades was much higher than that in the rest of the country. This may be illustrated in the following table:

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8. see, Doxiadis Associates, "The Sarifa Dwellers of Baghdad", The Development Board, Technical Section 5, Bulletin No. 1, Existic Centre, Baghdad, 1958.

Table (1.3)

Rates of Population Growth in Baghdad and Iraq During the Period 1947 - 1970:

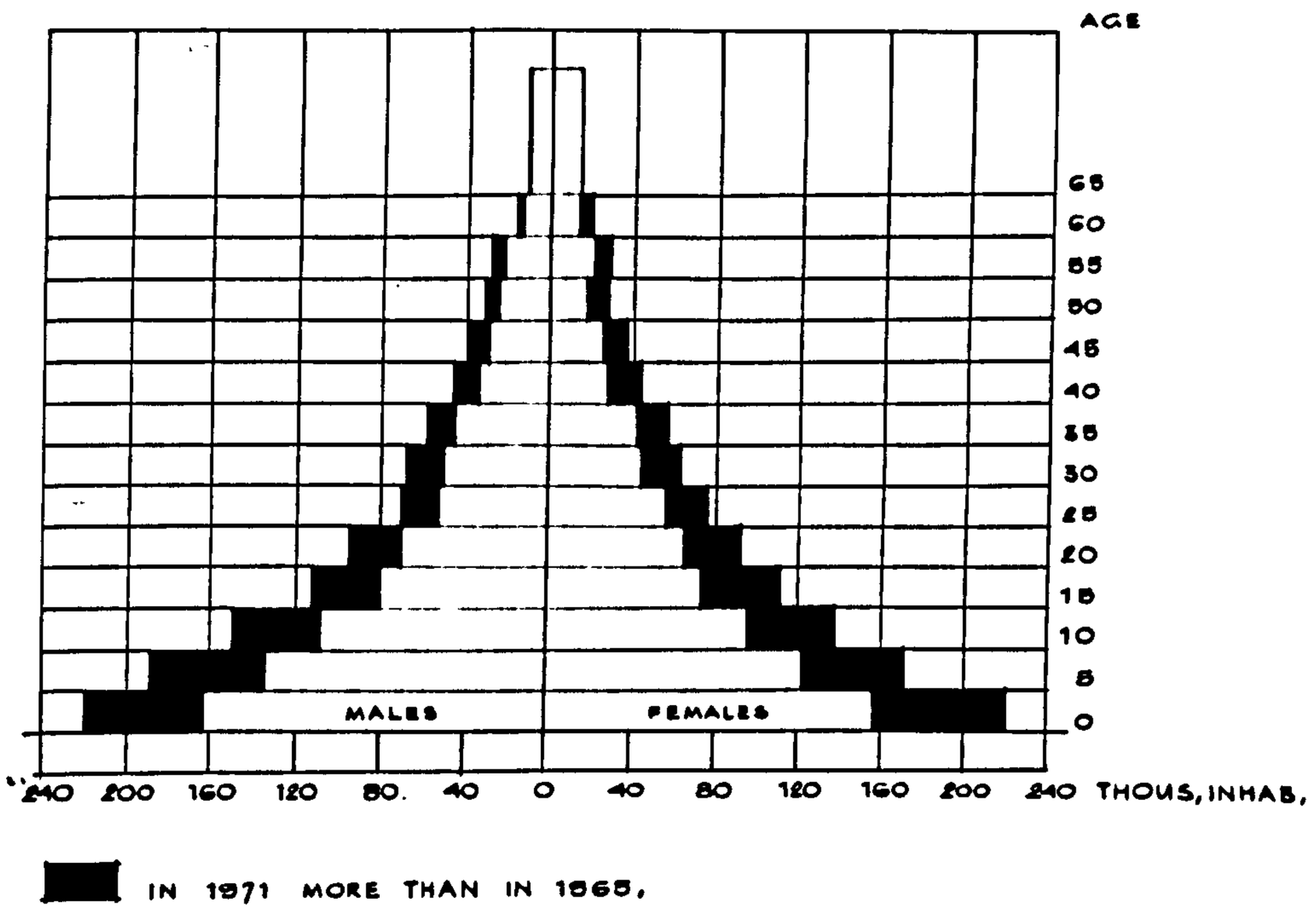
Years	Baghdad	Iraq
1947 - 1957	8.7 % per annum.	3.1 % per annum.
1958 - 1965	8.2 % " "	3.5 % " "
1966 - 1970	6.2 % " "	3.4 % " "

Source: General population censuses, and Central Statistical Organization estimates, Baghdad.

These figures demonstrate clearly the high rate of growth that Baghdad is experiencing; also a significant decline in that rate during the period 1966 - 1970, but one must be careful in assessing this decline, since the figures of that period were not based on census data; see, Fig. (1.1).

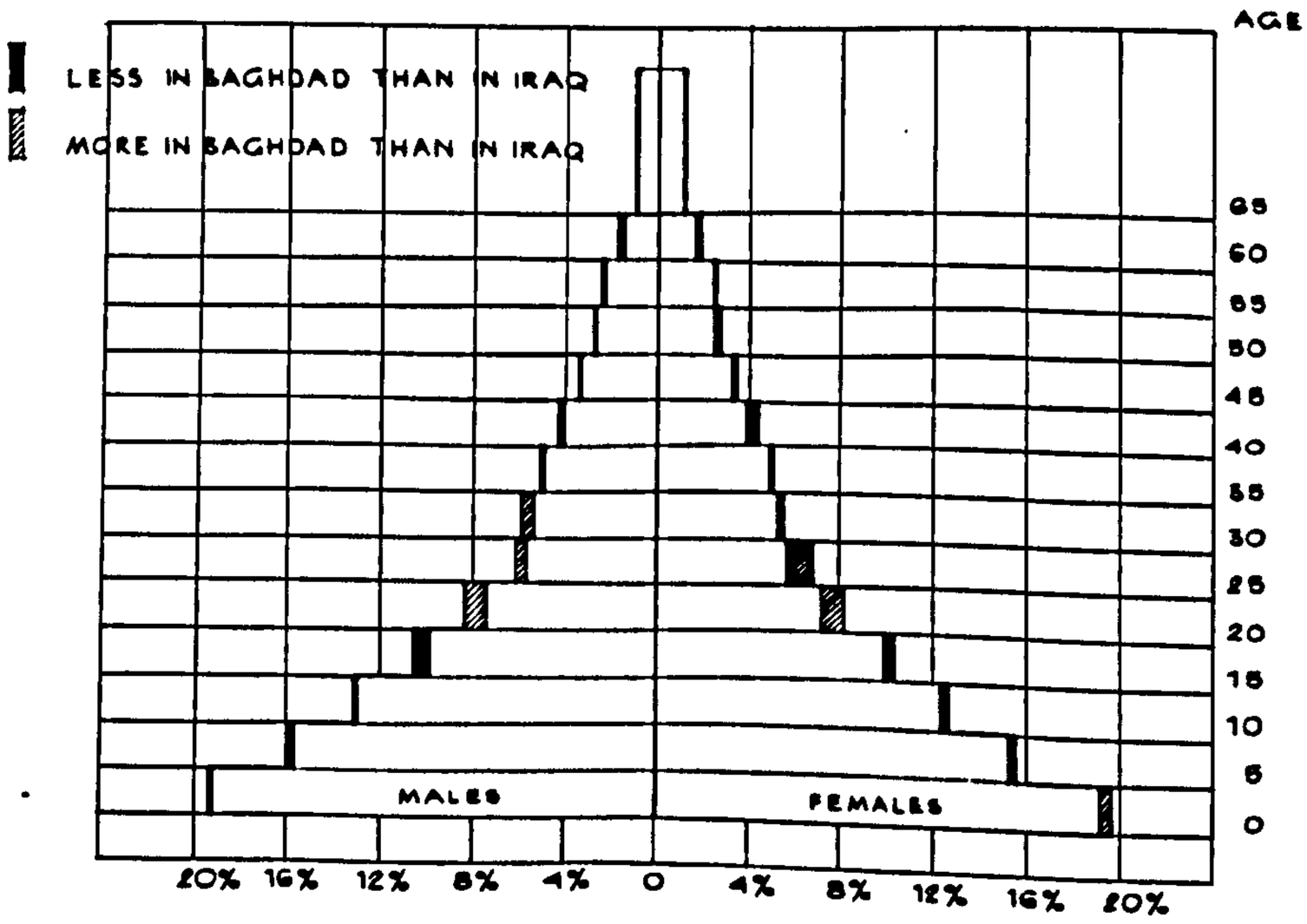
3. The predominance of a very young age group in the population, especially those below 14 years old. This is perhaps a well known phenomenon in most developing countries where the birth rates are higher than that in the developed countries; see, Fig. (1.2) and Appendix (1.7). This is also reflected in the large family sizes and high dependency ratio of the non-productive persons to prodective. In 1965 it has been estimated that the average family size in Baghdad amounted to 5.9 persons, while in the whole of Iraq it was estimated to be around 5.2 persons. This high family size is also

FIG.(1.2) POPULATION PYRAMIDS OF BAGHDAD AND IRAQ



A. BAGHDAD POPULATION PYRAMID 1965 - 1971

B. BAGHDAD AND IRAQ POPULATION PYRAMID 1970



attributed to the tradition of keeping more than two generations in the household; see, Fig. (1.3). Also it has been found that the average household size in Baghdad was higher, though slightly, than that in the rest of Iraq. In Baghdad it was 7.4, while in Iraq as whole it was 7.3 persons.[9]

Such growth and predominance of Baghdad should be considered as a negative phenomenon, since it creates and deepens disproportions not only in the economic development of the country, but also in other fields, such as housing, education, health and municipal services.

1.3.0 Migration Trends:

Population movements from rural to urban areas are not recent phenomena in Iraq, though in recent years they seem to be gathering nomentum. Several factors account for this trend:

1. Discovery and exploitation of oil resources, which has brought thousands of workers into urban areas in search of employment;

2. Population explosion, where the annual rate of growth was estimated at 3.4 per cent per annum during the period 1966-1970; see, Table (1.3). This rate of growth has caused in some parts of the country, particularly in the south, greater pressure on land;

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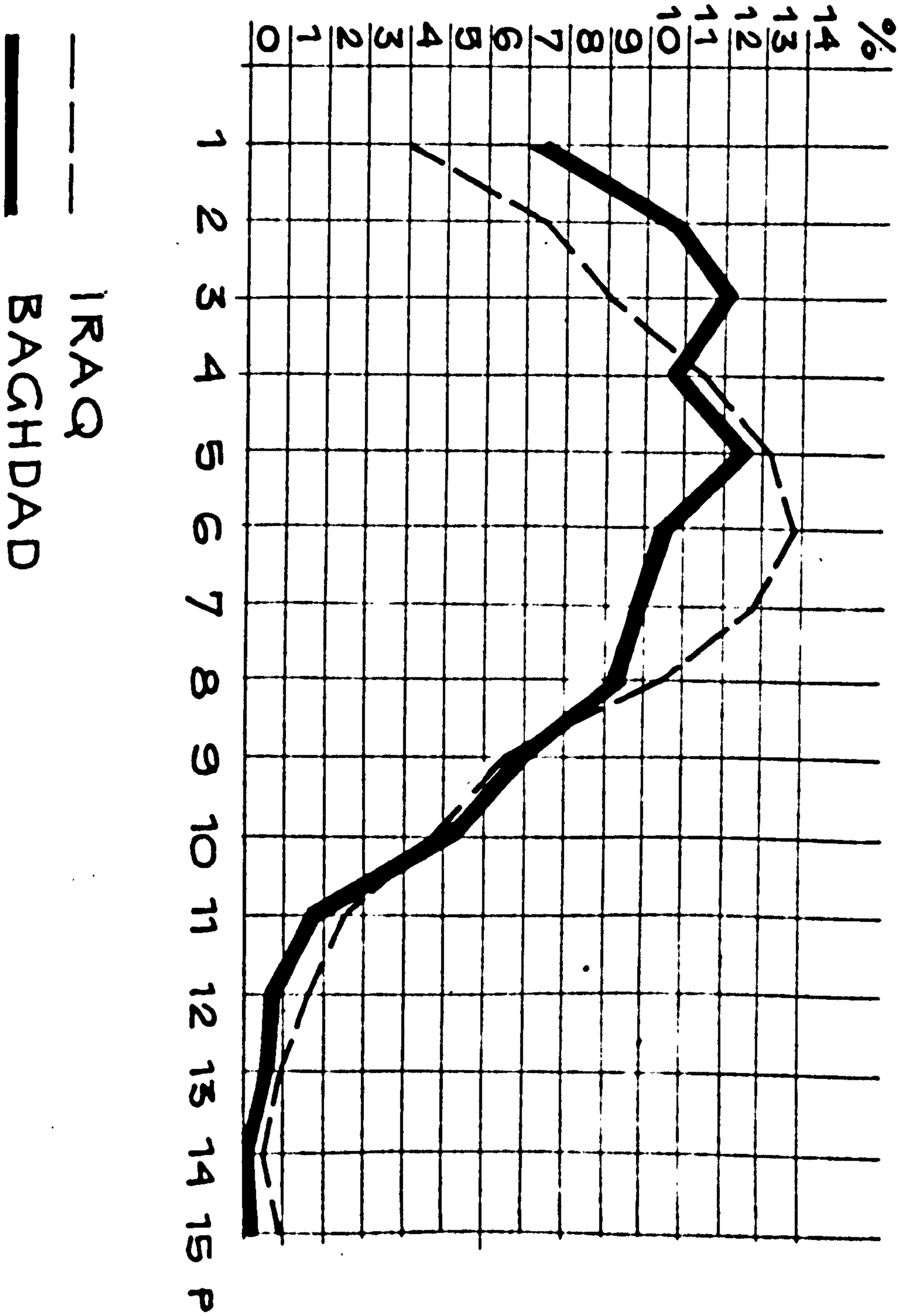
9. Republic of Iraq, General Census, 1965.

FIG.(1.3) DISTRIBUTION OF FAMILIES ACCORDING TO THEIR SIZE



3. Growing difficulty in finding additional land for cultivation and the implementation of agricultural policies which make labourers redundant in rural areas;

4. Accessibility of the cities due to improved methods of transport;

5. Attraction of the city to the rural dweller as main centre for education, health, employment, entertainment, and a totally different way of life;

6. The development of mass communication has created a desire among the rural population for facilities which only the big urban centres can provide. These facilities are usually absent in the settlements from which the new urban population has come. Further more, the desire for such facilities has been stimulated without a corresponding warning that the massive and disorganized transfer of population destroys the very amenities which are sought;

7. Government measures, particularly those related to the distribution of housing plots, provided an incentive for rural dwellers to migrate to the cities especially Baghdad;

8. The political instability, particularly during the early 1960s, generated a desire between some rural people to come to the cities, either to participate actively in the political struggle, or seek refuge.

In general, one can say that both "push" and "pull" factors influenced both the nature and pace of rural-urban migration in Iraq. According to a study published by the International Labour Organization in 1960, the "push" factors in migration were extremely strong; the earnings of cultivators were at subsistance level by reason of the low yields and the high proportion of the crop claimed as share-rent by the landowner; health conditions were extremely bad, and, the majority of the peasants "Fellaheen" suffered from diseases of acute malnutrition. This study went on to state that "pull" factors were also strong; although the oil industry itself employed only small numbers, the volume of employment created by new public expenditure was concentrated on construction, water control projects, roads and urban building.

While a detailed analysis of the pattern of migration is beyond the scope of this study, some discussion on the main features and implications of migration are unavoidable since it has a direct connection with the housing problems and policies pertinent to the main theme of the study.

Generally, the trend of migration in Iraq has been from the rural areas and small towns to the big cities, mainly Baghdad, rather than from rural areas to medium sized towns and then to big cities. This movement of people is characterized by the shifting of entire families including their domestic animals, and may be attributed mainly to the fact that almost the entire work opportunities, social facilities, education opportunities particularly at the secondary and university levels, and recreational activities which usually attract people, are

located in the big cities. It was reported that about 95 per cent of the migrant peasants left the rural areas with their families.[10] As a consequence of this trend, these cities have grown at a faster and almost explosive rate than the medium sized towns, some of which have actually retracted in population. In the case of Baghdad for instance it was estimated that by 1970, about 50 per cent of its population was consisting of rural migrants; see, Fig. (1.1).

To illustrate the direction of the migration flow in Iraq in the last twenty years, one may refer to a study made by D.G. Phillips in 1957 on the nature of rural to urban migration in Iraq, which stated that:

> "Under the question on province of birth in Iraq's first population census of 1947, which was published in 1954, 'Maysan' province has supplied almost one quarter of all Iraqis who were then living outside their province of birth".[11]

Accurate figures on the volume of migration towards cities in Iraq are not available; but data obtained from the Central Statistical Organization on the number of migrants to the urban areas per annum revealed the following:

Table (1.4)

Estimated Number of Annual Migrants to Urban Areas in Iraq:

Year	No. of migrants per annum
1948 - 1952	11700
1953 - 1957	19600
1958 - 1962	40100
1963 - 1965	54000
1966 - 1970	57900

Source: Central Statistical Organization, Baghdad.

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10. see, K. Al-Madfai, United Nations Publications, ST/TAO/M/21.
11. see Phillips, Doris G., "Rural to Urban Migration in Iraq", University of Indiana, Economic Development and Cultural Change, 1957, Vol. 7.

The above data shows very clearly that the migration volume took a dramatic turn by 1958, which was the year of the creation of the Republic of Iraq, and the major changes in the social, economic and political systems. These figures also reveal that in 1970, when the total rural population was around 4 millions, there were about 14 persons per 1000 who migrated to the urban centres per annum.

The distribution of migration between the different provinces "Mohafadha" shows that the provinces of Baghdad, Basra and Kirkuk, are the major attractions of migrants in 1965, while the other thirteen provinces are virtually loosing population in varying degrees, with the provinces of Maysan and Wassit in the extreme; see, Appendix (1.8)

In general the major problems created by migration on the national level are as follows:

1. Disruption of the employment structure, due to the movement of the unskilled labour to the cities.

2. Substantial increases in the public expenditure in the fields of public services and community facilities to accommodate the extra population created by migration - these increases are especially significant to the city of Baghdad.

3. The continuing migration from the rural areas has given rise to squatter settlements in and around the main cities; some of the migrants share dwellings with those who have preceded them from the same locality or tribe and others consist of entire families seeking separate accommodations. All this adds to the existing pressure on housing and community facilities and contributes to the increasing cost of rents.

4. Environmental problems created by the presence of a large number of people who are not yet acquainted with the urban way of life and the use of the facilities provided for the urban dwellers.

Dealing with such problems, the present government policy is far from clear and consistent; but in principle, it seems that in the last two decades, the government adopted certain measures to combat the pressures on the main cities, mainly Baghdad, created by migration. These measures ranged between the development of short term and practical programmes for re-settlement of squatters in new housing areas developed on government-owned land on the fringes of the cities;[12] and the development of economic plans to increase investments in the agricultural sector of the economy, and in the rural housing, thus giving some incentives to the rural population which will eventually discourage them from migrating to the cities.[13]

In theory, the policies open to the government to deal with the housing problems created by the overflow of migration, particularly those created by the establishment of squatter settlements, may take the following forms:

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12. the Eastern Housing Development Project in Baghdad which was designed and executed according to Doxiadis Associates proposals as part of a national housing programme to overcome the housing shortage in the country: see, (4.1.1)

13. Investments in the agricultural sector was risen from 157 millions ID in the 1965 - 1969 economic plan to 211 millions ID in the current 1970 - 1974 economic plan; see Republic of Iraq, Law No. 87 of 1965, and Law No. 70 of 1970, Baghdad.

1. The outlaw of squatter settlements and the enforcement of rigid compliance with land ownership laws, housing codes and zoning ordinances. This approach is neither in line with basic social justice nor is likely to be anything better than self-defeating. Also, this policy in no way deals with existing settlements. These can never simply be razed, because without alternatives the result, even if it could be achieved over the resistance of residents, would be a further intensification of the housing shortage.

2. Another policy is to provide attractive housing in planned settlements to replace the substandard communities and, after relocation of their residents, to remove the latter. This is not feasible for several reasons. First, the demand for additional housing space is usually so great that vacated units would immediately be occupied by other tenants. Secondly, finished housing is expensive to provide and could, therefore, be constructed for only an insignificant fraction of the people who need it.

3. A third policy is to make available free land on the outskirts of the city to those wishing to settle - this policy was implemented in Baghdad in the early 1960's to settle the squatters who were living in the "Sarifa" areas behind the Eastern Band; see (4.1.1) although this policy has the advantage of canalizing settlements into locations that might helpfully be related to some over-all land use plan, it has proved self-defeating in Baghdad, for it has encouraged even more migration to the city than would

otherwise have occurred; attracting land-hungry peasants who might have remained home. Furthermore, this policy did not handle the basic need to provide jobs and shelter simultaneously.

Having examined the alternative policies for their consequences that the government might adopt to overcome the housing problems created by migration and squatter settlements, the following is an outline of a policy which may be pursued by the government and found capable of fulfilling essential needs:

1. The policy must utilize the leverage of subsidy not only to provide minimum adequate shelter but to have such shelter located rationally with respect to a larger urban and regional plans of land use and economic development.

2. It must utilize the energies available among persons already in the city so that residents meet the government subsidy with their own contribution, either in time or money, or preferably both.

3. The goal of providing shelter should, wherever possible, be merged with the equally important goal of creating community and a satisfying social life for its residents.

4. Housing production should help generate multiplier effects on the economy and should be viewed as part of the national plan for investment, development and labour absorption, and not merely as a consumption drain.

5. Programmes which utilize the existing strengths of social organization, communal affinities, and mechanisms of self-management, are to be preferred over those which require the complete creation of new, and centrally organized bodies.

Finally, it seems that any measures designed or policies pursued to combat the problems of urbanization in Iraq as a whole should consider the following three lines of action simultaneously. These are:

1. Improvements in the rural areas, through the provision and expansion of housing and network utilities and services, such as roads, water supply, electricity, schools, health facilities, and social services. This should be accompanied by proper measures to encourage the decentralization of industry or its establishments, to create non agrarian employment opportunies, thus discouraging people from moving to the big cities looking for such employment.

2. The development of medium size towns, particularly those located around the main cities, so as to encourage them to act as an intermediate reception areas for the imigrants; this should be achieved through proper regional strategy covering the country as a whole, taking into account the provisions of all the necessary services and employment opportunities in such towns so as to reduce the dependence of the people who live in them on the big cities for such services and employment This action

may require the development of new towns of medium sizes, benefitting the experience in the U.K. after the Second World War,[14] or the renewal and expansion of the existing towns and large villages which are centres for limited areas and small groups of population. This action should offer not only non agrarian opportunities, but also social and administrative services, better housing conditions, community facilities and amenities, similar to those found in the big cities but more adapted to local conditions and needs.

3. The reorganization of the big cities through the implementation of planning programmes designed to achieve the following objectives

   a. Better housing conditions, particularly in the high density areas.

   b. Better transportation network to reduce traffic congestion particularly in the central areas, and the provision of adequate public transport systems to minimize time and cost, particularly to the low income groups.

   c. Better land use patterns to encourage social integration, particularly between the imigrant population and the original city's inhabitants.

   d. Better environmental conditions, such as the improvement of open spaces, municipal services, infra structure networks, and recreational activities.

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14. see, Ogilvy, A.A., "The Self-Contained New Town, employment and population", Town Planning Review, 39, I, 1968, pp. 38 - 54.

It must be stated here that the above objectives are by no means exclusive, since there are other areas of action needed which are related to social, economic and political development, which it is beyond the scope of this study at this stage to assess, but represent an important area of action to improve the conditions of the imigrant population, and the city's inhabitants as a whole.

It is also important to emphasise that the above measures should be taken simultaneously so as to avoid the problems which might be created in concentrating only on the development and planning of the big cities - which is the present trend - which is by itself an indirect invitation to more migration accompanied by social and economic misery.

1.4.0 The Social Structure:

After the examination of the problems and characteristics of the urbanization trend in Iraq, and its effects on cities and population distribution, it is of great importance to examine its effects on society through the changes that have occured in the social structure of the community and the family in particular, since this unit of the social system is of direct relevance to the problems of housing in general and housing costs and incomes in particular.

Perhaps the best description of the contemporary Iraqi society is that it is of transitional nature in a period of fundamental and unpredictable economic and political changes, highlighted recently by the substantial increases in the oil revenues which are bound to effect the socio-economic structure as well as the economic and political policies of the government.

Much of the traditional foundations of Iraqi society, which were based on strict religious and tribal principles are being undermined; the extended family and the tribal organism are breaking up, and the cities' traditional structures by family and districts has undergone basic changes.

The fundamental character of these changes is that they have not generally been organic in nature; the form of these changes was not chiefly due to normal evolutionary process, or from forces which arose from within, but was generally the result of copying borrowed attitudes from foreign civilizations, mainly western civilization, through direct and indirect contacts on an individual as well as community basis. These new attitudes are not accepted equally by all sectors of society, since they do not conform organically with the traditional old values of the society, neither are they capable of replacing it in its entirety.

As a result, it is inevitable that sometimes old traditional and new patterns are to be found in combination, and sometimes there seems to be a vacuum where the old values and attitudes are destroyed, but nothing new has been formed in their place. Thus, most of the problems facing the contemporary society in Iraq are due to the fact that alongside social changes, part or even all the population retain some of the traditional social values and the attitudes of generations past, which were forming an organic part of the traditional life.

An examination of the basic characteristics of the contemporary Iraqi society reveals the following: First, the Iraqi society is widely diversified in respect to religion and race; although the majority of the population are Arabs by race and Muslims by religion, there

are other groups, such as the Kurds, Turks and Persians, who are Muslims; also there are fairly big Christian communities particularly in the north around the Mosul area. In Baghdad about 90 per cent of the inhabitants are Moslims, predominantly they are Arabs, and then Turks, Kurds and Persians. Secondly,since the society is in a transitional period, the socio-economic structure of the people is very fluid. This is caused by the rapid urbanization and the mass flow of rural migrants to the cities, as well as the dramatic changes in the economic and political structures caused mainly by the relatively frequent change in the governments and their policies, which encouraged the emergance of diversified political groups, whom they took advantage of the political scene to elevate their living standards and persue new social status. Finally, there is an increasing influence of western values and customs on the way of living and social relations, especially among the upper and middle socio-economic groups. This influence was created by the exposure of these groups to the outside world, either through direct contacts or through the mass media. In many cases this created contradictory situations between the different sectors of the society as well as within the same socio-economic group. For example, the older generations, who are usually religously motivated conflict with the younger generations, who are usually more exposed to modern ideas, on issues such as, visual perception, environmental values, and social conduct. This phenomenon is also well known in other countries.

In the traditional Iraqi society, the family is the economic and property owning unit. The family as a whole rather than any of its individual members, is owner of those possessions which constitute the

basis of the family's maintenance. The family is also the fundamental social unit; the participation of an individual in wider groups, such as a religious sect or even a political party, is usually through his or her family. The importance of the family in society has hardly been weakened as a result of the urbanization trend, economic changes, or spread of education.

One of the significant characteristics of the traditional family in Iraq is the extended family structure; that is, one household unites the father of the family, his wife, his unmarried daughters, unmarried sons, and married sons with their wives and children. In this case, this type of family necessitated the living in a single large house or in apartments closely grouped or attached to one another, in many cases around a large common court yard, such as the case in the old traditional housing of Baghdad; see, (3.2.2).

In such a family the following pattern of division of functions and parts dominates: man earns money and is obliged to provide the family with means of subsistence; he stays in his working place and afterwards in cafe' or club; woman is in charge of the household and of education of children; she mostly stays at home. At the present, with the increase in women's education this pattern is partially abandoned particularly in the higher income groups. [15]

In recent times, particularly in the present generation, a major change has set in; married sons tend to move with their wives and children away from their parents to separate dwellings, thus the unit of housing

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15. see, also, M.K. Nahes, "Married Life in Iraq", Recherches sur la Famille, Tubingen, 1956, Vol. I.

and property has dropped into two generations only. This drop in the family structure affected to a large degree the demand for housing, and community facilities. Many owners of large houses, which were originally designed to house the extended family let their houses to be used for other purposes such as schools, health centres, and even warehouses, especially those in the old residential areas. Very few have split them into separate flats to be occupied mainly by the low income groups who cannot afford to have a house of their own.

The cause of this change in the family structure may be attributed to the increasing opportunities for the young generation to earn their living independently, thus breaking away from their dependence on their family's property and traditional family occupation. Also the spread of education among both sons and daughters has introduced new concepts counter to the traditional way of life, and favouring aspirations to independence.

The movement away from the extended family has varied in strength among the different socio-economic groups of the society; depending largely on the potential sources of economic independence available to the younger generations, and also on the housing situation which effects the decisions of new families to leave the old pattern of family life. There is no study or data available on such movement between the different income groups, but one can draw a tentative conclusion, that it is greater in the higher income groups, since those groups can afford to acquire new dwellings and maintain them more than the low income groups. This tendency is an important factor in any study of the housing demands, and must be considered independently from the demands resulting from the normal growth of population.

1.5.0 Summary:

The main conclusions drawn from the study of urbanization in Iraq are: First, it is big-city based - Baghdad, together with three or four other cities, contain almost two-thirds of the total urban population. Even among these cities, the differentiation is vast, for instance, after Baghdad, now close to 2.5 millions inhabitants, Basra and Mosul, have a population of less than half a million each; second, the urban population is characterized by large family sizes and the average household size is even larger; third, the overwholeming predominance of younger age groups - 5 to 20 years - which comprise almost sixty per cent of the population; fourth, the actual working force is less than 25 per cent of the total population, and even less in the urban population.

The rapid growth of the cities has greatly increased the demand for housing, basic utilities and transport, social services, education, cultural and recreation facilities, health and employment. The following two or three decades are likely to be crucial, since estimates suggested that the population is likely to grow to about 2.5 times its present size before the end of this century, while the urban component is likely to register almost a four fold increase. Unfortunately the implications of these increases have not yet been adequately realized and its consequences have not been appreciated.

This situation, therefore, demands comprehensive approaches simultaneously at national, regional, and local levels, and without these problems may explode into vocal and violent chaos, and may generate a dangerous potential for structural instability and disaffection. This need not be so, however, because urbanization if correctly understood and properly harnessed, could be a progressive element in the national development.

C H A P T E R 2

PLANNING : PROBLEMS, MACHINERY AND INSTITUTIONS

With the break up of the Ottoman Empire and the creation of Iraq as an independent country after World War I, a kind of modernization started accompanied with a rapid flow of rural migrants to the cities. This was encouraged by the discovery and exploitation of oil, which increased the government revenues and created a suitable economic base for investments, especially in cities where there were already mounting demands for housing and public facilities.

As a result, most of the original functions of the towns and cities have changed to face with these new pressures and demands. In contrast to the early compact high-density development based primarily on pedestrian movements, the population spurt accompanied with the new economic resources discovered, i.e. oil, these towns and cities expanded several folds, new residential areas developed, and in most cases this development had little relationship with the old community pattern, since it was not based on a rational and adequate physical planning. This situation led to the scattered and premature subdivision of land far from the existing community centres, which in turn led to the unplanned extension of the municipal services and utilities.

Urban planning in its simplest form could be traced in Iraq since 1935, when under a specific municipal law and regulations, all municipal bodies were required to produce plans for areas under their jurisdiction; such plans were to indicate general land use

pattern and road alignments, existing and proposed. [1] Under Articles 43,54 the municipal boards were required to prepare development plans, with the assistance of foreign expertise if necessary, for the next 25 years with powers to exercise control over the use of land. Moreover, under new modifications to the Law, the municipal boards were required to follow up these plans with detailed plans for every area within the municipality boundaries. By January 1972, as many as 69 basic plans had been attempted for various municipal areas and of these 36 have received approval of the Ministry of Municipalities. [2]

All town planning at that time was based on the concept of regulatory plans, with the result that those plans did not follow the pattern set out at higher planning levels. In general, most of them have been inspired largely by transportation requirements with little emphasis on the objective of improving the conditions of urban living. From the implementation side, it has been frequently found that many major details of development either were not shown or were contrary to the original drafts as prepared and filed.

Perhaps the main shortcomings in the planning efforts to control and guideurban development in Iraq are due to the following:

1. Failure to establish a suitable planning framework and required institutions e.g. legal and administrative, to carry out development programmes on an objective basis;

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1. The regulations under the 1935 municipal Law empowered the municipalities concerned to enforce these plans after their approval by the Government. By 1964 the government intoduced Law No. 165.
2. see Law No. 44, 1935 and its amendments.

2. Failure to establish within the Municipalities, a planning organization, which is able to understand and interpret plans, and where necessary, carry out modifications and details, thus ensuring continuity of the planning process;

3. Failure to establish coordination with other development agencies and departments: A great deal of development within cities is done by other than the Municipality, i.e. public and semi-public agencies; those agencies are under little obligation to consult or to conform to the plans of the Municipality, moreover the Municipality has little or no say even in matters of location of land uses within its own jurisdication.

4. Finally, failure to provide adequate financial resources on a continuing basis for effectuation of the more essential projects of the plans.

Before discussing the problems and characteristics of planning in Iraq it is important first to stress the point that no longer is there much argument that the economic, social and physical problems are closely interlinked. Not only are such problems interrelated within a given area, but also frequently they are elements of regional and national questions. Thus efforts and plans aimed at solving a particular problem have little chance of succeeding if they are not integrated and coordinated with other problem solving activities.

In this chapter, the stress will be on the problems that are facing Iraq in the field of comprehensive planning that attempts to coordinate various groups of government policies and activities so as to achieve balanced development.

2.1.0 The Planning Problems:

Comprehensive planning as such in Iraq does not exist, primarily for the following reasons:

1. There is no systematized or institutional mechanism for revising, re-designing and evaluating the planning process. Thus, ways frequently do not exist for improving the quality of the comprehensive planning process. Learning and feedback mechanisms, when they do exist, frequently produce distorted interpretations of facts and data. Indeed, the problem of distinguishing between fact and value under the best circumstances is extremely difficult since ideology is often the criterion for interpreting results.

2. The emphasis in Iraq has always been on economic growth and development and consequently economic changes have received primary attention. This is best illustrated in the National Development Plan of 1970-1974, where it is stated that the basic objective of the Iraqi economic structure is the adoption of all positive measures for strengthening the national economy through development of means of production, raising labour productivity, and utilization of all the

potentials of modern technique.[3] As a result, sectoral emphasis, especially at the national level, concentrates on economic change and has ignored physical and social dimensions. Environmental planning has frequently received a low priority and has been confined to the preparation of isolated master plans out of context with the regional-urban system or in the larger framework of the country; see, Appendix (1.5). This is accompanied by a view that urbanization is the natural by-product of change and development rather than one of the components that ought to be manipulated as a means for achieving developmental goals.

3. Because there is frequently a lack of indigeneous planning precedents, and because the models developed in the western world are generally inappropriate to both the institutions and problems of Iraq, it is difficult to conduct a systematic search of alternatives, and beyond this it is particularly difficult to anticipate the consequences of change. Thus, evaluation of proposals is usually fuzzy and the process represents less a system of scientific simulation than of pragmatic trial and error. It is difficult under these circumstances to specify accurately the boundaries of the opportunity area for planning and the nature of permissible and feasible alternatives. Another consequence of this is that an inconsistent sense of time evolves when there is confusion and uncertainty regarding long and short range effects.

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3. see, Planning Board and Ministry of Planning, "The National Development Plan, 1970-74", Government Press, 1971, Baghdad, p. 133.

4. Planning is the concept of rational behaviour, but this tradition is not always a feature of the Iraqi culture and indeed the Arab culture at large, where frequently extra rational components such as emotions extensively influence decisions. These tendencies are, of course, antithetical to a planning approach.

5. Also there is a tendency to produce plans which may not be considered feasible or in other words they are plans that no-one intends to implement. These plans and policies are not viewed as guides for action and future development but more as instruments for achieving other ends. That is, they are politically motivated, and though they may give the impression of high quality and comprehensiveness they are really facades for other purposes.

6. The present planning machinery possess highly imperfect knowledge about which agencies ought to be working together, the desirable channels of information, the composition of planning teams, etc. This structural deficiency becomes particularly important in the context of trying to develop coordinated plans among different governmental levels and among the different sectors of development.

7. Another difficulty is the shortage of reliable and timely information and data. This problem is of two folds, the first involves the way in which data are collected and processed, and the second involves the use of such data and information to predict the consequences of various strategies and courses of action.

8. Finally, policies have often been inconsistent and convulsive, kind to one type of investment and harsh to another in a very inconsistent manner, with the prospective investor never knowing when, where or whether the winds might shift. This inconsistency in the policies is influenced to a great extent by the political instability which has characterized Iraq since its independence as well as by the presence of different ideological theories which imply different approaches to the economic and social development of the country. Between these ideologies, the country is seeking its new values and systems, which are by no means clear and simple.

While there are many problems and shortcomings facing the development of a comprehensive planning in Iraq, there are also unique opportunities to create a proper and rational planning process.

In spite of the country's traditional heritages and indigenous customs, they are not saddled with deep rooted institutions, apart from religious ones, that dictate which mechanisms should be employed in allocating scarce resources and direct development. This is in addition to the fact that the administrative structure is very fluid. This is very clear in the rapid and frequent changes in the formulation of institutions to deal with the fluid and rapid changes in the socio-economic and political systems which characterize Iraq at this stage of its history. Therefore, it is possible to redesign rationally the administrative and institutional framework to develop balanced plans and integrate the actions of the various

government departments at different levels, i.e. national, regional and local. At this point the problem of formulating rational and clear development goals and objectives become vital, since no development plans and programmes can be formulated without them.

In any case, the pressure for change in Iraq by itself creates the opportunity for radical innovations. For example, following the substantial increases recently of the country's revenues from oil, investments which have long term consequences are yet to be made and the role of cities and towns in the national development framework has yet to be evolved. In fact the pace, pattern, and timing of resource exploitation has yet to be determined. All of these factors, and more besides, interact to produce a vast opportunity for the government and professionals to design a number of development alternatives which in turn can be examined and evaluated for their adequacy in achieving the stated goals and objectives.

2.2.0 Planning Machinery and Institutions:

Although national development planning has been accepted as a prime instrument for deliberate change and development, it has remained an economic excercise largely unrelated to physical considerations. Even though a growing awareness of the urban problems has lately been in evidence, this has not been the result of a definitive or deliberate national policy, but rather in response to the pressures as and when and where they felt.

Up to the end of World War I, most of the administrative structure in Iraq was influenced by the Ottoman system of government. As the system disintegrated and finally disappeared after the war, the British practice during the mandate period and the years following was grafted on the existing system of government and administration.[4] Most of the effects of this are still evident. Therefore, any analysis and examination of the government structure, these factors must be born in mind.

Since the 1958 revolution, the meaning of government and governing in Iraq have undergone profound changes. Up to 1950, the word "Government" included mainly the following functions:

- Maintenace of Law and order;
- Collection of taxes;
- Support of private initiative in matters of education and industry;
- Investment in items of the economic and physical infrastructure such as roads, power, flood control, and to a certain extent, urban and rural planning.

With the establishment of the Development Board at the beginning of the 1950s, the functions of the government acquired new dimensions. Apart from dealing with the accustomed responsibilities, the government accepted responsibility for the development of the country's natural and human resources. The new tasks include the guidance

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4. see, reports submitted by the British Government to the Council of the League of Nations on the situation in Iraq, 1920 - 1932, H.M.S.O.

of private development as much as initiative in public sector development projects through economic planning programmes.

The responsibilities of the government for health and education have acquired new dimensions as both of these fields have become part of the development of human resources. Social welfare, urban planning, and housing development are now matters of public concern. Direct investment by the public sector in development activities which private investors would not or could not undertake has begun to dominate the budget of the government. This new concept of government implies the necessity to plan. It would not do to make ad hoc decisions on the investment of public sector capital without coordination with private and cooperative sectors capital and without ensuring that the actual pattern of development follows anticipated lines.

With the new concept of government came new pressures to finance increased activities and new investments. The government looked to planning to establish new criteria for decisions in the face of competing demands. Thus the government formulated planning bodies and employed economists to help them to divide the cake between different sectors of the economy. The dominance of economic planners was due to the fact that the allocation of funds, which had been mainly a political game, is now seen as an economic problem. Moreover, economic development is most readily quantifiable and measurable, while social and cultural developments are somehow vague concepts and not subject to precise analysis.

The following sections attempt to analyse the problems and nature of the planning machinery and institutions in Iraq divided into two levels: the Central or national level and the municipal or local level.

2.2.1 The Central Level:

With the prospects of a rapid rise in oil revenues in the early 1950s, it became possible, as a result of the increased government share in the profits of the oil companies through the then new agreements and the expectation of a great increase in production, to envisage a much wider scope of activitiy and a larger role for the government in the development of the country.[5] To this end a Development Board was established under Law No. 23, May 1950. This Board which started operations towards the end of 1950, was entrusted with the preparation of a general economic and financial plan for the development of the country and the rising of the standard of living of the people, the undertaking of a general survey of the country's resources, the execution of development projects and the coordination of the development schemes of the various ministries within the framework of the country's overall plan. The Board had a separate budget and its revenues consisted, at the outset, of the entire oil revenues, plus such other sums as were alloted to by Parliament and the proceeds of internal or external loans.

The Board was intended to be an autonomous body insulated from politics so that it could maintain continuity of policy.

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5. until 1950 public investment in Iraq was handled through the ordinary budget and took the form of an annual capital works programme.

In 1952, the share of oil revenues allocated to the Development Board was reduced to 70 per cent of the total. At the same time, the Board was authorized to use its surplus funds to extend loans to banks, semi-governmental organizations and municipalities.

Dissatisfaction with the Board, which was accused of wielding too much power and independence, led in 1953 to the setting up of a Ministry of Development. The Minister of Development became the Board's representative on the Council of Ministers and the link between Parliament and the Board. The Board, however, continued to enjoy a separate budget and to exercise control over the execution of all major projects, including that of town planning and housing. The Ministry of Development, acting as the Board's secretariat, consisted of several administrative departments and major technical sections each to be in charge of one main field of activity.

Following the revolution of 1958, important changes were introduced into the central planning machinery affecting its constitution and functions. In 1959, for instance, the Ministry of Development was replaced by the Ministry of Planning and the Development Board was replaced by a Planning Board chaired by the Prime Minister. The Planning Board was confined mainly to plan formulation, and to the follow-up of plan implementation, each main project being entrusted to the ministry or ministries concerned. As a result of this important re-allocation of responsibilities, all the technical sections, which originally formed part of the Ministry of Development, were transferred to the sectoral ministries. Moreover, the share of the total oil revenues in the development budget was reduced from 70 per cent to 50 per cent.

Centralized planning and execution thus were replaced by centralized planning and decentralized execution, with planning becoming the responsibility of a Board composed of Cabinet ministers exclusively. Also, the Development Board's balances were merged with other government deposits, thus making it possible for the Ministry of Finance to draw on them.

The functioning, achievements and shortcomings of the central planning machinery in that period were subjected to intensive examination and evaluation. The outcome of these investigations was embodied in a new law which was enacted in April 1964.

The aim of the reform was to ensure that the Planning Board would have more independence and continuity and would be less vulnerable to political changes than the Development Board preceding it. Another important difference was in the extent of the powers invested in the Board. Plan implementation remained the responsibility of individual ministries but, in addition to preparing the overall development plan and the annual plans and following up the execution of the plan, the new Planning Board was entrusted with the formulation - subject to the approval of the Council of Ministers - of the economic, fiscal, monetary and commercial policies needed for the implementation of the plan.

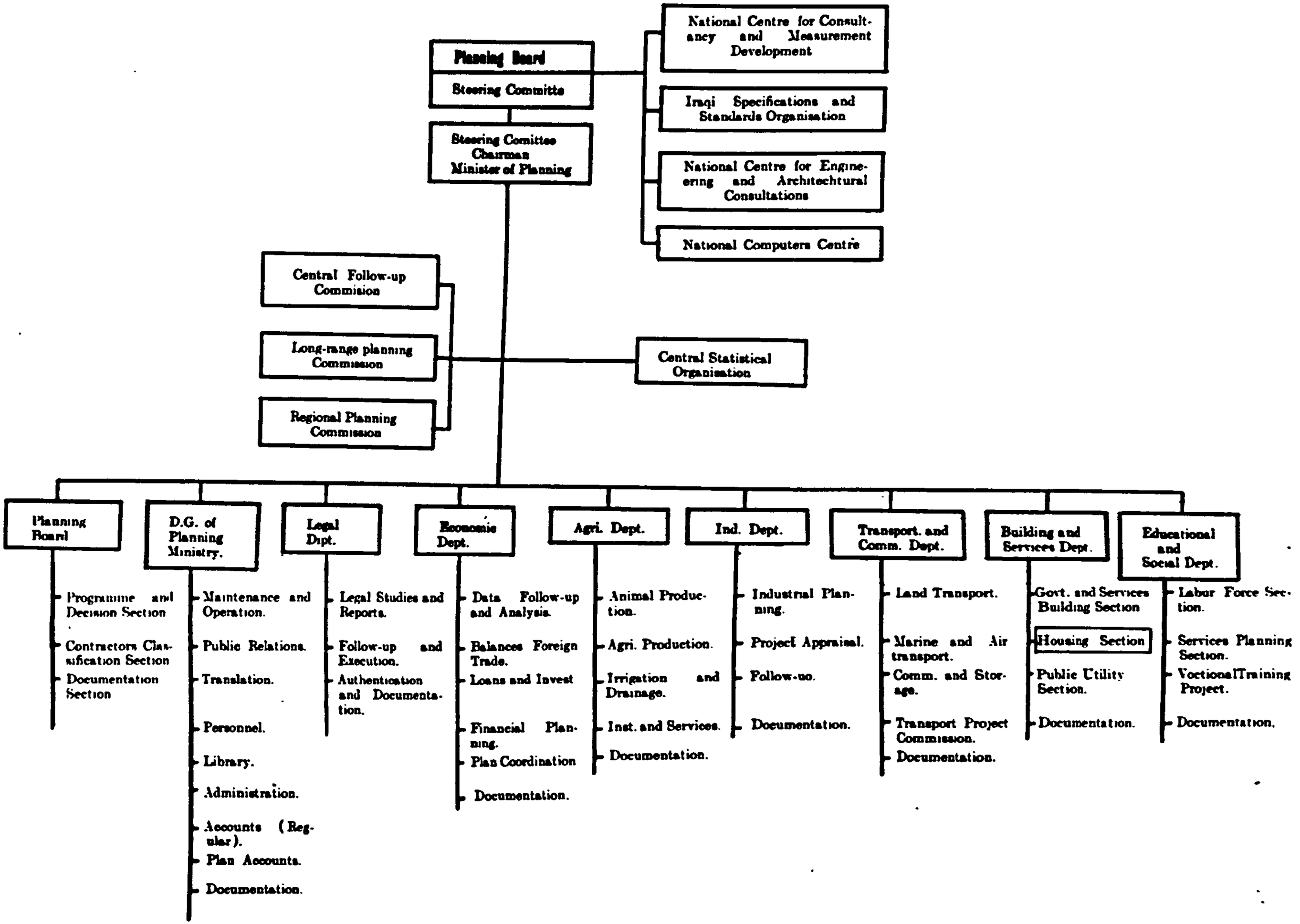
The central planning machinery continued to undergo changes after 1964. The major change was the amendment to the 1964 law, in which the planning Board delegated a large degree of its responsibilities to the executing ministries and agencies, empowering them to execute projects not exceeding one million ID, without having to refer to the Planning Board, except for the approval of the preliminary

reports on these projects. Also, a law was enacted which provided for the setting up in each ministry of a Planning Unit to assist the Planning Board in the preparation of the plan and in the follow-up of its implementation year after year. This Law has not yet been fully implemented owing to conflicting views about the allegiance of the units in question. Nevertheless, the functions and duties of the Board remained, more or less, as they were before, and the present Planning Board is currently functioning in this fashion, see Fig. (2.1).

From the foregone, it appeared that the central planning machinery has undergone frequent revisions and changes. Changes in political regimes and even changes in Cabinets within the same regime often resulted in institutional changes which became more pronounced after the 1958 revolution, when both the legislative and the executive powers were vested in the Council of Ministers. These changes made it difficult to ensure the independence and stability initially sought for the planning machinery.

The idea of combining planning and implementation in one organ and later that of separating the two functions corresponded to two approaches which have been the subject of much controversy in Iraq. Although transferring the technical sections of the Development Board to the ministries concerned entailed some disruptions, the sharp increase which occurred in development allocations after the 1958 revolution would have made it difficult not to decentralize execution.

FIG.(2.1) INSTITUTIONAL STRUCTURE OF CENTRAL PLANNING SYSTEM



The distinction between the Development Board which had a majority of executive members and the Planning Board which consisted wholly of Cabinet ministers did not have much practical implication. Few of the executive members served a full term, their appointment was not always based on merit and qualifications, and the views of the ministerial member naturally prevailed.

2.2.2 The Municipal Level:

In Iraq, local government and administration are parts of the national system. This means that local government in addition to meeting certain local needs, is an instrument of the national government and subject to its policies and directives. Although it is true that the various Iraqi consitutions recognize local government and municipalities as basic institutions of government; in fact they emphasize municipal and local councils as being established to afford a greater development of democracy. Nevertheless, the national organs of the government, i.e. the executive, the courts, the council of ministers and the individual ministries, are made responsible for the local government and administration. The enforcement of laws and regulations causes the national ministries to undertake supervision and control through inspection, approval of acts and decisions,checking of accounts and other methods, common to the normal relations between a higher level of government and lower units.

Primary responsibility for municipal affairs in Iraq is vested in the Ministry of Municipalities which was established in 1958 after the creation of the Republic. It took over the functions of the Directorate General of Municipalities in the Ministry of Interior.

The Ministry of Municipalities, through the Directorate General for Municipal Planning and Services, which was established in April 1971, is responsible for almost all the physical planning activities in the different municipalities. This is excluding the Municipality of Baghdad, which has a direct link with the Council of Ministers and the President of the Republic.[6]

The Mayor of Baghdad reports directly to the Minister of Municipalities in matters concerning physical planning which means that he is outside the channel of control leading to the Ministry of the Interior except in certain matters. The Municipality of Baghdad has unlimited authority to undertake projects of all kinds. It deals directly with all ministries and departments.

Despite this special status of the Municipality of Baghdad, there is greater involvement by the national government in its administration. The national ministries being in the same area, take a greater interest in its local affairs than they do in cities further away from the capital. Moreover, Baghdad has more national buildings, foreign missions, and other national interests that create special problems of local administration and finance. The fact that the national government has been inclined to favour and assist the local authority of Baghdad, and in many cases at the expense of the rest of the country, has caused concentration of industry as well as of other activities in the city, and migration to it by people lured by the attraction of government services and jobs.

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6. In 1969, the Municipality of Baghdadwas administratively separated from the Ministry of Municipalities, and became an independent body with a separate budget, and the Lord Mayor "Amin Al-Assima" acting with the rank of a Cabinet Minister and directly under the President's Secretariate.

Government in areas outside municipal boundaries is usually a complicated affair, the cities rarely render services across municipal boundaries or undertake joint projects or contracts for services with outlying units of government. Furthermore, the municipalities and villages that exist at the periphery of the central city are usually too small and too weak financially to provide their own urban services. Services rendered to the people on the ouskirts of cities usually come from the national units of local administration, notably the provinces, or directly from the national ministries themselves, or from special national boards or commissions established to provide the inhabitants with public utilities such as water, electricity and transport.

Public services available in areas of rapid urban growth are generally inadequate. Most cities are still struggling to modernize their outward appearance and physical conditions. These are often characterized by narrow streets laid out before the advent of the car, by blighted areas in which modern water, sewage and housing amenities are absent and which usually cannot be improved except perhaps by the complete demolition and the building of new housing facilities. The process of modernization, which has begun in some cities has not been able to keep pace with the increase in population, which has caused demands for services so extensive and so increasingly costly that few funds are left in municipal budgets to undertake necessary capital improvements.

Administratively, Iraq is divided into 16 provinces "Mohafadha", each headed with an appointed governer "Mohafidh", each province is divided into many districts called "Qadha", and each of these districts in turn is sub-divided into smaller units called "Nahiya".

All urban places incorporated as municipalities "Baladiya", are under control of the Ministry of Municipalities. The Governor is the highest offical in the "Mohafadha"; he represents in it all the national ministries and can be authorized by different ministries to act on their behalf. His control of certain functions such as justice, health, public housing and irrigation is more symbolic than real. However, he actually excercises control of certain departments such as police and rural affairs. In the desert districts of the country, the Ministry of Interior has established what is called Desert Administration Directorates, administered by the Director of Police.

In municipal affairs, the Governor excercises control over municipalities on behalf of the Ministry of Municipalities. All decisions of municipal councils are subject to the approval of the Governor. He approves all land sub-divisions before submission to the Ministry of Municipalities for final approval; awards contracts up to a certain amount, and acts in general as a guiding authority. He also controls, through the Directorate General for Municipal Planning and Services, those municipalities that are too small to have their own municipal organizations.

As far as the smaller administrative units "Qadas" and "Nahiyas", their governors "Quaimaqam" and "Mudir" respectively, are responsible to the "Muhafadha" governor, and they are assisted by an advisory administrative council, composed of permanent members, representatives of the ministries in their districts and four elective members, selected for two years term by the permanent members.

In each "Mohafadha", there is a general council consisting of up to fifteen members, including permanent members representing the ministries and elected members who are chosen by indirect election from the "Qadas". The council holds one regular session annually for a period not exceeding one month. Its actions are subject to approval by the governor. The consitution (Article 63) enumerates the powers given to general councils, including the administration of buildings and property of local government units, highways and public works, welfare and relief services, elementary schools and administrative and financial control over municipalities.

The obligatory functions of the municipalities include town planning and the acquisition of property as necessary to implement plans, building inspection, construction of roads, water supply, drainage and refuse disposal, public transport and price control when necessary. Optional functions include the establishment of parks and other public facilities and the setting up of a penal court to deal with offences against municipal regulations. Moreover, the central government may require municipalities to discharge other functions such as distribution of electricity. Functions such as police, education, health and social welfare are discharged by national agencies.

In each municipality there is in addition to the general council, an elected municipal council whose powers are mainly advisory to the mayor "Rais Baladiya" and to the governor. It determines the amounts to be raised by taxes, subject to the approval by the General Council of the "Muhafadha" or the Ministry of Municipalities.

The size of these Municipal Councils ranges from four to ten members, depending upon the class of the municipality.[7] However, more members may be added where minorities make up 5 per cent or more of the population. Members serve without salary for four years term, half of them retiring every two years.

Councils play a subordinate role. With few exceptions they cannot be called local legislative bodies; they are usually only consultative and advisory. Their resolutions are generally approved by the chief executive or the ministry, sometimes by both. While councils, for the most part, are supposed to be elected, the elections, regulated as they are by national ministries, are sometimes postponed. Even where municipal codes and laws give the councils a broad scope for discussion and action, they rarely take the lead in local government for they have little or no control over the finance, personnel or organization of the government of their areas. If they have powers of this kind, the funds and personnel at their disposal are inadequate for the provison of important services.

The Mayor is a local official as well as an agent of the Government, but he is under the direction of the governor, who delegate most of his powers within the municipality to him. The Mayor prepares the annual budget, carries out decisions of the municipal council and generally acts as the chief administrator of the municipality. He is also chairman of the municipal council, and in the event of emergency, when the council is not in session, exercises all the powers of the council.

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7. Municipalities in Iraq are classified in to four classes on the basis of their annual revenues, for instance, municipality Class I, have more than 15000 ID, while municipality Class VI, with less than 750 ID.

Apart from these organizations, there are a number of semi autonomous agencies render municipal services especially in the large cities, for example, the Sewage Board and Electricity Board, Passenger Transport Agencies, whose jurisdiction is not limited to municipal boundaries. These agencies are semi autonomous in that they are governed by boards but they are under the jurisdiction of some national ministry such as public works or health. The boards consist of government officials who are members of the "Mohafadha" and Municipal Councils, with the Governor as chairman and "Rais Baladiya" as deputy. The boards are supposed to be self-supporting. Occasionally, they receive loans for capital outlays from the municipalities in which they render service. [8]

The lack of financial capabilities and the almost total reliance of the municipal budgets on the central government, are mainly due to the fact that the municipal revenues play a minor role in the income of the municipality. This situation can be illustrated, for instance, by referring to the Municipality of Baghdad where in 1970/71 budget, the income tax revenue amounted to only 7.7 per cent, and the fees and charges to 12.8 per cent of the budget, while the allocations by the central government to the Municipality amounted to 68.6 per cent.[9] This lack of financial means at the disposal of the Municipality signifies a serious weakening of local influence on planned development of the city. This leads to the habit by the municipalities to spend the central government allocations quickly so as not to lose them. Mainly on streets which are relatively easy to plan and build and from which they can obtain a return by assessing adjacent property owners.

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8. Information obtained from the Ministry of Municipalities, 1972.
9. Data obtained from Baghdad Municipality, 1972.

The following are some of the main consequences of the lack of coordination of investments in the city of Baghdad:

a. An excessive number of land subdivisions into too large plots of over 600 sq.m. causes an ineffective spending of sums designed for public utilities. It is well known that in the areas of large plots the density of population is small i.e. that the same investments meet the needs of a smaller number of inhabitants. Also that these large plots are in the possession of high income groups which have greater opportunities to influence the implementation of public utilities than the low income groups.

b. Unfinished sections of roads within the constructed network render impossible proper use of this network and lead to ineffective spending.

c. Investments in roads which are not subordinated to a long term plan of development of street pattern, leads to constructions planned for a short period of exploitation. They will require additional investments in the future which will increase their total costs in a disproportional scale.

Finally, one must stress that, if the efficiency of the municipal administration does not progress at the same rate as the growth of its population, the problems created will reach a level so dangerous as to be extremely difficult to overcome. With the increasing initiative for development being vested in the national institutions such as the Planning Board and the Ministries, the Municipalities are increasingly dependent on sources of funds other than from their communities. Gradually the relationship between the people and the State will tend to grow stronger

than that between the people and the municipalities, which will result in the weakening of the community's sense of responsibility towards their towns and cities. Under these circumstances, it seems important to restate these relationships, by reappraising the entire municipal administration and its legal and financial structures, so that stronger ties can be established between the people and their municipalities, thus contributing to healthier and much productive municipal activities.

2.2.3 Planning Personnel:

Perhaps of all the mentioned difficulties confronting the adaption of comprehensive planning in Iraq, none is more obvious and effective than the scarcity of qualified planners and related personnel. This phenomenon, which is also shared by other developing countries may be illustrated by the fact that in 1972, the Directorate General for Municipal Planning and Services which is virtually responsible for all the planning of cities and towns in the country had only 7 qualified planners, including the Director General himself; besides some 70 other staff consisting of architects, engineers, surveyors, and other administrative clerks.

Perhaps the most serious problem facing the provision of planning personnel is and will be the continuing need for intermediate level personnel. While it is comparatively easy to obtain either planning consultants from abroad or to depute Iraqis for graduate education, there remains, however, a serious gap between the professional planner and a planning draughtsman. Although trained Iraqi graduates are available in disciplines relevant to physical planning, there is still no interdisciplinary team established either at the Municipality of

Baghdad or at the Directorate General of Municipal Planning and Services. The growing complexities of urbanization in Iraq and Baghdad in particular make it imperative that personnel from related disciplines should be engaged to form a joint planning team.

To fill the gap in the planning personnel, the Ministry of Municipalities has made several requests to the UN for expanding assistance in the fields of urban and regional planning, which includes the assistance in the provision of urban demographers, regional planning experts, etc., to work both at the Directorate and the Ministry of Planning. [10]

In a recent study made by Prof. J.R. James in 1970, on the future needs for professional planners in Iraq, he estimated that by the end of the century, Iraq will need at least 200 planners to fill different posts in national and local levels. [11]

At the present in the Municipality of Baghdad, exists a small planning department dealing with the enormous task of controlling the development of Baghdad and the implementation of the current master plan prepared by Polservice; this section contains three qualified planners, four architects, and a few engineers, assistants and draughtsmen. This section is obviously very meagre and should be augmented on a substantial scale. Apart from qualified urban planners, it is essential to gather a multi-disciplinary team representing, not only the physical sciences but also geographers, demographers, sociologists and economists.

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10. see, S.S. Shafi, "Urban Planning in Iraq, Problems and Prospects," UNDP, 1972, Baghdad.

11. see J.R. James, "Report on Physical Planning in Iraq", UNDP, Baghdad May 1970; also, S.S. Shafi, "Urban Prospects and Needs for Planning Personnel in Iraq", UNDP, Baghdad, Feb. 1970.

Recently, an attempt was made by S.S. Shafi to assess future functional and organizational needs of the Municipality of Baghdad, in which he envisaged that the planning department of the municipality should consist as a short-term establishment, of four major sections dealing with matters such as: long range or development planning, planning controls, traffic and transportation planning and design, and special projects and detail development. In the long-term establishment, he envisaged that in addition to the four sections proposed in the short-term establishment, three more sections should be added, these will deal with matters such as: research and analysis, fiscal planning and capital budgetting, and legal and regulatory measures. For the number of staff requirements for such organization; see, Appendix (2.1).

The proposals also envisaged that once the full set up of the planning department in the Municipality is established, it should be possible to undertake further sophisticated planning work, and the staffing will be mainly drawn from the newly established post graduate Centre for Urban and Regional Planning, which is attached to the University of Baghdad. [12]

Lastly, it is important also to emphasize the need of a sound personnel administration for staff of municipalities if these units are to become instruments for administering services that are needed for social and economic development. This could be achieved through the provision of opportunities for attractive careers in local government, so that

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12. The Centre was established in 1971 under Law No. 116, on the advice of a special committee consisting of Sir Robert Grieve, Lord Llewellyn Davies, Sir Desmond Heap, with Professor John James as chairman; also see, S.S. Shafi, "Functional and Organizational Structure Proposed for a Planning Department at Baghdad Municipality, Long-term and Short-term", UNDP, April 1973, Baghdad.

capable persons will wish to enter and remain in the service. This means that recruitment and promotions must be based on ability; employees must be protected against dismissal for personal or political reasons; salaries and other conditions must be attractive and comparable with those in the national service; and prospects for advancement as good as possible.

2.3.0 Prospects

Development activities in a country, whether in the form of uncoordinated development projects or programmes, or in pursuance of an integral plan of action, have far reaching effect on the lives of the people.

Although in Iraq there is planning for development on national level, and to some extent planning at the local or municipal level in the form of isolated town plans, the former is directed toward the attainment of national targets such as the eradication of illiteracy, the lowering of levels of unemployment, the increase of per capita income, or the reduction of balance of trade deficits. It is seldom concerned with the social and spatial implications of investment, except perhaps where alternative costs and availability of resources require it. The latter, unfortunately, is concerned almost exclusively with physical lay-out design and construction and the enforcement of outdated building regulations. It is not concerned with the integration of town plans with regional and national objectives.

An examination of the local government system in Iraq reveals that there is a general lack of unity and coordination in the administration of local services. First, there is a lack of functional coordination. With few exceptions, responsibility for rendering services in the same urban area is divided between the municipal authority of the central city, the

provincial and district administrations "Mohafadha" and "Quada" of the Ministry of Interior or of Municipalities, and sometimes even the municipalities and villages that exist outside the central city but within the urban area. Waste and ineffective administration are often the result of lack of coordination, confusion and duplication.

Secondly, there is little unity or coordination of administration in areas in which urban growth has extended outside established central city boundaries. As already mentioned, municipalities generally do not extend their services outside their boundaries and the smaller units on their outskirts are usually unable to give the inhabitants the services that are needed, especially when they have been overwhelmed by recent migrants. Furthermore, the provinces in these areas often lack personnel to render urban services, and therefore such services as are rendered are provided by the personnel of national ministries within the urban areas, sometimes under provincial management, but often directly by the ministries or by the national utility boards.

Certain measures, that have been tried in various parts of the world to increase administrative unity and efficiency in areas of rapid urban growth, might be applicable in the case of Iraq. Several are calculated to reduce the number of local units in the metropolitan areas. The first is the annexation of outlying sections of urban areas to the central city. The second is the consolidation of two or more contiguous local units in the urban areas outside the central city into a larger municipality, big enough and adequate financially to render the required urban services. The third is the expansion of the jurisdiction of certain departments, the increased cost being met by the inhabitants

of the outside areas or by the national government. A fourth method is the establishment of districts for the purpose of supplying public utility services throughout the central city and adjacent areas on the principle that the revenues from these services will cover their cost. A fifth possibility admittedly difficult to attain, is the consolidation of all units of local government in a given area into one metropolitan unit with an elective council and an appointed city administrator within this metropolitan unit, neighbourhood districts for sub administration might be established. A sixth method is to establish a federation of local units within the metropolitan areas to perform certain overall functions for the whole area, but the existing local units being maintained to administer local functions which are best handled in the smaller units.

In the last twenty years in Iraq, local authorities have had their boundaries extended to include the entire metropolitan area or at least large part of it. The city of Baghdad and other municipalities, for instance, have had their boundaries extended to include larger areas than were actually necessary. This was done mainly to increase municipal revenues and to provide for the development of vacant land for new housing. However, the result has been that the municipalities have spread their activities too thinly, and a wave of land speculation has occured which raised the costs of building for the middle and lower-middle socio-economic groups.

From the examination of municipal finance in Iraq it is apparent that an extremely small portion of the total public revenue finds its way into local treasuries to be used for local public purposes. This applies to the large cities including Baghdad, as well as to the rural areas.

Furthermore, a substantial share of the local revenue comes to the municipalities in a form of nationally collected, locally shared taxes, national grants and subsidies, and loans from the national government.[13]

It is suggested that some fruitful sources of revenues should be left exclusively to the local units. Where the national government is dominant in the field of public finance, the sources of revenues allocated to local units are usually secondary and often minor in significance. Sometimes also, when there is national stringency, i.e. the recent austerity measures taken in 1972 following the nationalization of the foreign oil companies operating in Iraq, the share due to local municipalities was withheld, and local finance was seriously handicapped. As a result municipal services suffered and in consequence the government took over services which are local in character, this added to the strain on the government machinery.

Another important issue in the field of improving the municipal activities in Iraq is taxation. On this problem, some kind of separation of taxes between the national and local municipalities should take place. This may take the form that the government may retain such taxes as customs, income tax, and taxes on corporate activity and profits, and leave to the

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13. Local revenues in the urban areas in Iraq include the following: additional taxes on national taxes such as taxes on incomes and buildings levied for local purposes; nationally collected, locally shared taxes such as those on petrol products and customs; municipally collected - sometimes nationally collected taxes on land and buildings; municipal license fees and miscellaneous taxes collected by the municipalities; revenue from public utilities and commercial enterprises either under franchise or owned by the local units; national grants and subsidies; loans and voluntary contributions and gifts.

municipalities such taxes as those on occupation of buildings, payable by the occupant, and licenses and fees on commercial activities in the municipal areas. In the case of Baghdad and other large cities, it is recommended that a single finance department with responsibility for the collection of local taxes should be established and that municipal authorities should receive the profits from public utility services; and the boards such as the electricity and water supply boards now autonomous and independent of municipalities, should be placed within the municipalities, except when they serve inhabitants outside the municipality. It should be stressed here that any revision of tax policy or in efforts to increase local revenues, care must be taken to avoid adding burdens on the poor and low income people who are barely able to pay the existing direct or indirect taxes.

In view of the increasing pressures on the central government, as a result of rapid urbanization, to provide housing and related facilities particularly to the low income groups and migrants, it becomes necessary for municipal and other local authorities to take direct responsibilities in the provision and administration of such activities. At the present these authorities are badly organized and poorly equipped with no effective municipal housing departments or institutions to deal with the housing problems at their sources, rather than having these mount to the stage of national concern. Municipalities and local authorities have an important role with respect to the planning, development and installation of housing and other municipal services, and consequently must have effective municipal and metropolitan planning machineries and operations, as precedent to considering the location and impact of proposals for housing projects.

In addition municipalities and local authorities must establish land reserves for future building, as an aid in diminishing excessive speculation, lowering land costs and facilitating town development. They should also establish systems of municipal taxation of real property, which would:

a. Penalize unbuilt land held for speculation;

b. Recapture for public benefit the unearned increment resulting from public improvements;

c. Adequately tax luxury building.

The advantages of decentralization of housing production and services are that housing and services an be more speedily administered; a better understanding of local problems exists at the local level; local people can participate more fully in the process of government; revenues from local taxes are likely to be spent more prudently, and governmental procedures can be simplified. On the other hand, certain problems will inevitably arise:

1. Decentralization may increase conflict between the various levels of government.
2. Devolution of powers is often too vague for precise demarcation of administrative responsibility.
3. There are certain weaknesses at the local level, such as inadequate funds and the lack of competent personnel.
4. Competition for projects between the various levels in the same province may subsequently raise the costs of material and labour for projects.

Finally, it is important to express the necessity to have some national control over local activities so as to coordinate it with national policy. The purpose of this control is not so much to restrain the activities of the municipalities as to provide the basis for coordination, guidance, and concerted action in administration. For example, the government in placing orders for construction materials and setting priorities for projects, is able to effect economies by purchasing equipment and other materials according to standard specifications. It should be acknowledged, however, that these controls may result in delays which slow down municipal administration through no fault of the municipality itself.

C H A P T E R 3

THE HOUSING SITUATION

D.V. Donnison stated:

> "House and home stand at the centre of people's lives, providing a shelter for sleep and for half their waking activities, a shield against the elements and the world - which yet admits both in controlled and selective fashion - and a storage place and showcase for most of their possessions. To study "housing" is to explore a cross section of a whole society and its affairs. To study "Housing policy" is to examine, from a particular standpoint, the functions, capacities and responsibilities of government, and its relations with the governed. And to study these things .... is to study the social, economic and political changes now at work...." [1]

In this chapter, an attempt will be made to examine the existing housing situation in Iraq and Baghdad in particular and government attitudes and policies whilst emphasising the priority problems through the analysis of the socio-economic structure of the people and their capabilities to pay for accommodation, and the possible approaches that might be considered to overcome housing problems.

Housing problems in Iraq spring mainly from the lack of any housing policy prior to the country's creation as an independent state after World War I; also from the expansion of cities with neither plan, community facilities nor provision for public buildings. The relative low standard of living and the limited means for investment in the past years, accompanied by the mass flow of migration from the rural areas to the cities aggravated the problem even further.

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1. see, D.V. Donnison, "The Government of Housing", Penguin Books, 1967, p.9.

Perhaps one of the most obvious effects of urbanization and population growth in Iraq in recent years, is the increasing demand for housing and related facilities particularly in the cities where the people are concentrated. As housing supply falls short of the population needs, a situation of overcrowding and congestion has occured particularly in the big cities with a high rate of housing deterioration. [2] On the other hand, the construction of houses has not kept pace with the increasing population. To illustrate the widening gap between population increase and housing output in Iraq, it has been found that while the annual increase in the population during the period 1960 - 1970 was about 234000 inhabitants, the annual housing output was about 15000 dwellings; see Appendices (3.1) and (3.2). This represents an annual average of about 68 dwellings for each 1000 increase in population, or about 0.5 dwelling per each household. [3]

Also the cost of houses has risen beyond the paying capacity of the majority of the people, for instance, it has been estimated that a dwelling of an acceptable standard of safety, health and convenience in Iraq in general costs at least 3.5 times the Gross National Product per Family, in Baghdad this may reach up to 4 times, thus most of the lower income families cannot afford the cost it takes to provide and maintain a house

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2. A.E. Alcock, estimated that the annual rate of obsolescence of houses in Iraq in the early 1960s was estimated at about 3500; see Alcock, "Low Cost Housing in Iraq".

3. based on the average household size in Iraq during this period of about 7.2 persons; see (1.2.0).

of even the lowest standard acceptable, without jeopardizing its other essential needs of survival, i.e. food, clothing etc; see Fig. (3.1).[4]

In brief, it can be said that the housing problem in Iraq in general and in the cities in particular, is caused initially by the population increase due to the mass migration to the big cities accompanied by the natural increases in the urban population due mainly to the relative improvement in the health services. This situation has created a high dependency ratio between the families, where it has been estimated that about 53.4 per cent of the population in Iraq are dependent; see Appendix (1.7) and (1.2.0) and has been encouraged to a large degree by the extended family structure, which characterize Iraqi society. High dependency ratio produced overcrowding and congestion as well as inadequate sanitation which in turn caused low productivity and low incomes to those families. Low incomes meant low saving potential for house purchase and minimal investment in house repairs. These factors combined together with the discrepancy between family income and house cost produced housing shortage, high obsolescence rate in the stock, bad residential environment, and low standard of living in general; see Fig. (3.2).

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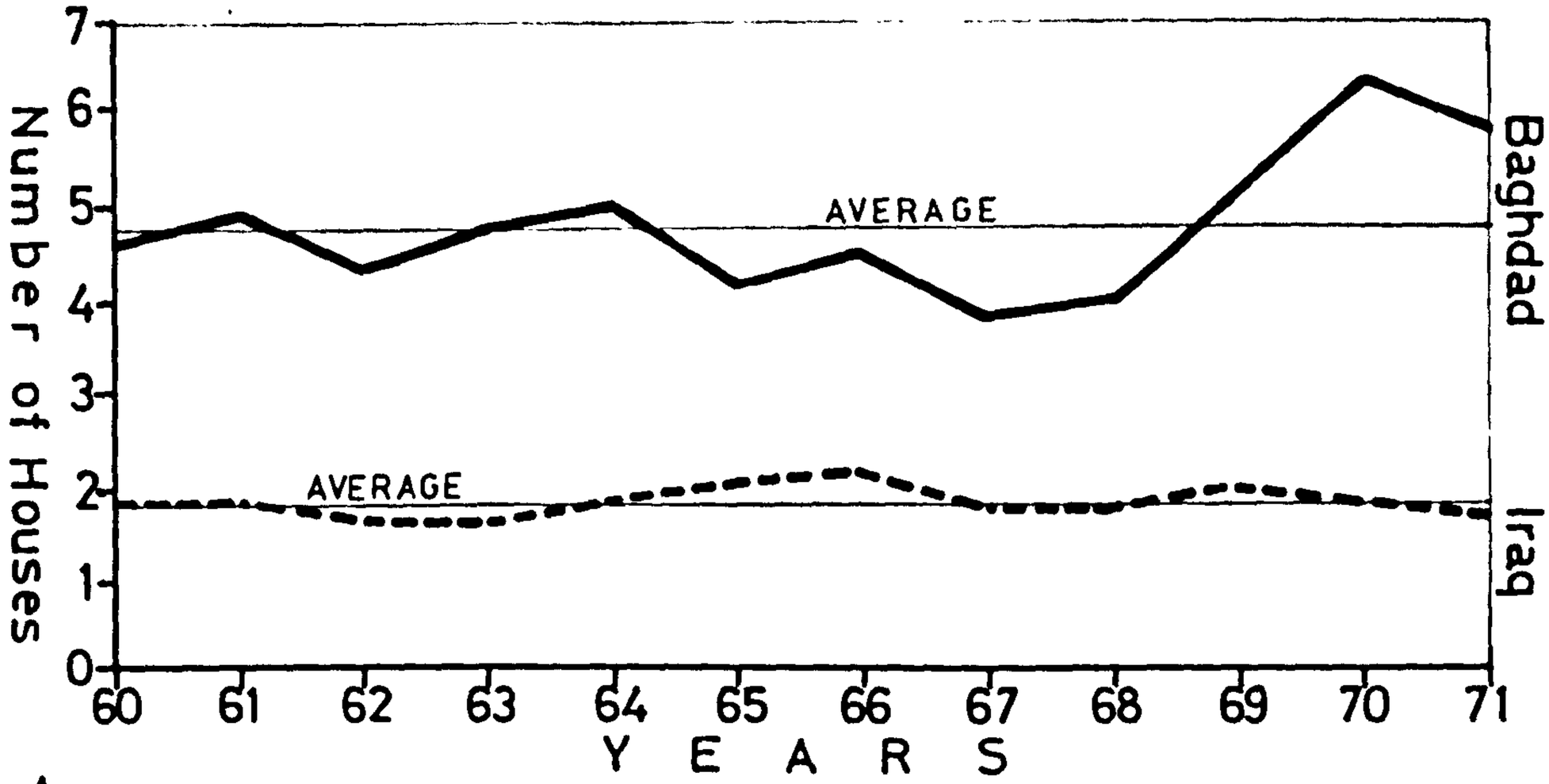
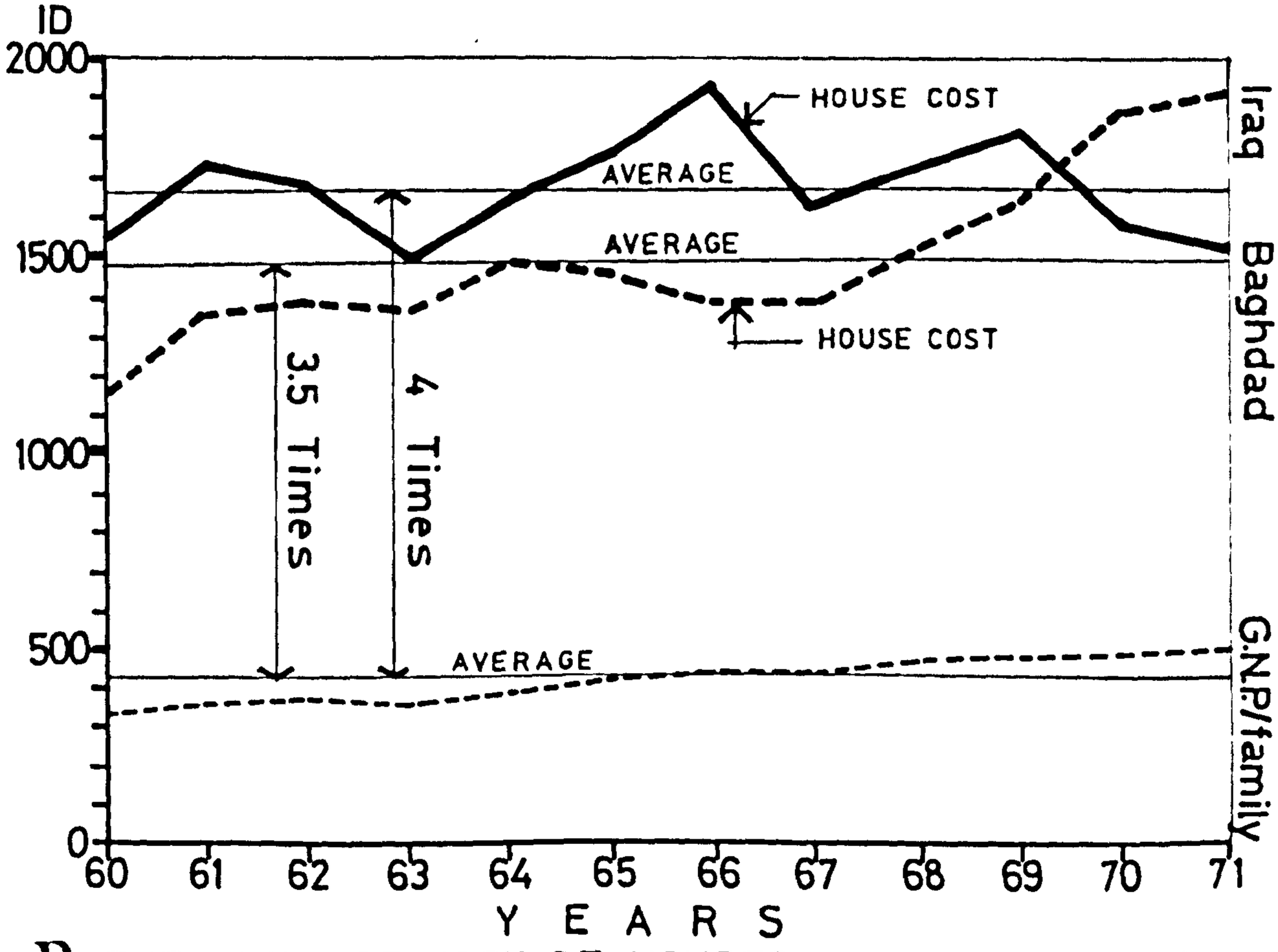
4. A sample survey carried out by the Central Statistical Organization of 900 families living in slum areas in Baghdad, showed that the average expenditures totalled 19.5 ID per month and savings would have to be shown on other items of expenditure, probably food. A sum of 4 ID per month would pay off about 600 ID in twenty years at 6 per cent interest, which means that an average slum dweller could not afford to pay for a two-room house built by the government, which tend to cost at least 900 ID. This may explain why the government had turned increasingly away from the slow, expensive and limiting method of direct building of housing to the faster, cheaper method of providing land which is regarded as the basic commodity in solving housing problems, and has been relying on the people to use their own resources to build their houses.

FIG.(3.1) RATES OF HOUSE CONSTRUCTION & THE RELATIONSHIP BETWEEN G.N.P./FAMILY AND HOUSING COST IN IRAQ & BAGHDAD



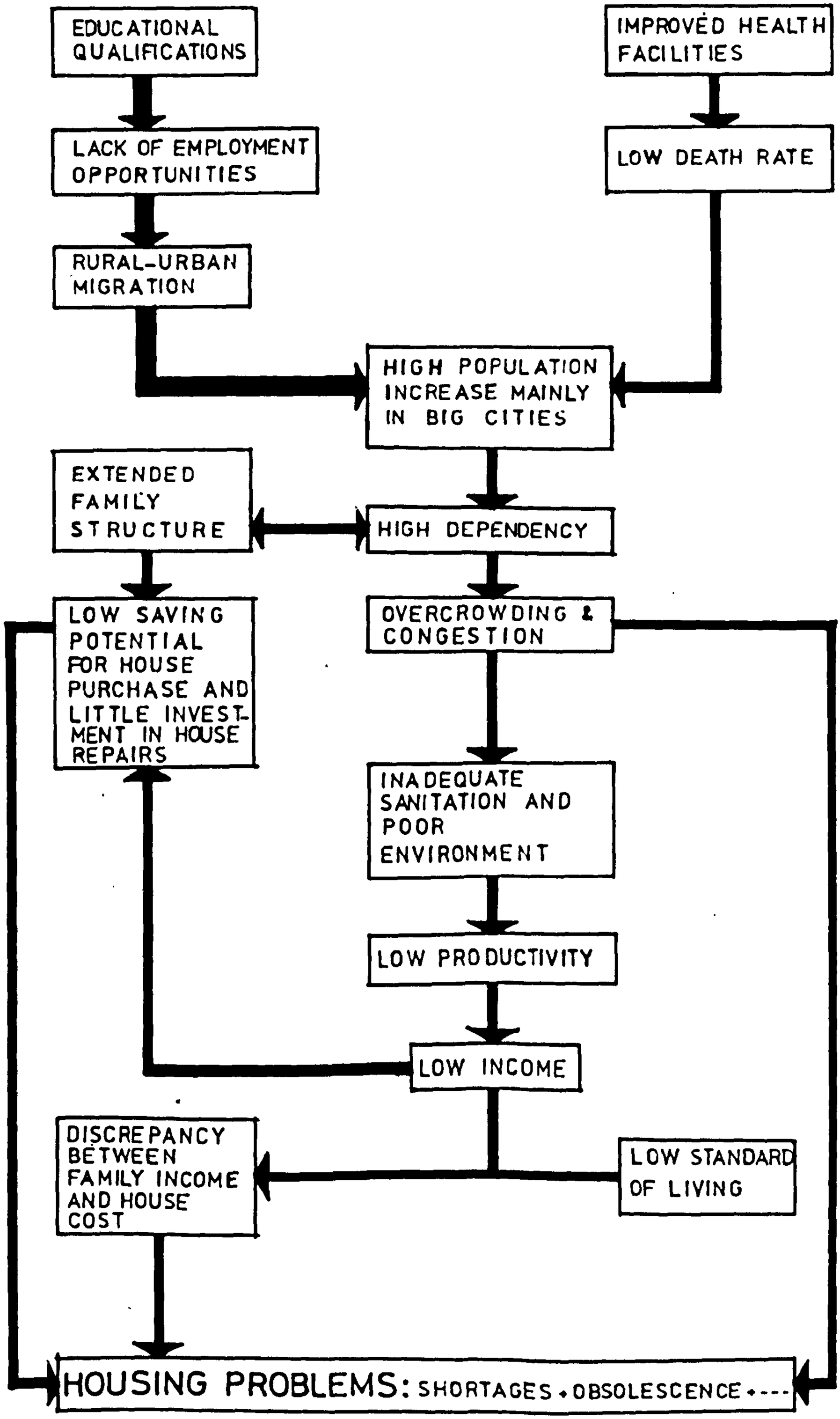
A. NUMBER OF HOUSES/1000 POP. CONSTRUCTED BY THE PRIVATE SECTOR IN IRAQ & BAGHDAD.

ID



B. THE AVERAGE COST OF HOUSES CONSTRUCTED BY THE PRIVATE SECTOR COMPARED WITH THE G.N.P./ FAMILY IN IRAQ AND BAGHDAD.

FIG.(3.2) THE CYCLE OF HOUSING PROBLEMS IN IRAQ



3.1.0 The Physical Quality of the Housing Stock:

The quality of a housing stock, as Donnison pointed out in his study, "The Government of Housing", depends largely on the date at which the social changes took place, the living standards considered acceptable at that time and the willingness of governments to enforce these standards. The quality largely depends, therefore, upon the age of the housing stock and tends to be best in countries which have built and replaced most housing since the point in their history at which adequate standards were effectively enforced. [5]

Shortage of housing and related facilities to cope with the increasing needs created by the population growth and migration to the cities, is not the only aspect of the housing problem in Iraq. A considerable proportion of the existing housing stock is deprived of essential facilities. The needs are also great regarding amelioration works to those houses which are not in such a bad condition as to be condemned to demolition. To illustrate, of the total housing of about 741000 dwelling units recorded in the 1956 housing census, it was conservatively estimated that about 78 per cent of the stock was built with undurable materials, at the same time about 80 per cent of the houses were without piped water supply, 83 per cent without electricity, and 67 per cent without toilet facilities; see Appendix (3.4). By 1965, the situation was still unsatisfactory, when it was estimated in the general census that about 70 per cent of the population were living in houses built with mud and in "Sarifa" lacking basic health requirements; see Appendix (3.3).

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5. see, D.V. Donnison, "The Government of Housing", Penguin Books, 1967.

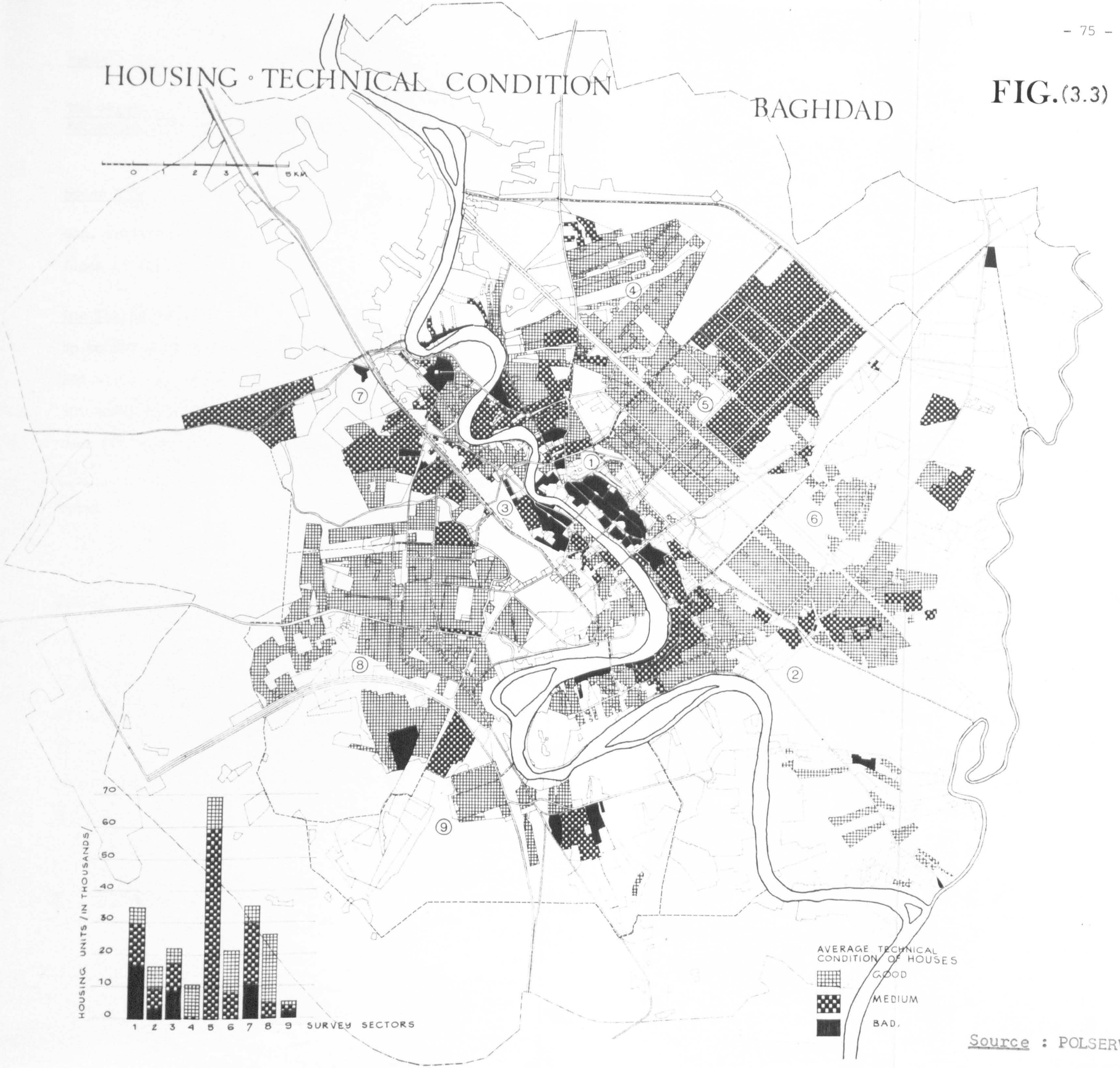
In Baghdad, the situation was less dramatic but still depressing. For instance, of the total housing stock of about 98000 dwelling units recorded in 1956, about 45 per cent of the houses were built with undurable materials, at the same time about 50 per cent were lacking electricity supply, and the same proportion lacked piped water supply; see, Appendix (3.4). By 1971, the situation had improved dramatically, where it has been estimated that only 13.4 per cent of the stock were regarded as in bad condition, from the point of structure and health hazards, and about 46.8 per cent were medium and needs maintenance; see, Table (3.1).

Fig. (3.3) illustrates that most of the houses which are in bad physical condition are concentrated in the old parts of the city, such as the central areas, where about 50 per cent of the houses are unfit for human habitation; other areas such as "Al Kadimiya" and "Aladhamiya", also have high percentage of bad houses.

In Baghdad, the technical condition of houses, seems to relate to the size of the plots these houses are built on, for instance the majority of houses built on plots of up to 200 sq.m. are of medium and bad condition. This is mainly caused by old age and the poor quality of building materials used, and the inadequate maintenance by the lower income groups. This may be illustrated in the following table, where almost 95 per cent of the houses built on plots of up to 200 sq.m. are of medium and bad conditions, while the houses built on plots of over 600 sq.m. this percentage drops to 16 per cent.

HOUSING · TECHNICAL CONDITION BAGHDAD

FIG.(3.3)



Source : POLSERVICE

Table (3.1)

The Physical Conditions of the Housing Stock in Baghdad in 1971, According to Type and Plot Sizes, Percentages:

House Type	Good	Medium	Bad	Total
Old, traditional House	-	3.2	96.8	100
Block of Flats	13.8	69.4	16.8	100
One Family Houses:				
Up to 200 sq.m. plot	5.0	81.0	14.0	100
201 - 300 sq.m. plot	82.0	16.5	1.5	100
301 - 600 sq.m. plot	80.0	20.0	-	100
Over 600 sq.m. plot	84.0	14.2	1.8	100
Total	39.8	46.8	13.4	100

Source: Polservice, "Comprehensive Civic Survey for Baghdad", 1972.

In general, during the period, 1956 - 1972, significant improvements in living standards have occured in Baghdad. This may be illustrated by comparing the figures provided by the Iraq Housing Census, 1956, and the Polservice Comprehensive Civic Survey for Baghdad, 1972.

Table (3.2)

The Relationship Between the Average Number of Persons per Family, House, Room in Iraq and Baghdad, 1956 and 1971:

		Iraq	Baghdad	
		1956	1956	1971
1.	Families per House	1.70	1.2	1.1
2.	Persons per Room	2.73	2.8	2.1
3.	Persons per House	6.05	7.5	7.3
4.	Persons per Family	5.65	6.2	5.9
5.	Rooms per House	2.22	2.7	4.0
6.	Rooms per Family	2.07	2.2	3.6

Notes:

- Data for 1956, was provided by the Iraq Housing Census, 1956, Tables: 3 and 15.

- Data for 1971, was provided from the Comprehensive Civic Survey for Baghdad by Polservice, 1972.

Source : Iraq Housing Census, 1956; and Polservice, "Comprehensive Civic Survey for Baghdad", 1972

The two main conclusions one may draw from the above figures are as follows:

1. A drop in the number of families per house, this is mainly caused by:

   i. The relatively increasing rate of housing development in the early 1960s, which was encouraged by the government land distribution policy, particularly to the cooperative societies; see, (7.3.0).

ii. The tendency for the young married members of the family to form separate households; see (1.4.0).

2. A significant drop in the room occupancy, this is due to the relative improvement in the financial capabilities of the individual, which allowed for the development of bigger houses, particularly on the government's distributed land. Since this land was distributed cheaply, far below the market price, the families took advantage of that and substituted the cost by building larger houses.

3.2.0 The Residential Areas of Baghdad

With the rapid increase in Baghdad's population mainly due to the mass migration from the rural areas, there has been a growing demand for housing of various types by the different socio-economic groups; this has resulted in a mounting pressure on the built-up and partially built-up residential areas.

Because the majority of the residential areas in Baghdad prior to the rapid urbanization were old, they lacked sewage and water supply and in many cases even electricity; see, Appendix (3.4), in addition, the houses were not constructed for the population density they now contain, as a result some of them were roughly altered to serve a new pattern of life. At the same time, those houses must satisfy not only a larger population but also one with non-traditional requirements. This is manifested by the increasing demand for smaller rooms because of the disintegration of the extended family and the corresponding shift of emphasis from communal to individual living. Modern amenities are also required whenever these can be supplied: bathroom, powered cooking, etc.

With the different style of life comes the desire for a different style of house, opening outward to the street instead of inward to the courtyard; see Fig . (3.4)

The old houses are made even less satisfactory by the hasty and shoddy alteration to some of them, and the few existing facilities in any over-subdivided building were strained beyond any possibility of proper functioning. Additions, in many cases increases in height, and planless covering of available open spaces resulted. Plot subdivision and exploitation of rising land values affected adversely not only the residents, but also the entire economic and administrative structure of the city, forcing business and government to be subject to the effect of fluctuation land values.

Slum formation by sub-division of old property is part of a world phenomenon, but in Baghdad it is aggrevated by:

1. The greater age of the building being sub-divided.
2. The building materials, mainly mud brick, which is not easily repaired and not suitable for alterations.
3. The lack of basic facilities in the stage prior to slum formation.

The rapid expansion of Baghdad created additional housing problems, where the growth took place regardless of the existence of a city plan. This growth was generally characterized by:

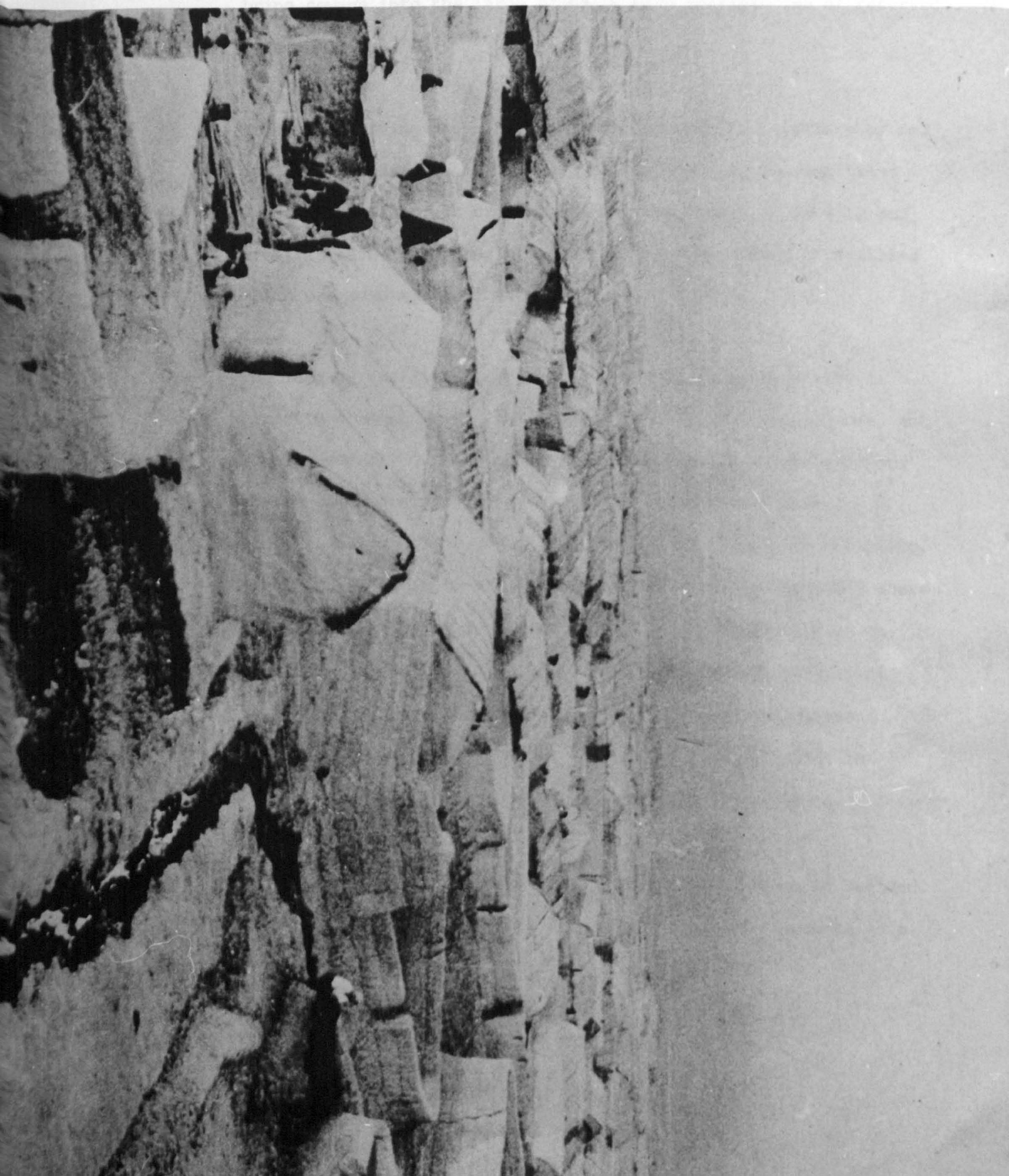
FIG.(3.4) TYPICAL NEW HOUSE IN BAGHDAD

1. Makeshift housing in the form of "Sarifa", constructed of shoddy materials mainly mud and reeds, usually of one room with no auxiliary facilities of any sort; see, Fig. (3.5).
2. Construction on the cheapest available land with no consideration of the suitability of the site in terms of transport.
3. Location beyond the zone of municipal control so that any existing, building and health regulations may easily be circumvented.

The formation of slums around Baghdad was often unwittingly encouraged by the different master plans prepared for the city as far back as the late 1930s; some of these plans, particularly the one made by Manioporo; see Appendix (1. 5), did not provide for growth or development along functional, geographic axes, i.e. the Tigris river, and provided plots for a population with an income level far higher than that of the population which required the space to live. In general those plans were characterized by the following:

1. Large building plots.
2. Strict, unrealistic regulations concerning percentage of plot coverage permitted.
3. Unreasonably large roads, particularly in the low income residential areas.
4. Lack of adequate provisions for local functions or community services.

FIG. (3.5) SARIFA AREA IN BAGHDAD



All these proposals and suggestions were made without regard to the fact that the municipal authorities, with their limited financial resources, will be unable to pave the spacious roads, bring sewage into the large plots or make sensible use of reserved open space.

It is interesting to notice that although the Arab culture by and large emphasizes the importance of the home and its amenities; urbanization, through excessively rapid increase in density and area, is largely responsible for the high percentage of families which are inadequately housed.

The lack of facilities and amenities in the expanding city is directly connected with the housing problem, for housing does not mean houses alone. The larger population needs not only to be sheltered, but also to have the use of places of recreation, schools, cultural and commercial facilities and public utilities. Furthermore, there is no organized development of community where there is no longer a true residential area with facilities on the scale of the neighbourhood and in harmony with tradition. And where educational, health, cultural and even religious facilities exist, they are rarely grouped in a way which is convenient for the mass of residents and potential users.

In summary, most of the problems of residential areas in Baghdad, particularly the one family, low rise housing developments were resulted from the following:

1. There is no adequate control of the extent of land subdivisions for residential use. [6]
2. Shortcomings in the existing residential areas classifications, which does not stipulate the maximum size of plots in each residential class, and does not refer to structural system.
3. Lack of programming and spatial outlines for subdivisions.
4. Elaboration of subdivision plans within ownership boundaries irrespective of size and shape of the area.
5. Lack of financial means for provision of social services and technical infrastructure in neighbourhoods, and the lack of coordination for the system of financing and realization of these facilities.
6. Lack of coordination between the different public and private agencies in respect to environmental features, such as public open spaces, streets and historical buildings.

Housing areas in Baghdad differ in the degree of development of public services according to their relative location to the city as a whole. For instance, the central residential areas represents higher standards in the fields of potable and irrigation water, sewerage and rain water drainage, streets and lighting; on the other hand areas laying at the outskirts of the city lacks all or part of these essential services.

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6. Although in recent years subdivisions of land for residential purposes has been contained within areas stipulated in the recent master plan for the city of Baghdad, a large application from the private sector have been received by the municipality, either to allow further subdivisions of existing plots or for the permission to build another house besides the existing one in the form of annexe, "Mushtamal".

The problem of accessibility to recreation areas is of less importance in residential areas where car ownership is high. Nevertheless, it has been found that there are more public open green spaces in higher income areas. In these areas there are also greater opportunities of recreation in the form of private house gardens. For instance, the index of open green spaces in the low income sectors amounts to 2.6 sq.m. per one inhabitant, while in the high income areas, this index rises to 9.2 sq.m. per one inhabitant, almost 3.53 times more. This is inspite of the fact that the area of house gardens per one inhabitant in the low income areas amounts to 2.7 sq.m. per one inhabitant and in the high income areas to as much as 14.3 sq.m.; see Fig. (1.4.G).

By pointing at the relationships between the accessibility to various public facilities and car ownership, an interesting phenomenon arises, namely that in the higher income areas the number of cars owned by the lower income families incorporated in those areas is higher than by the inhabitants of the lower income areas belonging to the same income group.

Similar relationships may also be found in the standard of commercial facilities in the different housing areas. For instance, in the high income residential areas the inhabitants usually do their shopping at the centre of the city, but the lower income areas the inhabitants mostly buy at the less developed local shopping areas where the shopping standard,

i.e. the quality and variety of goods is much lower than at the city centre. This trend may be the consequence of higher car ownership of the population living in higher income areas than that in the low income areas.

Another difference between the housing areas of Baghdad can be noted in the field of education, these differences depend largely on the location of these areas and the level of income of their inhabitants, for instance, it has been found that in the low income groups, the index of pupils per classroom amounts to 112 pupils, which is extremely high as compared with other countries, while in the higher income groups, this index drop dramatically to 42 pupils per classroom; see Fig. (3.6).

Broadly, the residential areas in Baghdad may be classified into three types:

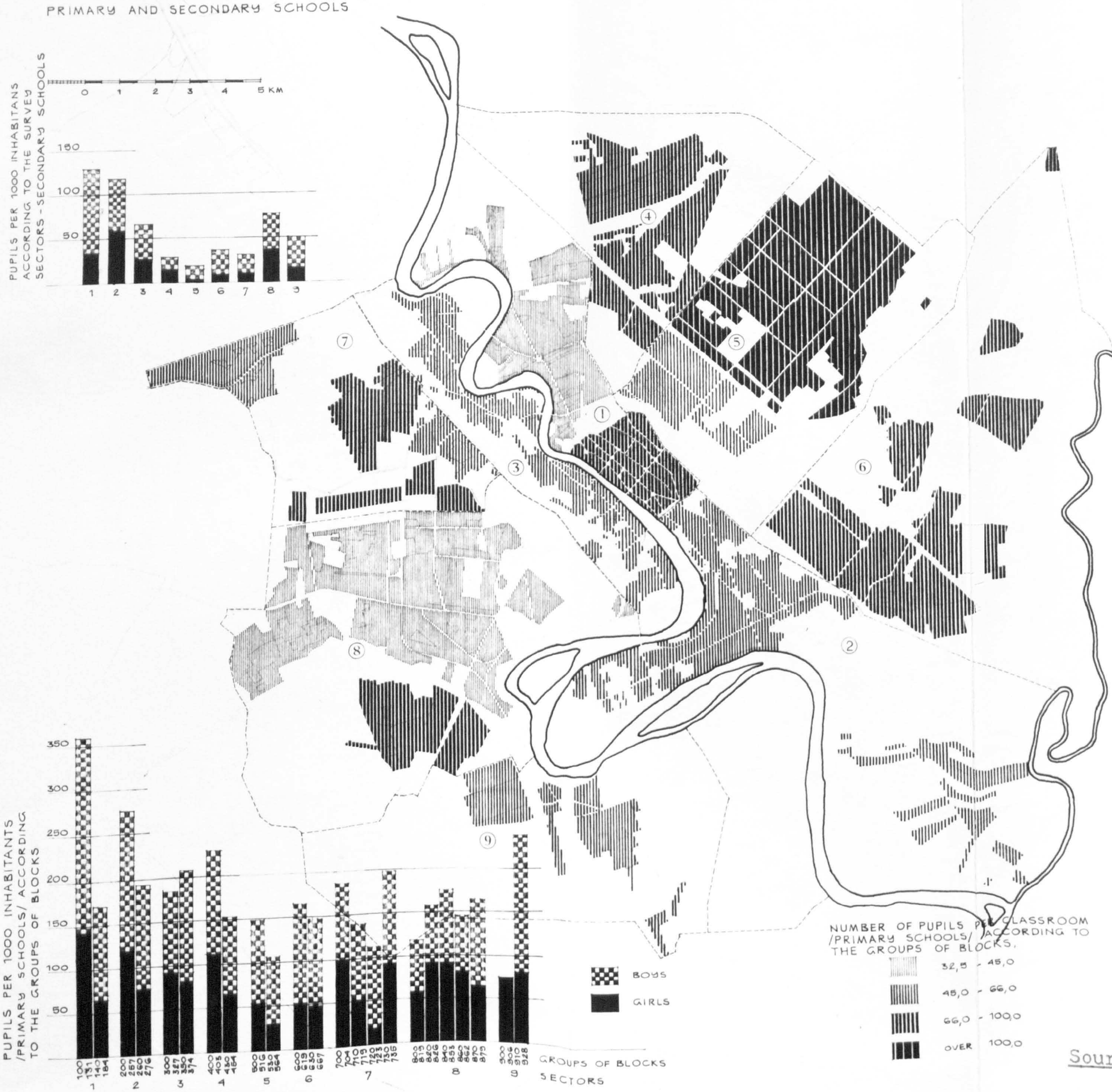
1. One-family housing, usually built on plots ranging from 200 - 600 and over sq.m.
2. The traditional housing areas, which were developed largely in the nineteenth century, and mainly concentrated in the central area of the city.
3. Multi-family dwellings; this type of development, though very recent in Baghdad, has taken place in the densly built-up areas mainly along the commercial streets. Generally the flats are built on upper floors with shopping on the ground floor; sometimes on the first floor, professional offices for doctors, lawyers and contractors are located. Most of these buildings are, however, up to four storeys, and almost all of them lack open spaces, playing grounds, and parking facilities.

EDUCATIONAL FACILITIES

PRIMARY AND SECONDARY SCHOOLS

BAGHDAD

FIG. (3.6)



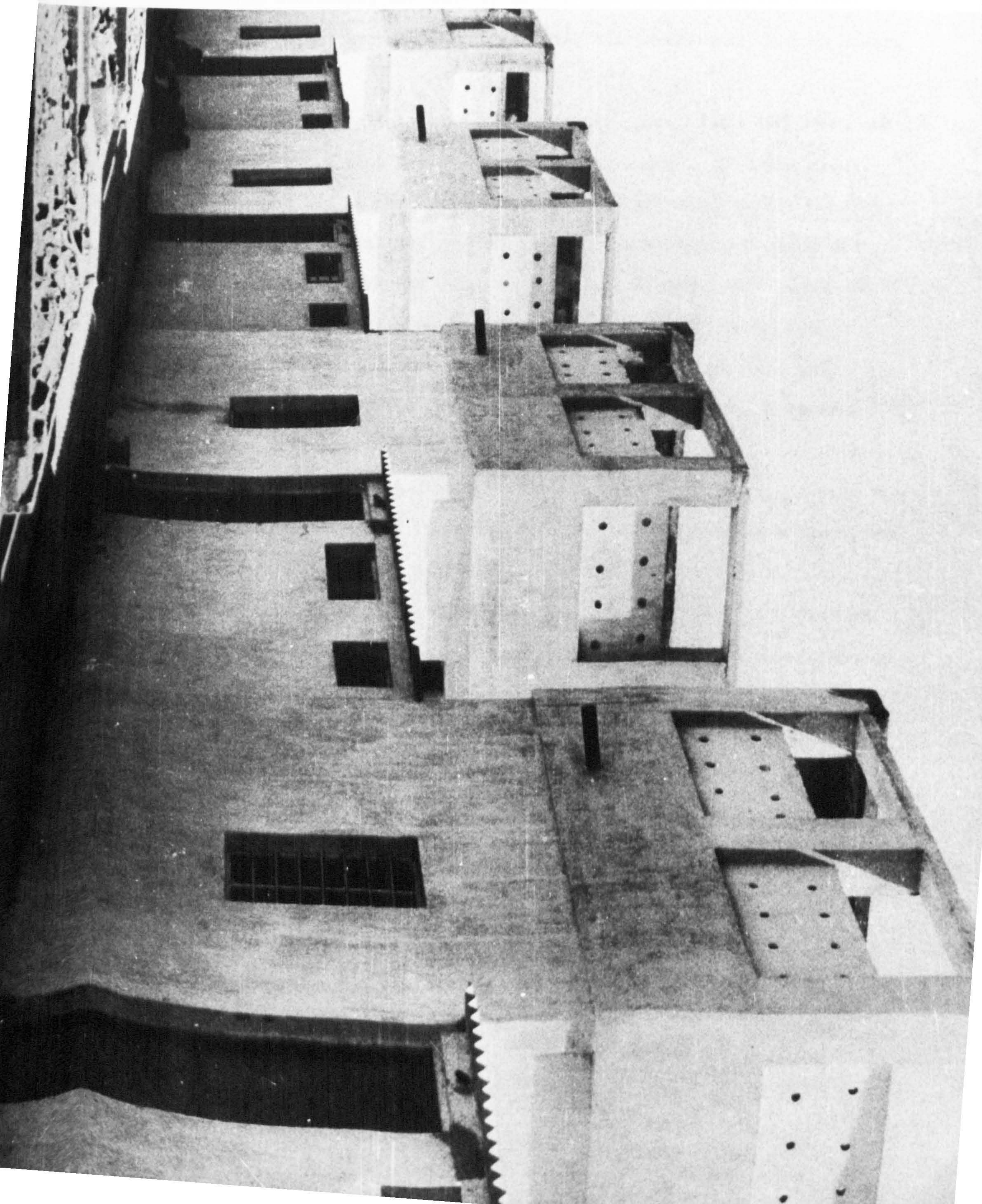
Source : POLSERVICE

3.2.1 <u>One-Family Residential Areas</u>:

One-family housing in Baghdad, although a relatively new phenomenon - most was built in the last thirty years - has become the prevailing form of housing development. This may be illustrated by the fact that almost 92.3 per cent of the total population of the city are now living in them. And the majority of these people are from the lower income groups,whose incomes do not exceed 100 ID per month, about 84.7 per cent of the total number of people living in one-family housing. Data provided by Polservice, 1972; see, Fig. (5.3).

Although the prevailing pattern of land subdivision for one-family housing in Baghdad is the grid pattern, where plots are arranged in a back to back fashion and served by open ended roads with pedestrian walkways on both sides, deviations may be found, especially in the residential areas of large plots. In the subdivisions of smallest plots, up to 200 sq.m., for instance, there are two kinds of roads: access roads and pedestrian walkways. The rectangular pattern of roads in these areas, with the uniformity of wall materials, mainly brick work, repeated on hundreds of hectares of almost identical housing units, causes an impression of depressing monotony; see, Fig. (3.7). The lack of variations in the housing styles in such areas renders difficult the psychological identification of inhabitants with their neighbourhood unit, almost similar to the housing areas which were built in the industrial cities in the U.K. at the beginning of this century. Deviations from grid pattern in this type of small land

FIG.(3.7) LOW COST HOUSING IN BAGHDAD



subdivisions will bound to result in a smaller number of plots, thus decreasing the density of the residential area to a level which might become uneconomical for the inhabitants of such areas.

In the residential areas having larger plots, 301 - 600 sq.m. and over, every plot has its own vehicular access. In these areas, one and two storey houses of villa type prevail. Better quality of architectural design than that in the residential areas of small plots with the usage of different building materials, as well as the provision of private gardens, break the monotony characteristic of the former group. In this situation, the deviations from the rectangular grid pattern, give, in general, better results for the improvement of the quality of the residential environment, particularly in the largest plots areas. It must be stressed here that improvement in the residential environment, and the quality in the urban life of a housing area does not only depend upon the size of the plots and their layout, but also on other factors such as the number of the inhabitants in the house; the technical conditions of the super structures; the quality of the services and utilities; and accessibility to the green areas, playing grounds and community facilities.

As for the residential areas of medium plots, 201 - 300 sq.m. they combine the advantages and disadvantages of the previous groups, in respect to the roads pattern, and the quality of the architectural design of the houses; but there are many subdivisions in this group, which are located at the outskirts of the developed

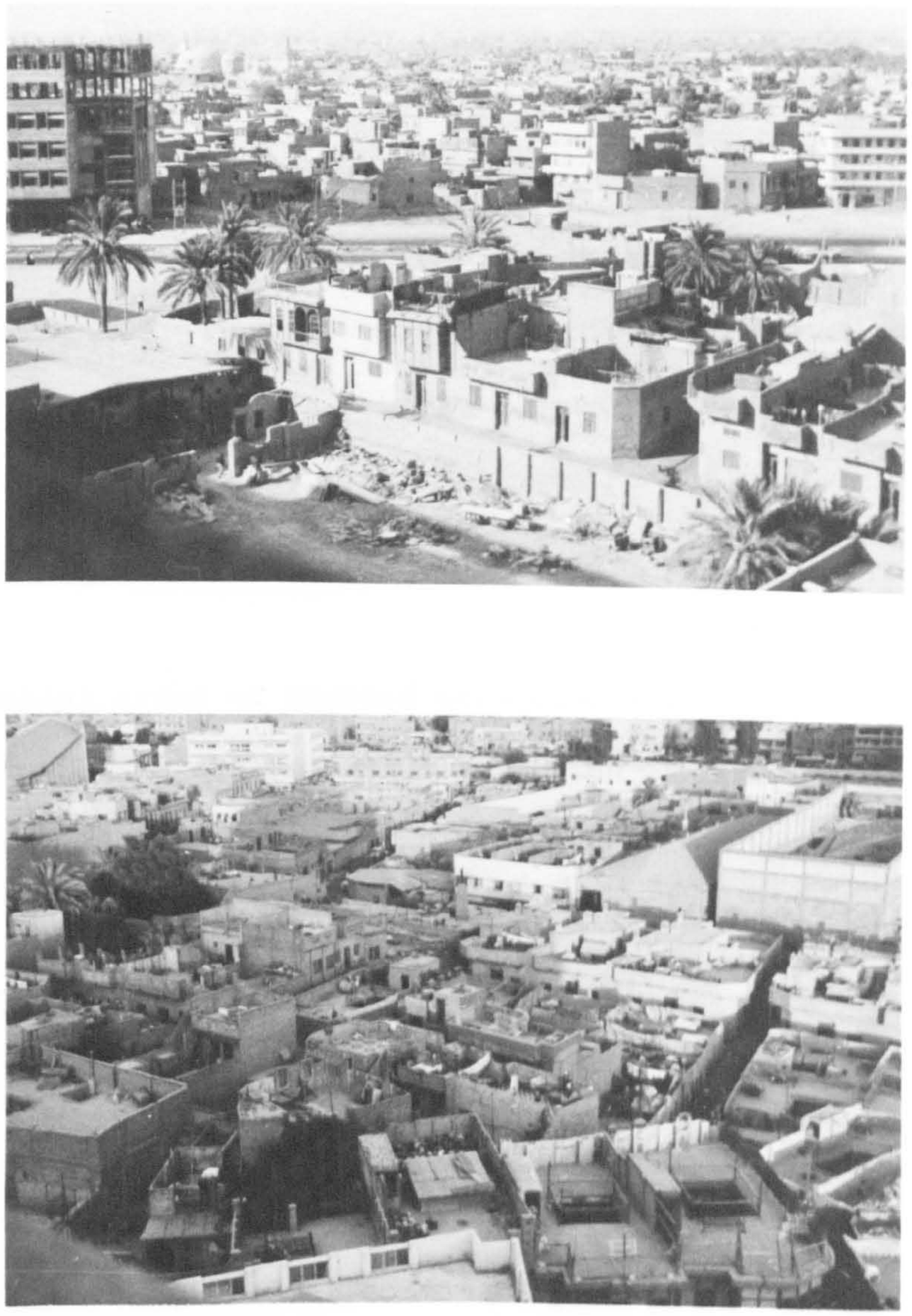
area of the city, having accidental boundaries following former ownership. In these cases, the road patterns are not designed in connection with the city's road network, thus makes it more difficult the programming and designing of public services and facilities.

3.2.2. The Old Residential Areas:

The majority of the old areas of Baghdad are situated along the river Tigris, particularly in the districts of "Rusafa", "Adhamiyah" and "Kadhemiyah", because of their central location and for traditional reasons they have adopted the functions of the centre of the city. They may be rather described as business streets than business zones, since business activities going on there have the tendency to sprawl along the streets. The areas between these business streets are filled with the traditional housing, which is mostly obsolete, and in a bad structural and sanitary condition; see, Fig. (3.8).

The mixed urban activities in the central area of Baghdad have generated heavy traffic loads in the narrow streets network of the old part of the city which were originally meant for pedestrian traffic. Drastic decisions to introduce vehicle traffic into the old parts of the central area of Baghdad by constructing new roads, caused that these areas lost their historical and environmental values as residential districts.

FIG. (3.8) OLD TRADITIONAL HOUSING AREAS IN BAGHDAD



The old residential districts of Baghdad, which covers an area of approximately 390 hactares, and occupied by 158,900 inhabitants, about 7.0 per cent of the total population are the remains of the town of Baghdad, at the time of the Ottaman Empire, they dated back to the XVII th Century, when the Mosque, by virtue of its size and distinct architectural form, as well as its importance as a religious and cultural institution, dominated its environs. Immediately surround the Mosque, were the residential areas, which were very densly populated. The entire complex of these areas was laced by numerous narrow roads which followed no pattern but grew as circumstances warranted; see, Fig. (3.9).

The old residential areas of Baghdad were composed of many residential communities called "Mahallah" which is equivalent to the neighbourhood in the western town planning termonology. Many of these Mahallahs maintained a high degree of social solidarity and were closely knit as homogeneous communities.

The solidarity of some of these Mahallahs was based on religious and ethnic identity, i.e. Moslems, Christians and Kurds. For the dominant Arab-Moslem population, common rural origin unified some of these Mahallahs, and in others depended on sectorial religious affiliations. In this case, there had been no prior unity of race, origin or family, but unity had grown out of the eventual association of the whole Mahallah with the school and under the leadership of the Sheikh, or as it is usually known "Al-Mukhtaar".

Apart from the religious and ethnic association, there was also an economic basis for the homogeneity of a particular Mahallah, some were named after a market or craft. A common occupation often

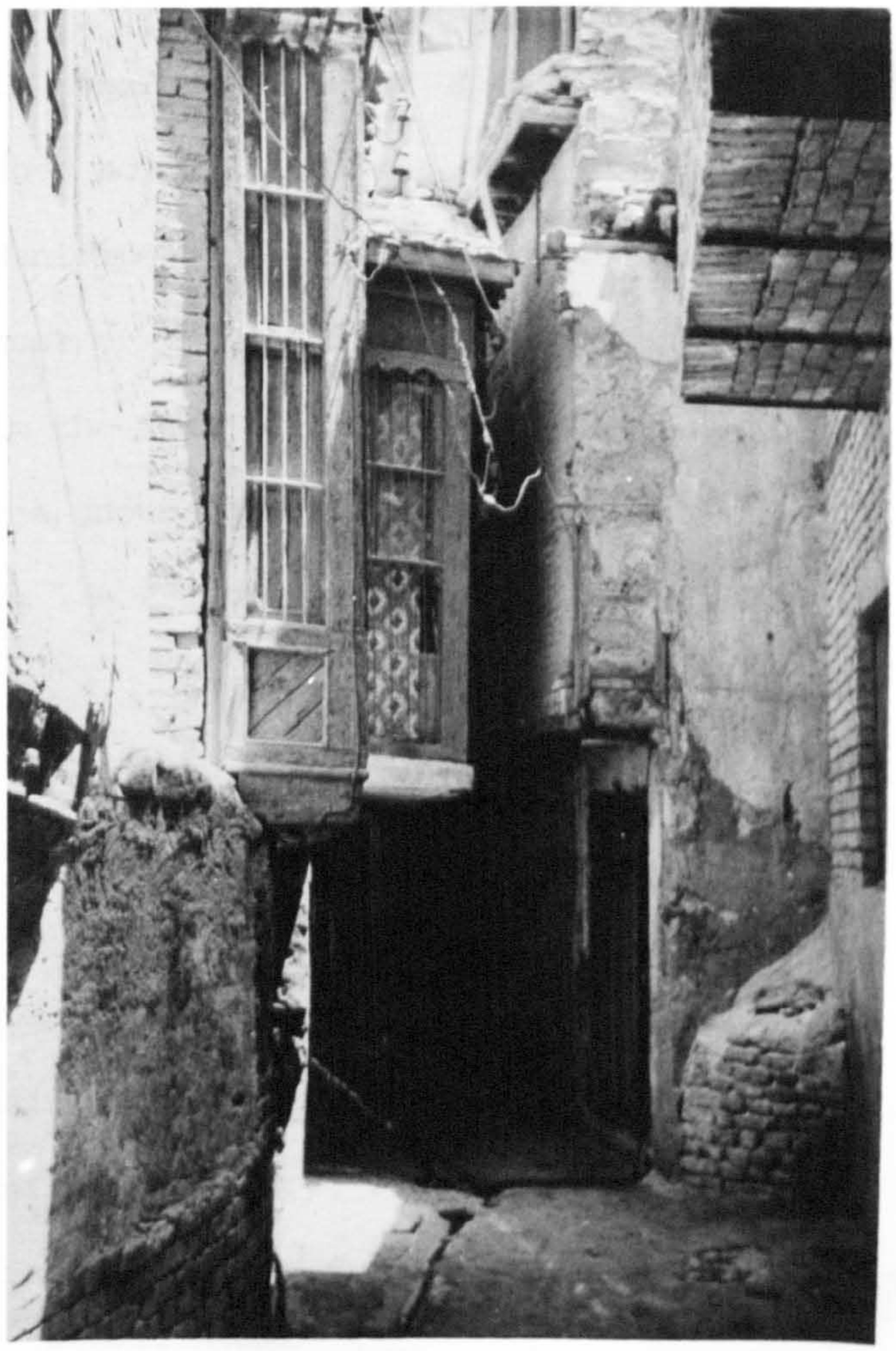
FIG.(3.9) TYPICAL VIEW OF THE OLD RESID_ ENTIAL AREAS OF BAGHDAD

gave these Mahallahs their special character. But there is no evidence, however, of any radical separation of economic classes. These areas were communities of both rich and poor.

Each Mahallah, being a small fortified self-sufficient neighbourhood, was able to live almost independently when necessary. It contained its Mosque, public bath "Hammam", small local market "Suq", and perhaps workshops. Characteristically, these elements were in many cases, physically isolated from the bustle of the main central city markets, and their services were limited to their own Mahallah. However, it was not a rule that every Mahallah was a real unit of social organization, ar had an identical economic base, or was physically bordered. In some cases, a large area containing more than one Mahalla was the unit of effective social action, or presented an economic function, or had a physical identity. Therefore, the old residential Mahallahs of Baghdad were neighbourhoods within the urban whole.

As a result of the rapid growth of Baghdad population and the land subdivisions policies adopted in the last fifteen years, the original inhabitants of these Mahallahs moved to new residential areas, looking mainly for better housing conditions, and more satisfactory living requirements. In consequence, these areas became slums, occupied by low income families, who have no other choice for living, also by smally workshops and warehouses; see Fig. (3. 10). Unfortunately, if this process of degredation is not restrained through a positive conservation policy, some of the most essential historical values and architectural elements of interest will soon disappear.

FIG. (3.10) DETAIL VIEW OF THE OLD RESIDENTIAL AREAS OF BAGHDAD



3.2.3 Multi-Family, High rise Housing:

High rise living in Baghdad and Iraq similar to that experienced in other countries, especially in Western Europe and North America, does not exist. This is illustrated by estimations made by the Municipality of Baghdad in 1972 which reveals that only 0.7 per cent of the total inhabitants of Baghdad are living in 3330 flats in the form of 2 - 4 storey buildings with shops and workshops at the ground floor, while the majority of the inhabitants are living in 1 - 2 storey individual houses.[7]

These flats are chiefly occupied by inhabitants temporarily staying in the city, such as students, short staying visitors from other provinces, etc. they are mostly located and concentrated along some of the main streets and in the commercial centres. The existing state of these blocks of flats does not provide for correct sanitary, functional or environmental conditions. It resulted mainly from the lack of regulations, controlling the manner of development, and not counteracting the tendencies for the maximum income gain from plot to be the only object of development. To illustrate, it was estimated that plot coverage in these blocks reached in many cases 95 per cent of the plot area.[8]

Perhaps the main reasons behind the lack of high rise residential development in Baghdad and Iraq may be attributed to the following:

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7. see, Polservice, "Comprehensive Civic Survey of Baghdad," 1972.

8. data provided by Baghdad Municipality, 1972.

1. The prevailing trend and the official policy regarding the subdivisions of land for residential purposes is based almost entirely on the principle of providing separate plots for each household. This trend encouraged the development of 1 - 2 storey houses by households regardless of their socio-economic status.

2. The cultural and religious customs of the society, which are mainly based on the Islamic principles, does not favour flats living on the principle that this type of living does not provide the essential privacy and family life required.

3. Perhaps the main factor hindering the wide spread development of high rise living in Baghdad, and indeed in Iraq in general is the climatic factor. Up to the present, there has not been any successful attempt made by the architects and engineers to develop a type of residential block which is suited to the extreme climate of Baghdad, by providing the necessary protection against the summer heat, and outdoor sleeping spaces, especially for the low income families who cannot afford to use electrical means for cooling, without raising the cost beyond the economic capability of these families, and without affecting the essential privacy aspect.

To illustrate the above factors in statistical terms, one may look at figures of rate of flat construction and compare them with the rate of ordinary low rise housing construction. During the 1969 - 1971 period, construction of flats by the private sector in Baghdad amounted to 1200 flats containing about 4280 rooms at an estimated total cost of about 2.76 mill. ID, while during the same period the private sector constructed about 37000 houses,

containing about 130000 rooms, at a total cost of 60 mill. ID. This means that flat construction is amounting only to 3.14 per cent of the total dwelling construction; see, Appendix (3.5) and Fig. (3.11).

In recent years, there has been a wide discussion within the public and professional circles on the necessity to encourage the development of high rise residential blocks in Baghdad to meet the increasing need for accommodation, also to break the monotony of the flatness of the city's sky line. This discussion seems to spring mainly from the argument that Baghdad has experienced in the last twenty years a horizontal expansion in almost all directions, which makes it highly expensive to provide the basic services, i.e. paved roads, piped water supply, electricity, and refuse disposal, for the communities who are living on the periphery of the city. Therefore, it is necessary to encourage vertical residential development, especially for the low income groups who cannot afford transportation cost from their place of residence to work, shopping, recreation and education, and vice versa, or to pay for the services provided except through high government subsidies.

The recent master plan of Baghdad, which was prepared by Polservice, see Appendix (1. 5), suggested that by the year 1990, up to 20 per cent of the population of the city could be expected to be accommodated in multi-family dwellings. Although the recent survey carried out by Polservice, has indicated only a very small portion of families living in this kind of buildings, about 0.7 per cent; see, Fig. (5.3).

FIG.(3.11) NEW BLOCK OF FLATS IN BAGHDAD

ARCHITECTS = HISHAM A. MUNIR & ASSOCIATES

The new trend to live in blocks of flats up to four storeys is becoming more and more discernible. In the past years the Municipality of Baghdad has been inundated by applicants requesting permission to build multi-family blocks of flats. The pressure for such permissions is highest in the central locations, but there have been also applications for shops and two storey flats even in somewhat far-flung locations. To cope with this demand the latest decision or thinking in the Ministries of Planning and Housing and Public Works has been to discourage subdivision of land on a plot by plot basis and, instead, to encourage building of flats.

3.3.0 Incomes and Housing:

Housing is the most expensive single commodity which the ordinary family ever uses, and if the family owns its dwelling, the house usually represents by far the most important asset which the family can accumulate.

On the supply side, housing's most significant characteristic is its heavy capital cost. To provide one family with housing often requires resources equal in value to substantially more than the family's total annual income.

Technology is only part of the explanation for the costly nature of the housing product, however. Another aspect is the enduring demand for housing especially in the large cities such as Baghdad. A family can usually look forward to occupying the same dwelling in the same location for several years. When that family's needs change, the house will be transferred to another family with needs

like the original requirements of the first occupants. In this way, the usefulness of the dwelling in a fixed location is perpetuated. If the intention is to find a dwelling for a longer period of time, it makes practical sense to buy a more elaborate product. The extra cost of extra comfort can be spread over a longer period of time. Thus, there is a strong inducement to make the urban dwelling both durable and elaborate. Technological advances, it is argued, may someday bring the cost of housing units down to a very much lower level. Recently in Iraq, there is a substantial public interest in pre-fabrication and in the use of new techniques and material in housing, which promise to make housing in the country less expensive. [9]

Technological progress which may reduce the materials cost of urban dwellings would probably not bring equal reductions in the expensiveness of the individual housing product, as it would become both possible and practical to make that product more useful and more elaborate than before. It would be unrealistic to deny that a massive technological breakthrough could alter housing behaviour in a significant way, leading perhaps to the adoption of disposable dwellings but there is a force on the demand side which tends to counteract technological price lowering developments on the supply side. Housing, therefore, is a costly thing and is likely to remain so.

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9. Recent information obtained from Baghdad reveals the intention of the government to build around 6000 dwelling units in Baghdad alone per annum, to house middle and low income groups, using prefabrication methods.

There are many factors which must be considered in the assessment of the housing costs and family incomes, these include: the type of house construction, equipment, standards which tend to rise with time and with increases in income, also the choice available for the family between renting a house or purchasing a new one.

The usual problems which individuals face regarding construction costs in Baghdad particularly are primarily due to special demands which are in many cases out of proportion to the financial resources available. One of the many faults in that respect lies with inadequate or bad advice regarding accurate estimates at the early stages of design preparation. In many cases this situation caused prolonged hardship by the individual being forced to borrow more, request help from friends and relatives etc. Alternatively it can mean abandoning the project while in an unfinished stage.

Perhaps the main causes of this mismatch are due to:

i. The current practice of land subdivision, which encourages the individual to exceed his resources, i.e. the provision of large plots for relatively low income groups.

ii. The nature of the building process, which demands the use of unnecessarily sophisticated building technologies, such as the extensive use of reinforced concrete, complex plumbing and electrical fixtures, cooling systems, etc.

This unfortunate situation has developed into a vicious cycle. Certain building techniques, materials and practices have acquired strong image qualities, influenced by the actions of the high income groups which are a minority, and also encouraged by contractors and architects for profit and prestige reasons.

To appriase building costs in relation to family incomes, it is essential first to establish the financial resources of the individual to see whether his financial capacities can match his demands for space and amenities. To do that it is important first to study the socio economic structure of the society and its characteristics so as to assess their economic and financial abilities in relation to housing.

3.3.1 The Socio-Economic Pattern:

Analysis of the socio-economic groups and the class stratification of the Iraqi and Baghdadi society is hampered by the almost complete absence of research material in this field. Apart from a recent attempt made in 1972 by the consultants of the Baghdad master plan - Polservice to study the socio-economic pattern of the population of Baghdad, there has been no single attempt to investigate the stratification of a sector of the society, using criteria such as power, status, or prestige, or even on more specific criteria, such as wealth, or housing standards.

Although the present political and economic system in Iraq discourages the creation of a class society, however, one may distinguish with reasonable accuracy three main classes in the Iraqi society in general:

1. The Upper Class:

This class is taken to include groups who hold abundant possessions, wealth, or political powers. Before the 1958 change of government, and before the introduction and implimentation of the Agrarian Reform Law in 1958 and its amendments; see, Government of Iraq,

"Agrarian Reform Law, No. 30, 1958" ,it was possible to include in this class the great landlords and the tribal Skaikhs, who were enjoying a high political and economic influence. This class also includes entrepreneurs, small groups of industrialists, and the professionals, such as doctors, engineers and lawyers.

2. The Middle Class:

This class embracing all groups who are not belonging to either, the upper class or the lower class. This class is very heterogeneous and diversified, and still much smaller than its counterpart in the industrialised countries of Western Europe. This class includes small merchants, civil servants, middle and low ranged army officers, and junior professionals.

3. The Lower Class:

This class includes persons who are without property, wage-earning labourers or who are engaged in undefined work, as well as the rural peasants. This class does not include persons whose earnings are gained from work involving any degree of education,since the differences in standards of living, way of life, social standing, and power between the white collar and physical labourer are too great in Iraq than what it is in Western Europe, for instance. This class is by far the largest, since it has been estimated that almost 42 per cent of the present population in the country are rural inhabitants; see Appendix (1.3).

It is important to note that the differentiation between the mentioned classes does not signify that each of them occupies a well-defined and clearly distinguishable position. Furthermore, strata are not rigid,

and it is common to find, for instance, quick transitions from class to another. This phenomenon of high social mobility is connected with the fact that Islamic religion and Arab culture in general has no exclusive nobility or aristocracy which preserve marriage ties within its own close circle, as it is the case in Britain to a certain extent.

This mobility in the social system has increased substantially in the last two decades, particularly after the 1958 change of government, as a result of the rapid urbanization which tends to increase social contacts, economic development; and to a large extent the spread of education, especially in the cities. Also as a result of the frequent political changes and upheavals, which terminated the traditional privileged political and social positions of the traditional landlords and tribal Shaikhs; see (1.4.0).

Deficiency of data and information about the social, professional and economic structure of Baghdad's population, as well as lack of adequate field surveys make difficult working out of a precise sociological analysis of the city's society.

In a sample survey made on the socio-economic structure of Baghdad society by the Municipality of Baghdad in 1963, showed that in the population of the city, three economic classes can be individuated from the point of view of family income.[10]

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10. see, A.J. Araim, "Communities, Class System and Caste in Iraq", Bulletin of the College of Arts, Vol. 6, April 1963, p. 14.

Class I : income 10 - 50 ID per month, accounting for about 75 per cent of the population.

The professional structure of this class:

- manual workers : 55 per cent
- office employees : 20 per cent
- others : 25 per cent

Class II : income 50 - 100 ID per month, accounting for about 20 per cent of the population.

The professional structure of this class:

- teachers, manual workers and professional men : 50 per cent
- office employees : 30 per cent
- army officers, non commissioned officers and retired men : 20 per cent

Class III : income over 100 ID per month, accounting for about 5 per cent of the population.

The professional structure of this class:

- professional men : 50 per cent
- office employees and army officers : 35 per cent
- teachers and retired men : 15 per cent

At that time it has been envisaged that the future number of class I will decrease, class III will increase to a certain level and the highest increase will appear in class II. This forecast was based on the assumption that class II will rapidly grow on account

of Baghdad being the capital of the country and the number of employees in service trade always grows more rapidly and in higher percentage in capital cities in relation to the quantity of industrial employment. Also the expected economic development of the country and the growth of the national income will bound to effect the increase in population in the middle classes. As a result of this expectation, the following percentages of the socio-economic structure of Baghdad for the year 1990 was worked out:

Class I	:	60 per cent
Class II	:	30 per cent
Class III	:	10 per cent

A recent survey by Polservice on the socio-economic structure of Baghdad's society made in 1972, seems to support this expectation and showed a marked decrease in the percentage of the low income classes, and increase in the middle income group. [11]

This survey resulted in the re-classification of the population of Baghdad into four distinct socio-economic groups or classes, based on their monthly income and occupation. In this classification a new group was envisaged, i.e. group (D) with an income exceeding 200 ID per month. The following table illustrates these groups and their percentages to the total population of the city; see, Appendix (1.5).

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11. see, Polservice, "Comprehensive Civic Survey for Baghdad", 1972.

Table (3.3)

Socio-economic groups Classification, and their Percentages in Baghdad, 1972:

Socio-economic groups		Income range	Percentage of Population
Group	A	up to 50 ID/m	57.6
"	B	51 - 100 ID/m	27.8
"	C	101 - 200 ID/m	10.3
"	D	Over 200 ID/m	4.3

Note: One ID - Iraqi Dinnar - is approximately equal to £1.40.

Source: Polservice, "Comprehensive Civic Survey of Baghdad", 1972.

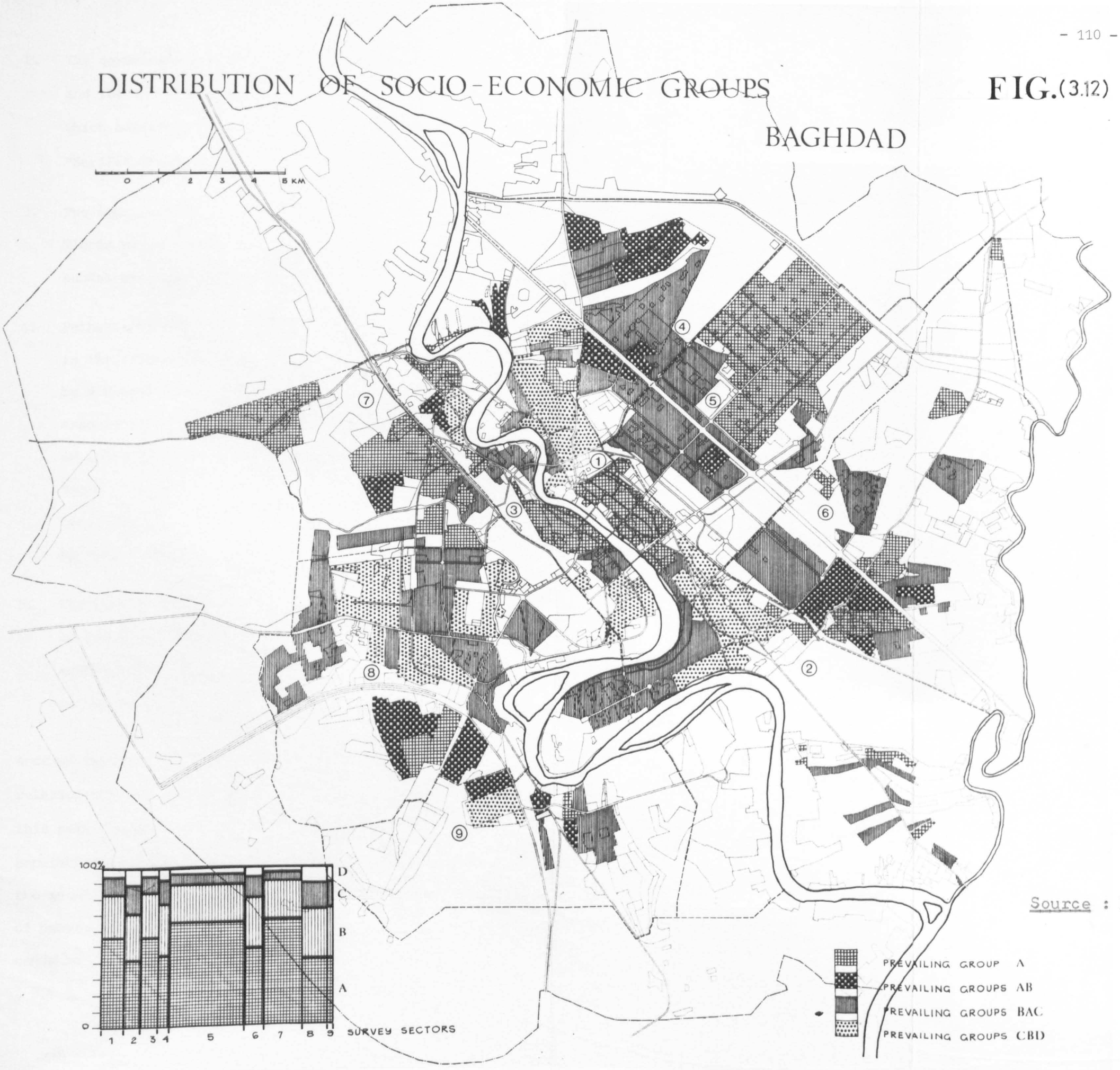
The spatial distribution of the socio-economic groups on the city level; see, Fig. (3.12), reveals that group (A) dominates almost all the sectors of the city, particularly the central area - Sector 1 - where the majority of the old, traditional residential quarters exists; also Sectors 5 and 7, where they were initially developed to accommodate the squatters and "Sarifa" dwellers, in the early 1960s. As for the other groups, it seems that they are mixly located with particular concentration of the middle groups, (B and C) along the Tigris river banks. The main reasons for such pattern may be listed as follows:

1. The historical evolution of the city, where the original communities are still concentrated around the holy Islamic shrines, most of them are now occupied by the lower socio-economic groups (A and B); see, Appendix (1.4).

DISTRIBUTION OF SOCIO-ECONOMIC GROUPS

FIG.(3.12)

BAGHDAD



Source : POLSERVICE

2. The government policies of land subdivision and distribution, and the direct construction of houses during the early 1960s, which concentrated on the re-housing of the squatters of the "Sarifa" areas, and the military officers, see, (4.1.0).

3. The topographical nature of the city's area, where the river Tigris historically attracted residential development along its banks; see, Appendix (1.4).

4. Perhaps the major reason for the present socio-economic pattern, is the effects of the different master plans which were prepared by different town planning consultants, mainly Doxiadis Associates master plan, where they recommended the development of areas far away from the river, and the construction of the "Army Canal" in the eastern part of the city which encouraged many families to develop their houses in this area; see, Appendix (1.5).

5. The location of certain employment nodes, such as the oil refinery in the southern part of the city, and the brick yards in the eastern part, which tends to attract the settlement of the low income groups (A); see, Fig. (1.4.C).

Another important finding was that there is a significant relationship between the age structure and the socio-economic groups, this relationship indicates that the proportion of the dependent population - up to 14 years and over 65 years - tend to decrease as the income of the people increase. At the same time the proportion of people in production age and gainfully employed 15 - 64 years tends to increase proportionally to income increases; see, Appendix (3.5).

As for the main characteristics of the socio-economic groups of Baghdad, it has been found that group (A), which is by far the largest, about 57.6 per cent of the total population are characterised by the following:

a. High proportion of younger age groups, up to 14 years; see, Fig. (3.13).

b. Very low proportion of productive, gainfully employed groups, about 17.5 per cent; also a high dependency rate, where it was estimated that out of an average household size of 7 persons, about 5.7 persons are economically dependent; see, Figs.(3.14& 3.13

c. Low level of working females, it was estimated that out of 100 females only 5 women are employed; see, Fig. (3.15).

d. Very low level of education, about 50 per cent of the people in this group are illiterate, which means almost 25 per cent of the total population of Baghdad; see, Fig. (3.15).

e. The occupational structure of this group consists mainly of blue collar workers, about 70 per cent, while others, mainly white collar workers and traders amounted to 30 per cent; see, Fig. (3.14).

f. The total income per one household in this group does not only depend on the individual income of its employed members, but also on their number.

FIG.(3.13) AGE_EMPLOYMENT RELATIONSHIP ACCORDING TO SOCIO_ECONOMIC GROUPS IN BAGHDAD IN 1971

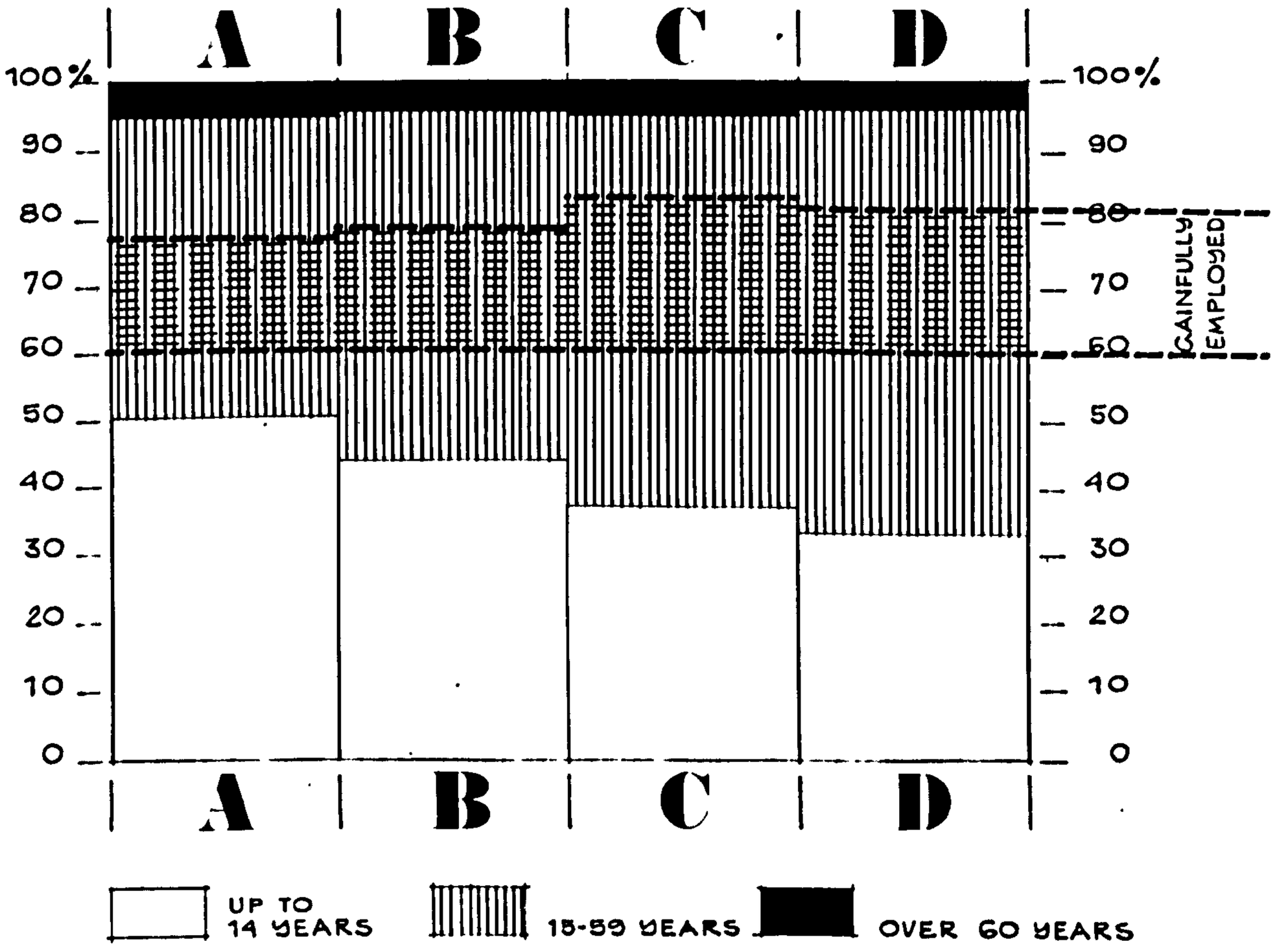


FIG. (3.14) OCCUPATIONAL STRUCTURE , BAGHDAD

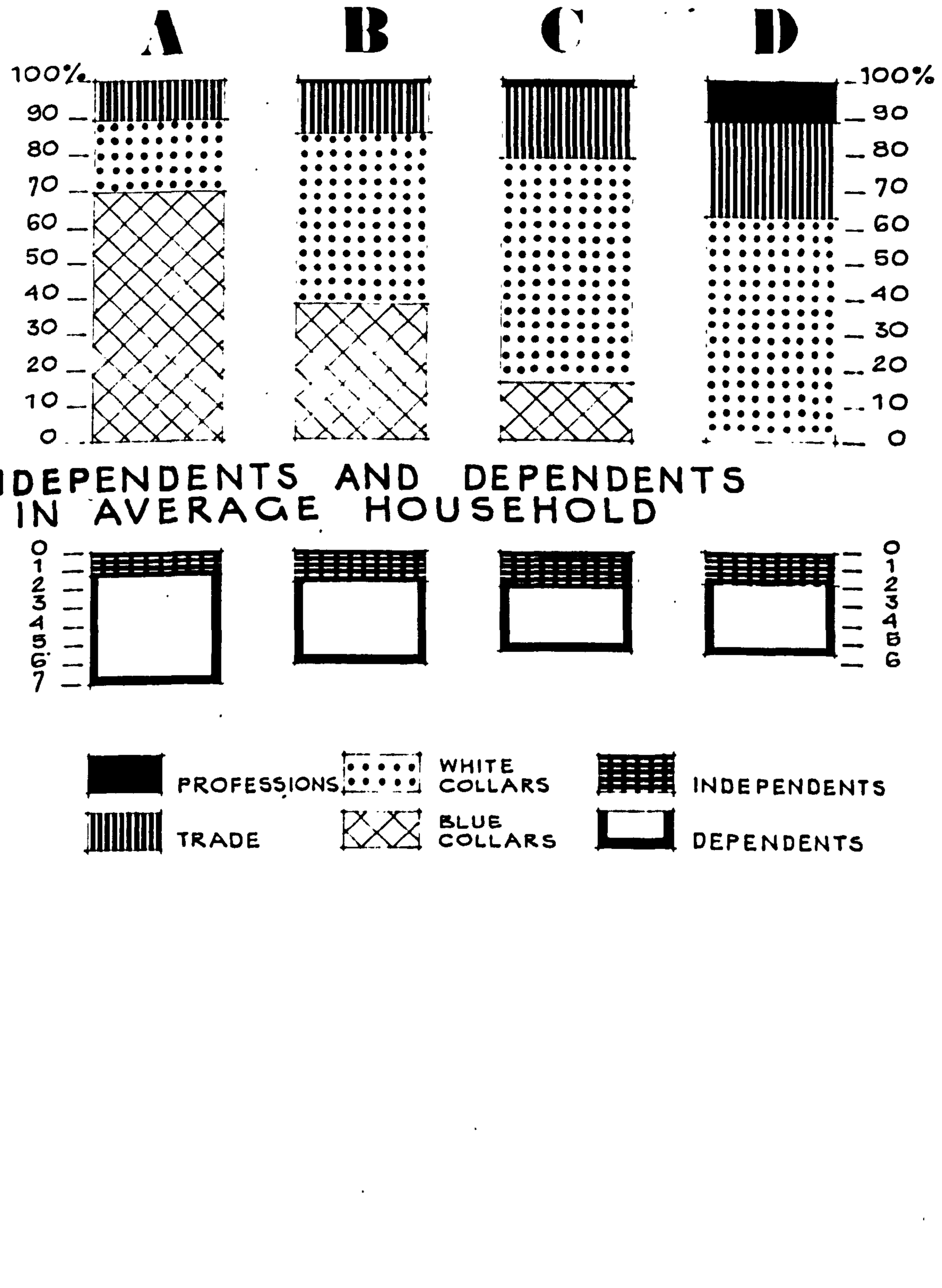
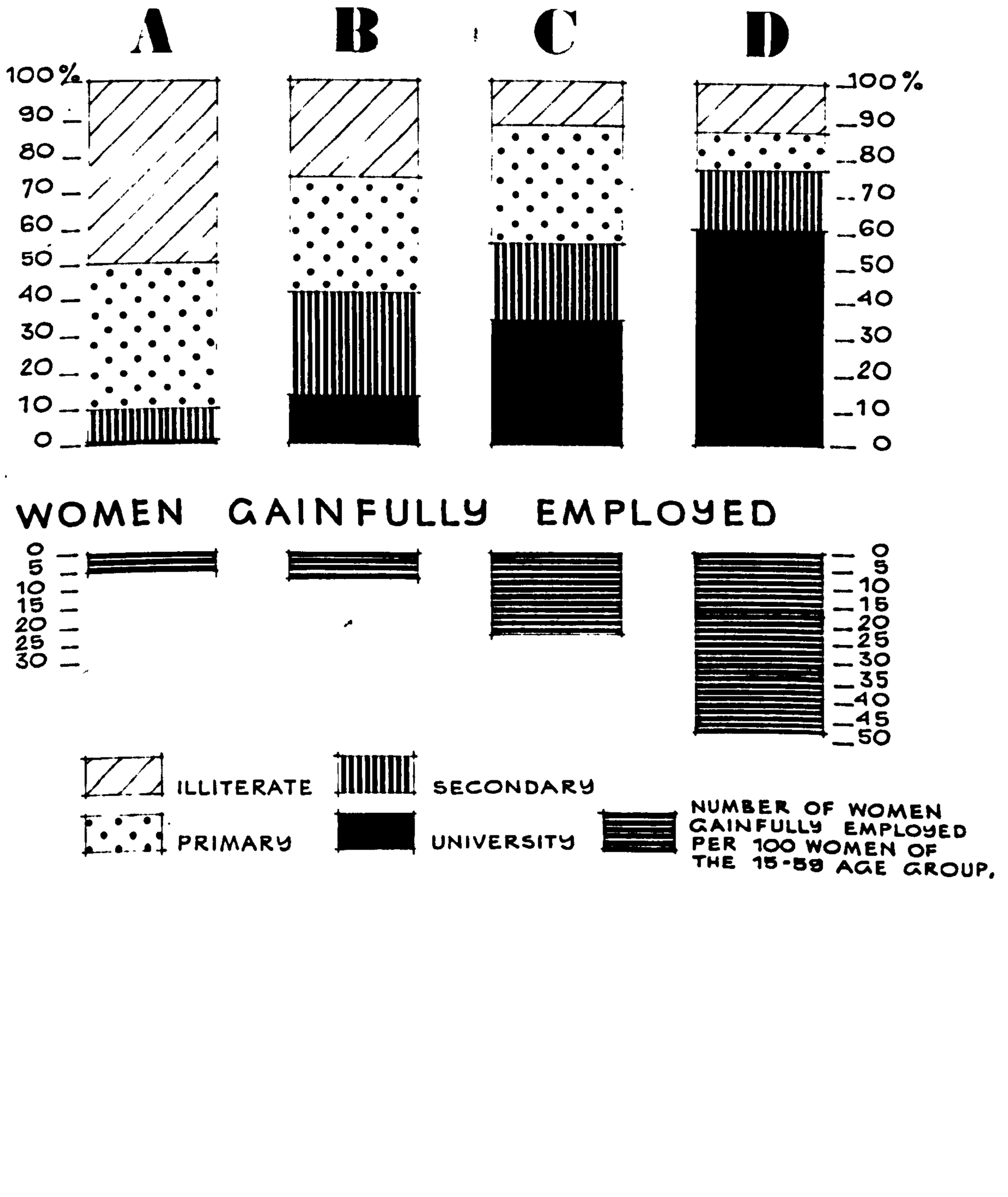


FIG. (3.15) EDUCATIONAL LEVEL , BAGHDAD



At the opposite end of the scale, group (D) shows the lowest number of people in non-productive age groups and the smallest size of household. It also represents the highest per cent of working females and a number of employees, particularly in professions requiring higher qualifications.

Groups (B and C), may be characterised as intermediate levels between groups (A and D), It may be assumed as very probable that with a gradual increase in incomes, the lower groups will develop in the direction determined by characteristic traits of higher groups, i.e. group (A) will progress towards group (B), and group (B) towards group (C).

3.3.2 Accomodations and Incomes:

In order to assess the relationships between the incomes of the different socio economic groups and the type and size of accommodation they can afford either to buy or rent, it is important to compute first the maximum cost of houses for each group. The criteria adopted in the calculations, is that the cost of the house should not exceed four times the household's annual income. This is based on two assumptions:

a. The working and earning life of the gainfully employed members of the household is between 30 - 35 years.

b. Housing expenditure should not exceed 10 per cent of their incomes. [12]

---

12. this figure seems to satisfy the result of the study made by the Central Statistical Organization in 1972 on the household budget in Baghdad which shows that substantial percentage of the incomes is used for food purchase.

According to this criteria, the cost of the house for the different income groups in Baghdad must not exceed the following: see, Fig. (3.16).

Table (3.4)

Estimation of Maximum House Cost for Different Income Groups in Baghdad

Income groups	Average annual income, ID	Maximum house cost, ID
A	324	1296
B	864	3456
C & D	1767	7068

Notes:

- The average annual income was derived from the socio-economic classifications of the population of Baghdad by Polservice.
- The calculations do not include the cost of land.

Source: Based on data provided by Polservice, 1972.

Comparing these figures, i.e., the maximum house cost the people can afford, with the current cost of houses built in Baghdad classified according to standard of construction and size in terms of number of bedrooms and floor space suggested that the meximum size of houses the different income groups can afford and their standard of construction are as follows: see, Fig. (3.17).

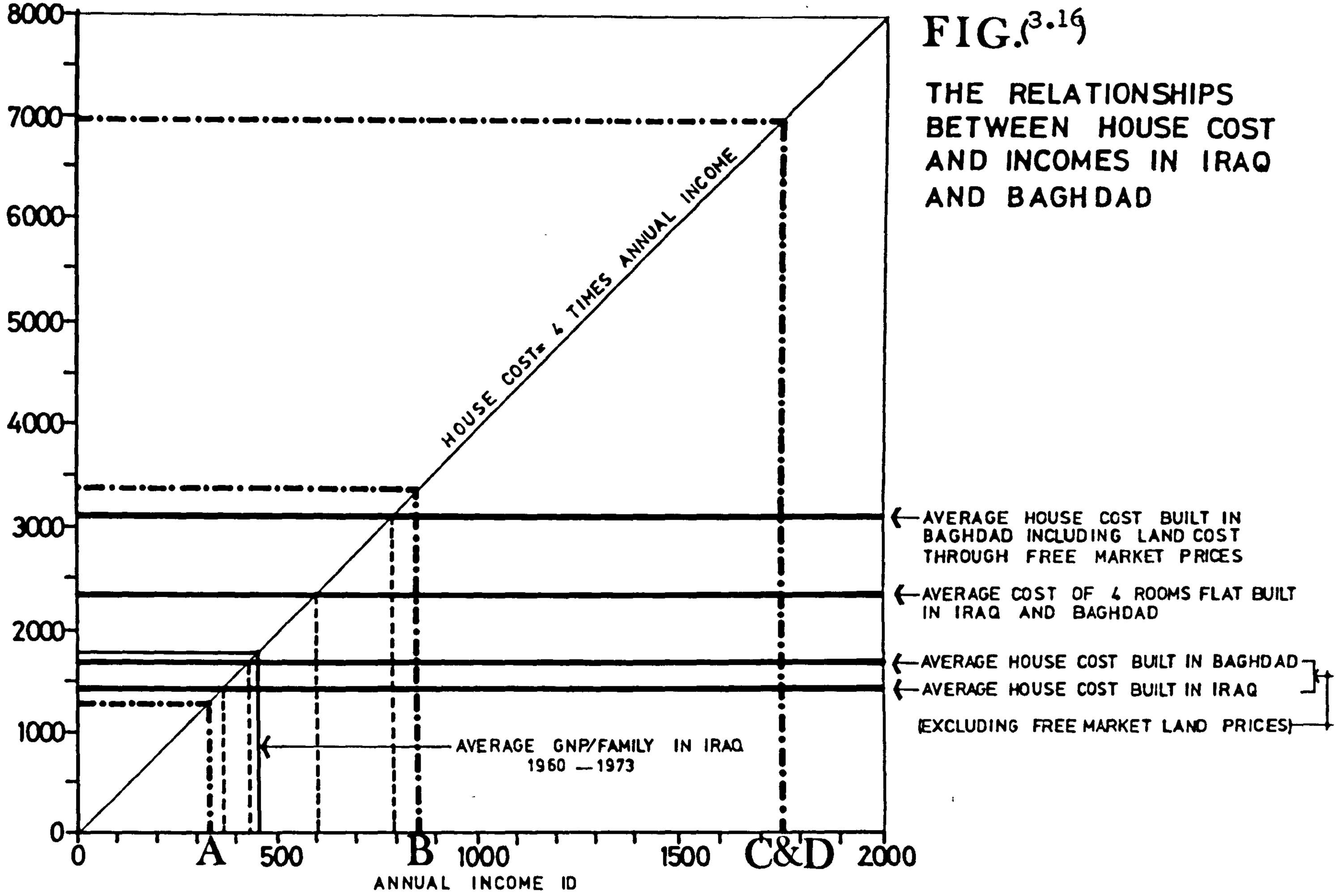
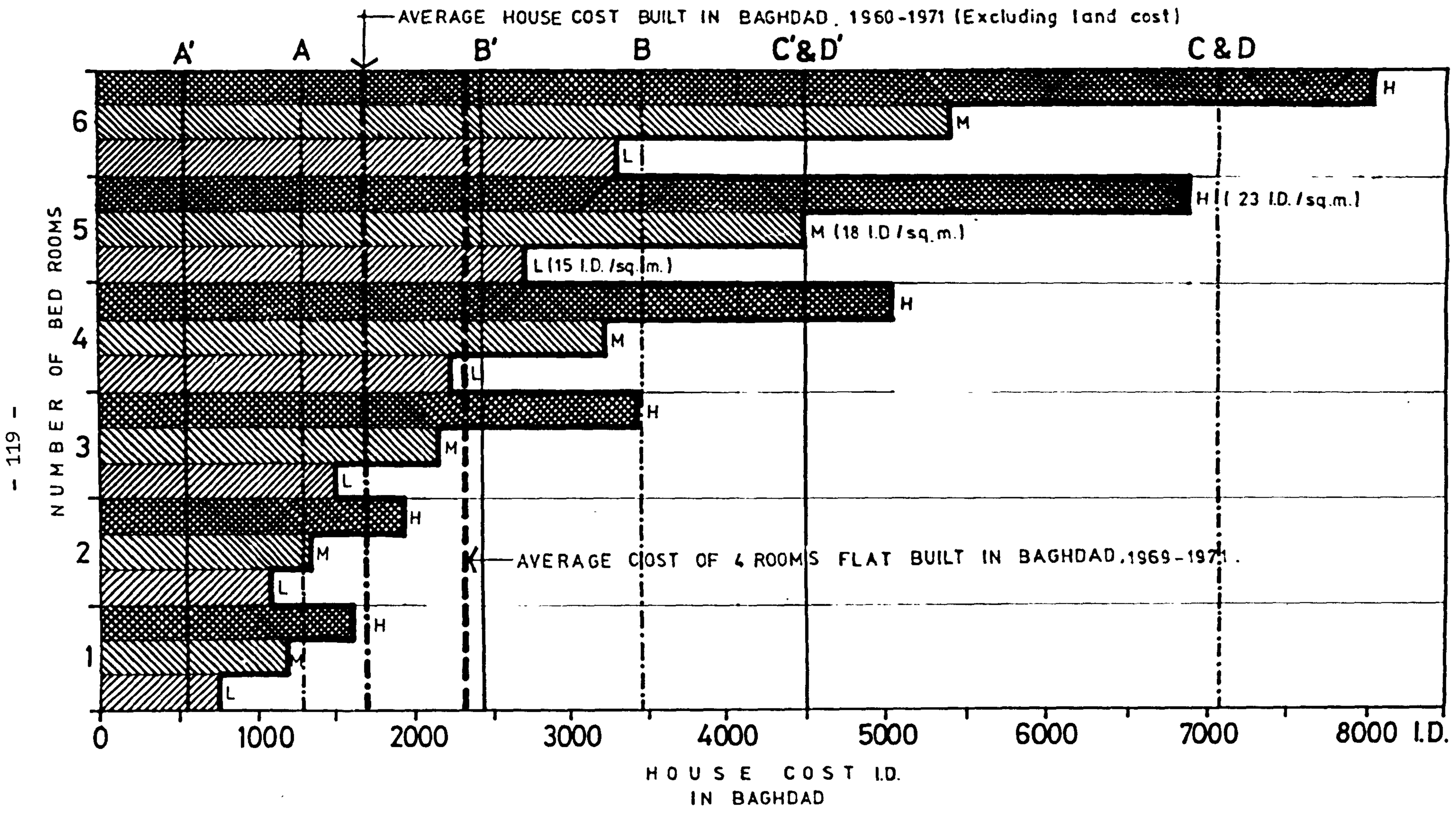


FIG.(3.16)

THE RELATIONSHIPS BETWEEN HOUSE COST AND INCOMES IN IRAQ AND BAGHDAD

FIG.(3.17) THE RELATIONSHIP BETWEEN HOUSE SIZE, COST, & INCOMES IN BAGHDAD - 1972



Income group (A) : can afford only : (excluding free market land cost)

a. 86.4 sq.m. of low cost house construction, which might only provide them with 3 bedroomed houses.

b. 72.0 sq.m. of medium cost house construction, which can only provide them with 2 bedroomed houses.

c. 56.3 sq.m. of high cost house construction, with which they cannot even afford a one bedroomed house.

Taking into account that the average number of persons in a house for this group which is 8.61 persons; see, Table (5.8), means that in the case of option (a) the number of persons per room will be about 2.87; and in the case of option (b) the number of persons per room will be about 4.30. In both cases they are higher than the city of Baghdad average of about 2.1 persons per room; see, Table (11.3).

Income group (B) : can afford only: (excluding free market land cost)

a. 230.4 sq.m. of low cost house construction, which can provide them with 6 bedroomed houses.

b. 192.0 sq.m. of medium cost house construction, which can only provide them with 4 bedroomed houses.

c. 150.3 sq.m. of high cost house construction, which provides them with 3 bedroomed houses.

Income group (C and D) : can afford: (excluding free market land cost)

a. 471.2 sq.m. of low cost house construction, which provides them with a house of even more than 6 bedrooms.

b. 392.6 sq.m. of medium cost house construction, which provides them with nearly 6 bedroomed houses.

c. 307.3 sq.m. of high cost house construction, which provides them with a house of 5 bedrooms.

From the foregone, it is quite clear that the hardest hit in respect to the cost of housing are the low income people, who represent about 57.6 per cent of the total inhabitants of Baghdad; see, Table (5.6).

So far, the calculations of house cost and family incomes were based on the assumption that the land for the house is provided by the government at a minimal price which in no way affects the economic capability of the familes in relation to house building. In the following, an assessment will be made of the house cost for the different income groups of Baghdad on the assumption that those groups cannot obtain land for house construction except through the free market prices, so as to examine the real impact of this situation on housing sizes and family incomes. Before doing so it is important to assess the values of lands in Baghdad at the free market prices, which are governed by supply and demand trends, location, and size.

In general land values in Baghdad during the mid-1960s showed a significant drop. This is mainly due to the presence of large number of newly distributed plots by the government in the market; see, (8.3.0). Land values in Baghdad can be generally divided into three types:

i. Land within the central areas of the city, where its value may reach on average 75 ID per sq.m.

ii. Land within the existing built up residential areas, where its value may reach on average 10 ID per sq.m.

iii. Land in the newly developed areas, where its values are dependent on its location to the main transportation routes, the state of the infra structure, and its size.

For the trends in land values in Baghdad during the 1960s; see Table (8.1):

For the prupose of analysing the cost of land to the families in relation to their house construction cost, it has been assumed that this land is located in the newly developed areas, since most of house construction in Baghdad at the present are concentrated in these areas.

Since there are no official data available on the free market prices of land in the newly developed areas of Baghdad according to their size and location, an attempt was made by the author to assess an average land price for different sizes. This attempt involved a number of interviews with local estate agents in different parts of Baghdad in 1972, the result of these interviews were classified according to the prevailing classification of residential plots made by Polservice in the recent survey of Baghdad. The following table illustrates these results:

Table (3.5)

The Free Market Prices of land for Residential Development in Baghdad, According to Their Size, 1972: Also see, Table (8.1).

Plot Size, sq.m.	Cost per sq.m., ID	Total Cost, ID
Up to 200	1.500	up to 300
201 to 300	2.000	400 to 600
301 to 600	4.000	1200 to 2400
600 and over	6.000	over 3600

Source: Data obtained from Interviews with local estate agents in Baghdad, 1972.

It must be stated here that these prices are the free market prices of the newly developed areas and do not include land subdivisions before 1958, or lands within the central areas.

The figures reveal that there is a clear relationship between land cost per sq.m. and the plot size, which tends to increase as the plot size increases. This is mainly due to the fact that large land sizes are usually associated with better environmental factors such as better housing qualities, municipal services, and higher income groups which reflected in the better maintenance of the housing area.

In order to assess these land prices in relation to families, and house cost, it is important to correlate land size with population so as to arrive at the average cost of land for each income group. This has been done on the basis of the available data of the existing distribution of the different income groups on the different plot

sizes which was provided by Polservice, in 1972; see, Fig. (5.3). The following table shows the weighted average of the amount of money that each income group are likely to pay for land through the free market prices:

Group	A	:	720 - 870 ID
"	B	:	790 -1080 ID
"	C & D	:	1880 -2530 ID

These figures mean that, if the people are going to pay the free market prices for land, their paying capability for shelter will be reduced substantially as compared with their capability to pay if the cost of land is not included, as it has been illustrated below: See, Fig. (3.17).

Income group (A) : will only afford an average of :

a. 33.1 sq.m. of low cost house construction.

b. 27.6 sq.m. of medium cost house construction.

c. 21.5 sq.m. of high cost house construction.

From these areas, it is quite clear that those people cannot afford even a one bedroomed house.

Income group (B) : will only afford an average of:

a. 168.4 sq.m. of low cost house construction, which provides them with a 4 bedroomed house.

b. 140.4 sq.m. of medium cost house construction, which provides them with only a 3 bedroomed house.

c. 109.9 sq.m. of high cost house construction, which provides them with only 2 bedroomed houses.

Income group (C & D) : will only afford an average of:

a. 324.6 sq.m. of low cost house construction, which provides them with 6 bedroomed houses and more.

b. 270.4 sq.m. of medium cost house construction, which provides them with 5 bedroomed houses.

c. 211.7 sq.m. of high cost house construction, which provides them with 3 - 4 bedroomed houses.

Following these analyses, it is clear that income group (A) are the most affected people. This is particularly significant where land is purchased through the free market, where for instance on average, group (A) was affected by almost 61.70 per cent in respect of their capability for paying for a house, while the other groups, (B) and (C and D), by 26.90 and 31.10 per cent respectively. Furthermore, Fig. (**3.16**) demonstrates the financial capabilities of the different income groups in relation to the present average cost of house and flat building in Baghdad; see, Appendices (3.5 ; 3.10) and reveals that income group (A), which amounts to more than half the population of Baghdad are well below the income level required to cover the cost of the houses and flats already built in Baghdad; for instance, while the average cost of the houses and flats were 1670 and 2320 ID respectively, which demand an annual income of417.5 and 580 ID. [13]

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13. based on the assumption that housing cost represent four times the annual income.

the average annual income of the groups is around 324 ID. This represents a deficit of about 28.8 - 79.0 per cent. If the cost of land is included, the deficit will rise up to 146.8 per cent.

3.3.3 Housing Rents:

As it has been mentioned earlier, one of the factors to be considered in assessing house cost and family incomes is the choice available for the family between renting a house or purchasing a new one. In this section, an examination will be made for the renting accommodation in Iraq and Baghdad in particular and whether the levels of rents are within the financial capabilities of the income groups of Baghdad. Before doing so, it is important to demonstrate the significance of rent in housing and the main factors affecting it.

The term rent can be defined as the payment made by a tenant for the right to live in a dwelling which belongs to another. The problem with rent is to understand why it should be paid at all?. The answer lies in the word rationing. If some useful commodity is fixed in supply, then it becomes important in both the economic and a business sense to use that commodity as fully and effectively as possible. If no rents were charged for the use of land or building, these commodities might be used by people who derive relatively little advantage from them to the exclusion of people who can use them most beneficially. For instance, the high rent asked for land or building near the city centre prices it out of the agricultural market and limits that land or building to business use, for which it is best suited. Without the rent payment, it might be used as

a farm for example, which greatly disrupting the business activities of the city. Economic rent rations a fixed resource by excluding all potential users except the one who derives maximum benefit from that resource.

It does not follow, of course, that market determined rents will ration a fixed supply of housing or other goods in a manner which conforms to the community's idea of fairness. Property owners simply hold out for the best price they can get and the best price for housing usually comes from those families with the highest incomes to spend. Poor families might value the house as much in a paychological sense as a rich family, but the rationing function of the market will award it to the family which offers the most money. A public agency might decide to ration housing on some other basis than market determined rents and ability to pay, and this often happens. In the absence of a public rationing scheme, however, market determined economic rents will plan the disposition of the housing stock. Rents, then provide some type of indication as to how a fixed supply of dwellings should be allocated among households. The market in this situation is actually carries out this allocation programme as well as planning it.

Before persuing the problems of the families and house rents, it is necessary to stress that the desire for house ownership in Iraq and Baghdad appears to be very strong. This may be demonstrated in Table (3.6) where it has been estimated that in 1956, for instance, about 82.5 per cent of the houses in Iraq were owner-occupied, and about 65 per cent in Baghdad. These percentages are increased

substantially during the 1960s following the wide spread distribution of land by the government to the cooperative societies. However, there are still large number of families renting houses particularly in Baghdad, where the percentage of rented houses to the total stock was estimated between 25 - 30 per cent.

Table (3.6)

Houses Ownership in Iraq and Baghdad in 1956:

	Iraq		Baghdad	
	Number '000s	Percentage	Number'000s	Percentage
Owner occupied	611.35	82.5	64.51	65.8
Rented	94.27	12.7	30.41	31.0
Rented in rooms	3.98	0.5	1.67	1.7
Free of rent	27.12	3.7	0.64	0.7
Vacant	4.38	0.6	0.79	0.8
Total	741.10	100.0	98.02	100.0

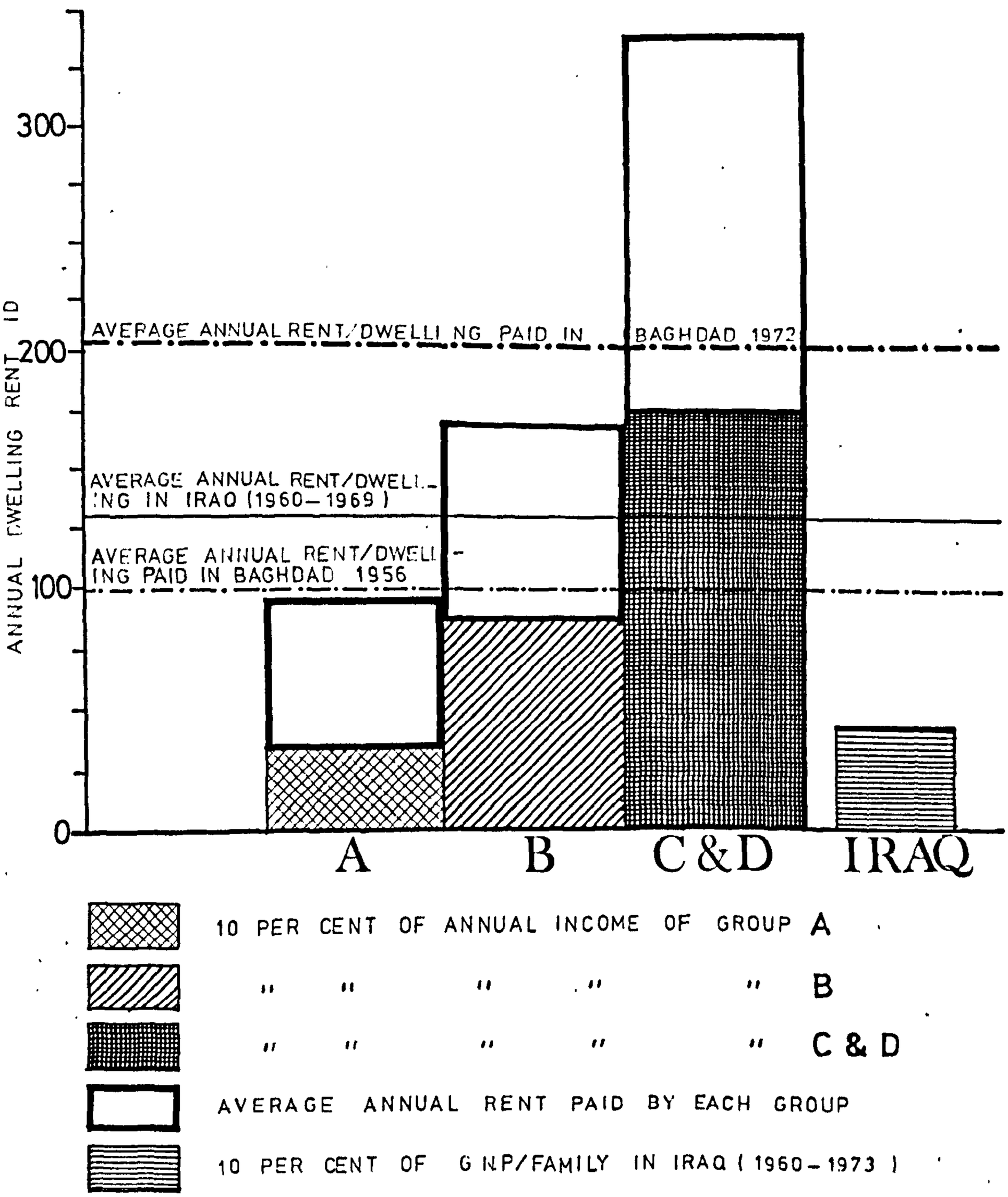
Note: In the case of Iraq, these figures exclude villages of less than 15 houses each.

Source: Iraqi Housing Census, 1956, Tables 4 and 16.

The present level of housing rents in Baghdad and Iraq in general suggest that almost all the income groups are paying annual rents higher than 10 per cent of their annual income; see, Fig. (3.18), this may be illustrated in a recent survey made by the Central

FIG.(3.18)

THE RELATIONSHIP BETWEEN ANNUAL INCOME AND ANNUAL RENT/DWELLING IN BAGHDAD & IRAQ



Statistical Organization in Baghdad on six different sectors representing different socio-economic groups. It revealed that on average, the low income groups of "Al-Thawra" and "Bab-Shaikh" residential areas, the people were paying almost 29.7 per cent of their income for rents, which is substantially higher than the other groups of medium and high incomes; see, Appendix (3.7).

The same can be said for Iraq as a whole, where in a study made by the Ministry of Planning in 1971, suggests that the people who rent dwellings were paying during the period 1960 - 1969, some 31.2 per cent of their annual incomes for rents; see, Appendix (3.8).

Perhaps one of the main reasons for such excessive payment for rented accommodation is the shortage of housing particularly in the big cities, and the low rate of new housing production, this situation forced people to accept rented accommodation as an alternative, thus increasing the demand and contributing to higher rents. This trend may be clearly noticed in Baghdad, where in the last twenty years or so housing rents increased subtantially due to the increasing demand caused mainly by the mass migration of families to the city where the first choice open to them is to rent an accommodation before obtaining a land through the government to build a new house.

The first real attempt by the government to control housing rents was introduced in 1958, when the value of housing rents at that time was reduced more than 50 per cent its real value. [14] This Law was never implemented properly due to failures in enforcement by the local authorities concerned, particularly the Municipality of

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14. see, Rent Law, No. 6, 1958.

Baghdad. As a result housing rents kept rising where it has been estimated that the average rent paid for a house in Baghdad per annum, between 1956 and 1972 had risen by almost 100 per cent; see, Appendices (3.7 and 3.9). This situation made the government introduce yet another legislation to control rent increases.[15] The main highlights of this new Law are:

1. The Law will be effective on all houses and rooms occupied for residential purposes, and are located within the municipal boundaries. This will exempt those houses which are owned by the government and rented to civil servants and industrial workers. The Law also exempted those houses which were newly built, i.e. about three years old, which are already exempted from the real estate tax, and also blocks of flats.

2. The annual rents of the houses covered under the Law must not exceed at any circumstances 7 per cent of the assessed value of the house.

3. The owner of the house covered in this Law, has the right to appeal for re-assessment of the rent for his house if he has invested on repairs or alterations which increased the value of the house. This investment must not be less than 10 per cent of the total rents for the period between the date of construction of the house or the last repairs and the date of the appeal.

Apart from the many advantages brought by this Law to help the low income families and protects them from the rises in rents and landlord's speculations; rent control by itself, however, creates its

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15. see, Rent Law, No. 67, 1973.

own economic problems. It may for instance reduce private investment in rental housing, and if continued for long it becomes difficult to remove or abate. Also it is likely to create a large gap between rents normally paid and new economic rents. This again will increase the need for higher public subsidies for building and maintenance of housing and it will tend to lower the degree of maintenance and repairs of the existing housing stock, which on economic and social grounds, should be conserved as much as possible because of the cost of its replacement. Therefore, every effort should be made to eliminate severe housing shortages, which are the prime cause of rent increases so as to avoid the adverse economic and social consequences of such shortages or the controls that inevitably follow.

In conclusion, it seems from the foregone that the gap between housing cost and rents and the financial abilities of the families to pay for them, particularly those of low income, is widening. This gap is likely to increase in the near future due to the expected rise in the construction cost as well as in the costs of providing the necessary services and facilities.

The importance of adequate programmes and facilities for the financing of housing becomes readily apparent when comparing the costs of the housing currently being produced with the ability to pay of the families in need of housing. Here distinctions should be drawn between urban and rural areas, because in Iraq, there is almost exclusive reliance on the use of traditional building materials and techniques and local manpower in the rural areas, so that neither the final product nor the resulting costs can be readily compared with housing produced under urban conditions.

Therefore, it is in the urban areas that concentrated attention must be directed towards making these available on a long-term credit basis, so that families will be able to pay the capital costs of their dwellings over a period of time; virtually none can provide housing for themselves out of the current income, as with other commodities. Corresponding attention must be given also to all the technological and many other factors that have to do with producing more housing and reducing the costs of house-building.

3.4.0 Government Policies:

Perhaps the outstanding feature of the present housing situation in Iraq is the mismatch between the allocations and the housing needs. The government responded to the housing problems and the pressure of population increase on the housing stock as early as 1953, when the Real Estate Bank was established to finance housing built by the private sector. The objectives of this bank were to grant loans for the purposes of house building, house purchase and rehabilitation, and to help paying house mortgages from other sources, if any. The other major response was in 1955, when the then Development Board took over the task of preparing a National Housing Programme - later called the Basic Foundation Programme - with the assistance of Doxiadis Associates; see, (4.1.0).

By 1958, a special Ministry was established to deal with housing problems. This ministry, which is known as the Ministry of Housing and Public Works, transferred most of its powers in 1966 to the Ministry of Municipalities as part of merging housing development with town planning.

Although the government declared its intentions in regard to housing by stating in the National Charter that:

> " Healthy and convenient housing should be provided to all citizens in accordance with the phase prerequisites and available resources, provided that the state should bear a fundamental responsibility of providing housing services to the largest possible extent all over the country, and that social and cooperative institutions be encouraged to extend various facilities to their members for the acquisition of housing units." 16

housing programmes in Iraq, indicate considerable variations in the extent to which the development of the housing sector is considered a government responsibility.

To illustrate the trend in the government housing policies and programmes, in the 1961 national development plan, for instance, there was a deliberate phasing out of investment in housing to almost one fourth its former size by the end of the period in 1965. While the 1966 - 1970 development plan showed a radical reorientation of government thinking, and stated explicitly the intention to leave the responsibility for housing mainly to the private sector, with the government providing only financial support and assistance. It envisaged the encouragement of the private sector's investment by the distribution of housing lots through the housing cooperatives, and by the granting of more housing loans through the Real Estate Bank.

According to the plan, the target growth rate for housing ownership was 3.5 per cent annually.[17] In line with this new orientation of government housing policy, the financial allocations made under the plan reflected a desire to give priority to completing projects

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16. see, the National Charter, proclaimed by the Revolutionary Command Council in 1971.

17. see, Development Board, "The National Development Plan 1966 - 1970", Baghdad, April 1966.

already initiated under the previous plans, and to supplement the attention given to housing, by promoting the construction of infrastructures and buildings for education, health and water and sewerage networks, while at the same time retaining a relatively small share for public housing.

In drawing up the current 1970 - 1974 development plan,[18] the government attitude has been that the existing backlog in housing cannot be wiped out within one generation, since this would require the allocation to housing each year over a period of about twenty years of one fifth of the plan's projected investment. This means that the total allocation will be around 2580 millions ID for the next twenty years, with an average of 230 millions ID per annum.

To avoid such burden on the treasury, the government settled to 15 per cent of the total plan allocations, about 160.25 millions ID.[19] Of this allocation, the public sector share was put at about 1.3 per cent.

This investment represents only 3 per cent of the Gross National Product of 1973, as compared with the economically more advanced countries, which devoted about 5 per cent of their G.N.P. taking into consideration that these countries have traditionally allocated

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18. see, Development Board, "The National Development Plan, 1970 - 1974", April 1970, Baghdad.

19. see, Government of Iraq, Planning Board and Ministry of Planning, "The National Development Plan, 1970 - 1974", Government Press, 1971, Table 29, Baghdad.

this much or more even in their early stages of development. Also the expenditures for construction of housing in these countries, exclusive of expenditures for land tend to run around 25 per cent of total investment, with expenditures for utilities running another 10 per cent or more. [20]

The United Nations publication, "Finance of Housing in Europe", Economic Commission for Europe, Geneva 1958, pointed out that the average national expenditure on housing in Western European countries has been commonly 15 per cent of gross fixed capital formation; in Eastern Europe the figure tends to be lower at around 10 per cent. The same levels are found in the less developed countries, where investment resources are scar ce and where, prima facie, the need exists for heavy investment to raise productivity generally.

In these countries the high share of housing investment does not universally produce however a large volume of house construction or investment as measured by the proportion of gross national product dev oted to housing, or the number of houses built per 1000 inhabitants. It reflects rather a low general rate of investment and the fact that for institutional reasons, investment in housing is often easier to realise than indulstrial investment, for instance. This latter point is certainly true in Iraq, where relatively a high proportion of gross fixed capital expenditure is put into houses, about 19 per cent but only forms a low level of investment as a proportion of gross national product, about 3.4 per cent.

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20. United Nations Year Book, 1970.

Table (3.7)

Housing Investment and Output in Iraq, 1960 - 1969:

Year	A	B	C	D
1960	25.5%	4.91%	19.21%	1.85
1961	26.3%	4.95%	18.80%	1.84
1962	21.1%	4.28%	20.30%	1.65
1963	21.3%	3.98%	18.68%	1.63
1964	23.1%	3.92%	16.93%	1.84
1965	18.7%	3.86%	20.62%	2.02
1966	19.2%	3.87%	20.11%	2.18
1967	19.7%	3.17%	16.08%	1.72
1968	18.5%	3.48%	18.80%	1.76
1969	18.1%	3.40%	18.80%	1.97

Notes:

A. - Gross Fixed Capital as a percentage of Gross National Product.

B. - Investment in housing as a percentage of G.N.P.

C. - Investment in housing as a percentage of G.F.C.

D. - The number of houses produced per 1000 inhabitants.

Source: Central Statistical Organization, "Statistical Pocket Book, 1960-70", Baghdad.

It is clear from the above figures that the present level of housing investment in Iraq is relatively low. They also demonstrate the unstable government investment policy. This situation calls for a substantial production of housing and related facilities to house

the population increase, to replace dwellings unfit, that are constructed of non-permanent materials, or that are located in areas of extreme concentration.

Estimates made in this study, indicate that at least an average of 10 new dwellings per 1000 inhabitants are needed annually in Iraq between the period 1970 - 1990 to meet the requirements existing and growing. Comparing this rate of construction with that of the 1960 - 1969 period, which gives an average of 1.8 dwellings per 1000 pppulation; it means that the annual construction rate must be increased almost 5.5 times. The magnitude of this task may be gauged by the fact that the developed countries of Western Europe with a high level of housing output build houses at a rate of 6-7 dwellings per 1000 population. It is clear that the number of houses produced will depend largely upon the cost of buildings and the standards which those costs purchase. Hence if the average cost of houses falls it is possible to build more with the same outlay.

The extent to which housing standards are likely to rise in Iraq will depend partly on rises in national product in relation to population and on its distribution and partly on the propensity to devote income to housing as distinct from other consumer goods and services and from capital accumulation. The latter will depend on relative prices, on the availability and need for goods and services of various types, and on the machinery and climate of opinion for the acquisition of housing facilities.

The crux of the housing problem in Iraq for the rest of the century seems to lie in the ability to manage the sudden increases in the government revenue from the oil, where it was estimated that at the end of 1974, the gross national product increased by almost 4 times than that of 1973, so as to produce the number and type of houses needed, urban and rural, taking into consideration the rapid rise in the household formation, and the expected rises in standard of living due to income increases. It must be stated here that the increases in incomes due to the increases in oil revenues will take at least 5 to 10 years, therefore, one may expect that during the 1980s high demand for better quality houses will be generated.

In this respect, one can say, however, with some confidence that as real incomes increase then the following will happen:

1. Some people will tend to marry earlier than they would if incomes were lower.

2. Some single people will decide to set up their own households, and the number doing so will tend to be greater than if incomes were not so high.

3. Some married people will tend to have larger or earlier families.

4. Some people who already have houses will seek second houses, for use at holidays or for rent.

5. Some people will decide to spend more on housing by moving to a bigger house, or one in a different locality.

6. Owner-occupiers may be more willing to keep their houses in good condition because they can more easily afford repairs. Others will feel that since they can afford a new house there is no point in continuing to patch the old one.

This is not an exhaustive list of the consequences of the expected change in incomes in Iraq due to the increase in revenues from oil, but it does illustrate that not all the forces in respect to housing work in the same direction. But on balance, however, it is likely that rising incomes will mean a rising total expenditure on housing. In other words, it is likely that as incomes are expected to rise in Iraq, the demand for housing also rises. This situation may produce housing shortage arising not simply out of basic needs but out of the fact that rising incomes have made it possible, but not necessary, for more households to be formed, for people to demand second houses, or for households to adopt higher standards than hitherto. In this respect, it is exceedingly difficult to determine at what stage rising expectations cease to consitute housing needs. It is clear, however, that rising incomes may turn a surplus of houses in one area into a shortage without there being any significant change in size and age structure of the population.

3.5.0 Possibilites:

After the examination of the housing problems in Iraq and Baghdad in particular, and the government policies towards them, it seems that there are two possible approaches to the housing problems.

The first approach is based on the argument that a large segment of the population living in such a bad condition that noone can wait in good conscience for elaborate technical solutions to emerge. With the rapid population growth, mass migration, and urban sprawl, therefore one must look for immediately available solutions. These solutions, given the economic circumstances must draw to the maximum upon the talent and the resources of the people involved.

In Baghdad and other big cities, for instance, the professional community has too often looked down upon the old because it is old, and has not done enough to improve the local designs, materials and building techniques in order to make them acceptable and workable from the point of view of the modern needs and standards. This neglect of the traditional designs and building methods is partially due to the fact that virtually all professional training is oriented along the lines of the western countries standards and requirements. The minimum standards specified by the studies made by the foreign consultants particularly those made by Polservice as part of the master plan for the city of Baghdad; see, Appendix (1.5) and (4.2.0), are hardly relevant to the situation of the masses of the population who cannot afford even these minimum standards, which are not only of foreign inspiration but also highly urban in conception, whereas the majority of the population concerned, even if they live in urban areas are of semi-urban, semi-rural in character, see, Figs.(4.6 ; 4.7)

In addition to the emphasis on traditional designs and skills and lowering of housing standards, this approach requires more community facilities and services than are currently prevalent. Emphasis is

also required in the need for developing expensive, efficiency oriented utilities and services which could be installed in existing dwellings even if the latter are otherwise unacceptable. [21]

It must be noted in this connection that traditional skills are deficient and scarce when it comes to the provision of community facilities and related services. Therefore, urgent steps should be taken to train local personnel in this field. Furthermore, this approach to the housing problems require efforts to enlist the cooperation and enthusiasm of the people in building and maintaining their dwellings and community facilities. Likewise, rather than allow the professionals exclusively to set housing standards, the people must be consulted about their own priorities and values, so far as housing and related facilities are concerned.

This argument could be further refined to imply that a housing study should go to the grass roots of the peoples needs and beyond conventional and preconceived notions, which mainly derive from cultures foreign to the society of Iraq. Also it must be stressed here that even such commonly accepted space measures as room, should be dropped from the vocabulary of space standards, since not all people live in rooms as understood by the typical city dwellers of the western countries.

The other approach to the problem advocate total opposition to the idea that the existing standards of housing should be lowered in order that underprivileged people might afford any shelter. This argument

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21. this approach was particularly emphasized when the government was considering the possibility of upgrading the living standards of the people who live in "Al-Thowra" district east of Baghdad, which was originally planned and designed to house the squatter population of the city, by Doxiadis Associates; see, (4.1.1).

is based on the fact that if the existing standards are minimum already, how could they be further reduced?. This point of view believe that if housing is to be produced in quantitites and qualities commensurate with the increasing demand and rising aspirations of the people, then it is imperative to develop a system of house production superior to that one at present prevailing.

Experience gained in the developed countries, indicates that housing and economic development are closely interrelated. Housing should accompany economic development proportionately; otherwise, further economic development becomes stultified. Intensified industrialization, as envisaged in Iraq, of necessity will depend to a large extent on the corresponding construction of dwellings for the rapidly increasing population, particularly in the cities.

As for the allocation of available resources to be directly devoted to the construction of housing, here it is evident that difficult decisions would be required. Determinations should be made of the proportions to be assigned to both urban and rural housing. In part, such determinations would reflect decisions on the importance of housing to productivity in connexion with new industrial and agricultural schemes. But, in part they must also be made on the basis of health and social factors. Also to be considered is the importance of using housing and community development approaches to the raising of living standards and to incorporate into productive modern society large sectors of the population who may otherwise remain dormant and submerged on the fringes of the monetary economy. On the other hand if the large cities are to compete and take their places as modern productive units,

offering adequate working and living environments with easy communication and transportation, they will also require major expenditures for urban renewal and the installation of new public services and utilities.

As far as the type and function of the body responsible for the national housing policy formulation and administration is concerned; although there is already a Ministry concerned with housing and public work, a number of problems are still unsolved. Frequently the ministry is not directly involved in or concerned with the mobilization of resources, and has little supervisory or coordinative authority over the banks or specialized agencies that may serve in this field. Therefore, there is a need for the creation of adequate national housing banks to be concerned with housing finance in all its aspects. In Iraq there is a particular need for the housing agencies to work more closely with other instrumentalities of the government, particularly, the Planning Board and the Ministry of Planning, also with the agencies that have to do with the regional and local planning. i.e. the Ministry of Municipalities, and the Municipality of Baghdad.

The present situation reveals that neither public or private resources are being dedicated to housing in sufficient quantity to keep pace with the increases in population and the rapidly increasing urbanization rate. As for the rural housing, allocations have been correspondingly much smaller, and in most cases negligible. For these reasons, it seems that the provision of housing and related facilities will undoubtedly continue to be a joint responsibility of the public and the private sectors. Thus, it is important to establish clearly

defined national housing policies and programmes to guide establishment of an institutional framework and the terms and techniques needed for effective mobilization and application of resources to finance housing and related community facilities. Such a national housing policy must specify the continuing type of direction and support that the government will give to its housing programmes so that all people will understand what the priorities are what they can expect and how best they can mobilize or lend their own resource to the housing needs. Such a policy should be an important factor also in the confidence of investors, who may be able to make capital available for particular projects and programmes, when assured of certain terms, conditions and guarantees.

The proportions of national income that could be or should be devoted to investment in housing are difficult to quantify, in part because the needs for importation of materials used for construction are very difficult to assess. One priority, therefore, is the importance of establishing or expanding building materials industries to the extent feasible in accordance with the national market possibilities in order to provide the basic ingredient for building housing as much as possible from national resources. And the projects for the establishment of such industries should be included in the national development plans.

The optimum harmonizing of house building programme and policy with economic and social development calls for the active assistance of public bodies, both central and local. These bodies must apply administrative and financial measures, sustained by adequate public

resources. A well planned system of public assistance can successfully mobilize and coordinate public and private efforts in speeding up house building, within the framework of economic and social development. In doing this it is essential not only to correct existing deficiencies, but adopt measures which will prevent the appearance of new ones. This is important both for progress in the immediate future and for requirements accompanying further technical and social development.

In conclusion, planning for housing in Iraq suffered from the long-standing tradition that housing is a matter for private initiative, from the difficulties and deficiences of the housing finance system, and from the lack of research in the various aspects of housing development. However, this picture is changing gradually, especially with the substantial recent increases in the national income from the oil, which puts the government in better position to prepare and implement a comprehensive housing programme to overcome the problems from its very roots, such as the replacement of old dilapidated structures and at the same time adding new dwellings with related facilities to meet the needs of a fast growing population that is gravitating rapidly towards the cities and to Baghdad in particular. These are tasks that can hardly be tackled successfully without definite action and the promotion of technological development in the framework of the development plans and the government policies.

PART II

Programmes ; Assessments of Needs and Standards

C H A P T E R 4

HOUSING DEVELOPMENT PROGRAMMES

Before demonstrating and assessing the different housing programmes which were formulated to deal with the housing problems of Iraq and Baghdad in particular, it is of importance first to discuss the nature of housing programmes in general and their main characteristics.

The term "Housing Programme" is somewhat vague and can be interpreted in various ways. Its meaning varies considerably from country to country and takes different forms depending largely on the economic, social and political conditions, to historical background, and the current rules of law.

Housing programmes may be drawn up by public authorities, by social organizations, or even by private bodies. This study will be concerned only with the programmes drawn up by the public authorities, since they represent to a large degree the government policies in regard to housing development, and also because, in the case of Baghdad almost 75 per cent of the housing development was either carried out directly by the government and its agencies, or influenced by its land distribution policies, such as the case of the houses built through the cooperative societies.

The term programme is often associated with the term plan. The economic terminology of the socialist countries of Eastern Europe distinguishes clearly between the two terms. A plan is generally framed as a legal instrument or an administrative order, and not only defines the building work but also provides the funds, equipment, materials and organization needed for its fulfilment. A programme is generally confined to establishing approximately the amount of building to be done.

Housing programmes can be subdivided into programmes of economic aim and of physical aim, the latter programmes being linked to land development. A programme may relate to the whole complex of settlement problems, or only to certain specific problems of housing. An economic programme may concern investments, major repairs and upkeeping, i.e., maintenance of the building stock. Problems of investment are expressed spatially in the plans determining the application and development of the land and the selection of construction sites. These programmes may have either the character of mandatory rules for the fulfilment of rigidly defined targets, or the character of directives indicating the lines along which development is required to proceed.

The forms and content of legal rules or of recommendations depend largely on the various economic and social systems, the methods by which economic development is directed, the links between the housing economy and the rest of the national economy, the building policy, the financing system, the organizational structure, the building investor etc.

As has been stated, the programmes lay down targets according to the period for which it is designed:

- "Perspective" programmes, laying down the broad lines of development of housing construction, are generally differentiated according to the period of at least fifteen to twenty years which they cover;

- Long term programmes cover a period of several years and already make it possible to determine accurately the desired or planned volume of housing construction;

- Annual programmes which define the targets for the next ensuring year.

Another approach to programme formulation is that of programmes which specify certain objective targets and state more or less exactly in what time they are to be achieved. Because of the length of time required for preparing building operations, their continuity, and the need to plan a whole series of communal and urban investments simultaneously, housing programmes should be laid down for relatively long periods. This is also dictated by the need to expand the basis of the building industry.

In general, housing programmes do not set out the overall targets for housing construction at the national level; they also incorporate decisions or proposals regarding its distribution. The composition and territorial division of the plans can be considered from two angles. The first is the degree of accuracy in the distribution

of the tasks laid down in the plan, this being in general associated with the administrative subdivisions of the country; the second relates to the part played by the local factors in the preparation of the programmes.

The volume of the housing construction programme depends both on the size of the financial resources that can be applied to its implementation, and on the production facilities available, i.e. building materials, building enterprises and their equipment, and labour. These factors must be determined not only at the national but also at the regional level, and it must be born in mind that means of production are much less mobile than financial resources. Moreover, housing construction programmes can often be expanded by the use of locally available reserves of building materials and labour.

The economic and social effects of a large scale housing programme can be far reaching; thus it is important to establish the main objectives of industrial and physical planning as well as in the social fields on regional and national levels - This does not mean that several years of expert attention must be spent in creating a highly finished plan before any building work can start at all - . To illustrate this point explicitly, for instance, one may take as an example the spontaneous urbanization in the large cities particularly in Baghdad, which results in people leaving the rural areas, establish overcrowding the available dwellings or setting up substandard, self built housing on vacant land on the periphery of the city. To concentrate first on rehousing them would encourage

further migration to the same areas and exaggerate the unwelcome trend and make the task of slum clearance unending, as is the case in the "Al-Thawra" district east of Baghdad.

On the other hand, building up new and expanded towns is likely to attract the current streams of migration to those towns and may even begin to attract away earlier immigrants who had created mushroom settlements around the large cities. In this respect, the terms of ownership of the dwellings provided under the housing programme will have wide social effects, and must be decided on beforehand.

Similarly, a view should be formed about the directions in which the housing efforts will be developed after a satisfactory trend in new house building has been established. For instance, it will not be reasonable for the clearance of unfit dwellings to be indefinitely delayed, even though considerable programmes must first be made in reducing the quantitative deficiency in the housing stock. These are few examples of the components of the broad present and future policy structure which needs to be worked out. The natural process is to develop from simplified and strategic objectives, giving the maximum short term achievement, and at the same time building up effective and intelligible procedures and chains of command and efficient administrative, planning and building teams. In the course of this build up, there will be a continual interaction of theory and practice.

Broad knowledge leads first to broad action, which in turn begins to reveal more of the detailed nature of the problems, which leads to elaborate, refinement and adjustment of action. Speed in making these adjustments is a basic necessity in all the organizations involved.

In the last twenty years, many attempts have been made to solve the housing problems in the country at large as well as in specific localities. Perhaps the most serious attempt was made in 1955, when the Development Board commissioned Doxiadis Associates with the task of preparing comprehensive housing programmes which would take into account the country's housing problems as a whole.

Since this attempt fell short of what was expected, and the problems of housing continued, another attempt was made, notably, the U.N. attempt in 1968, which drew a programme for the housing needs in the country for the period 1969 - 1973; see, Appendix (4.1). And the Ministry of Housing and Public Works programmes for Iraq and Baghdad for the period 1971 - 1980; see, Appendix (4.2).

As for the city of Baghdad, the most recent attempt was made by Polservice, as part of the general master plan for the city, where many proposals were put in regard to the organization of the residential areas in general, as well as the type and number of dwellings required by the year 1990 in particular.

It seems, therefore, appropriate to demonstrate these attempts in larger detail so as to evaluate them from the view point of their methodology as well as their achievements in overcoming the problems they attempted to solve.

4.1.0 Doxiadis Associates housing programme:

In 1955, Doxiadis Associates were commissioned by the Development Board to prepare a housing programme to deal with Iraq's housing problems. Within a year, the consultant firm had prepared a five year plan called the Basic Foundation Programme, which they submitted to the Development Board. The Board approved the programme and again asked Doxiadis Associates to supervise its implementation. The programme was not confined only to housing. It covers the field of housing, community facilities and community buildings, within the framework of broad regional plans which place the establishment and development of settlements on a rational economic basis.

It has been conceived as the first phase of a very long range plan, to organize the public services concerned with housing and settlements; to create a suitable framework for the further development of all the complex activities constituting the national housing effort in a way to ensure its continuation on a much broader basis after the first five years of the programme. [1]

The projects included in the Basic Foundation Programme may be classified into three broad categories:

A. Urban projects:

These projects aimed at covering the most urgent of the housing needs of cities and included:

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1. see, Doxiadis Associates "Principles and Outline of the Basic Foundation Programme for Housing", Document No. AQ-19, Baghdad 1955.

- The construction of 20,000 new houses.
- The development of 20,000 housing plots.
- The resettlement of 40,000 "Sarifa" families in new healthy quarters.
- Improvement in the housing conditions of 30,000 more families by the execution of the necessary works, either in the form of community facilities or of repairing and making additions to existing houses.

B. Rural projects:

The objective of these projects was to raise the standard of living in the countryside, thus serving indirectly the policy of stemming the tide to the city. The projects included foresee:

- The construction of new villages for 15,000 families.
- Improvement in the housing conditions of 80,000 rural families by the execution in many Villages of necessary works such as water supply, sewerage, street building, construction of community buildings, etc.
- The rehousing of 30,000 families of the swampy southern areas - the Marsh Arabs - in houses with firm foundations, thus freeing them from the dangers of flood and malaria which are the scourge of these areas.

C. Special Projects

These aimed at housing groups of people who are playing a considerable role in the development of the country. More specifically, they include the construction of:

- 12,000 houses for civil servants.
- 6,000 houses for industrial workers.
- 1,000 houses with attached workshops for handicraft workers etc.

During the implementation of that programme, it became apparent that the various housing schemes should be incorporated within master programmes and plans of urban areas so that their planning could be integrated and the realization of functional communities secured with minimum of expense. Baghdad took the biggest share of such plans when it became obvious that the design of various housing schemes had to be integrated within organized structure covering the future development of the city; see, Appendix (1.5).

Doxiadis Associates found it necessary to apply methods based on standardization of design and programme implementation.

Standardization was applied through the use of a certain number of types of houses, community facilities, community plans, etc., as well as through the acceptance of standard methods of implementation, construction, etc. As far as buildings were concerned, all main and connecting elements, as well as their construction details, were standardized so that the designing work was restricted to the assembly of these elements within the assigned plot. This system offered a wide range of combinations of the standard elements, thus, avoiding repetition and monotony, while at the same time ensuring adjustment of local conditions.

Perhaps the main features of Doxiadis housing development programme for Baghdad were the grouping of the residential areas into hierarchy of communities each of which will provide all the necessary facilities to their inhabitants.

The major housing development projects implemented in Baghdad as part of Doxiadis Basic Foundation Programme were:

4.1.1. The Eastern Baghdad Housing Project; see, Fig. (4.1)

This project which was later known as "Al-Thawra" district, was originally intended to rehouse about 7000 slum dwelling families in new and healthy dwellings as part of a planned residential area of low income character, and provide them with adequate community facilities and services. [2] These families were part of the imigrant population who came to Baghdad in the late 1940s and settled in reed and mud dwellings called "Sarifa" in different parts of the city, mainly in the eastern part of the city. It was estimated at that time, that those people were amounting to about 40 per cent of the population of Baghdad.

The project was located on a government land east of Baghdad, covering an area of about 375 ha. The area was selected for the following reasons:

- It was well located and connected with Baghdad city centre.
- The land was even and continuous, allowing easy development.
- The biggest part of the land was within Baghdad municipal boundaries, and it was zoned for residential purposes in Doxiadis master plan.
- It was regarded as safe from the danger of floods.

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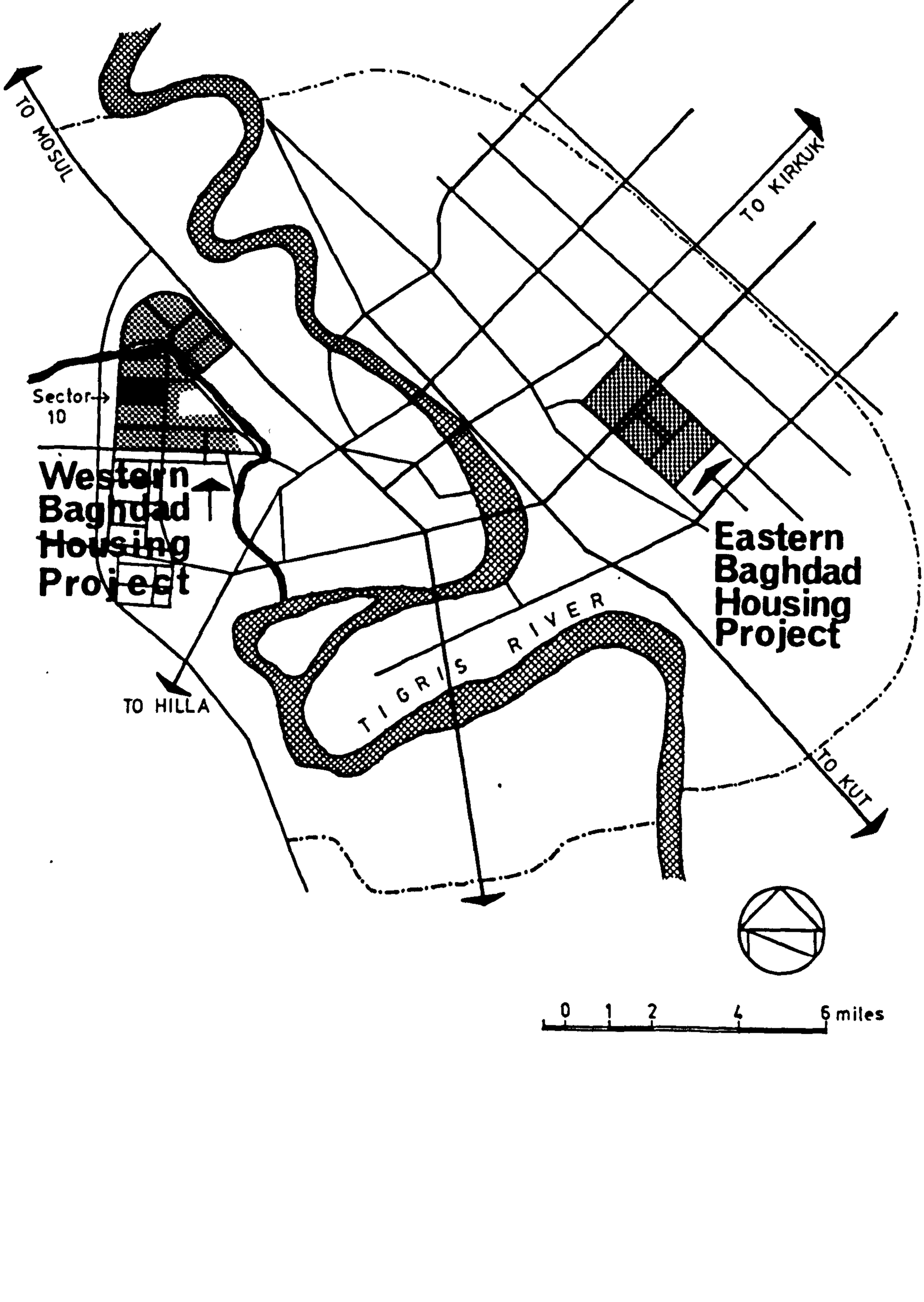
2. The present number of families living in this district was estimated to be around 50,000 families.

FIG.(4.1) DOXIADIS ASSOCIATES' HOUSING PROJECTS IN BAGHDAD



The project's area was divided into equal size sectors - seven sectors - as first phase each sector had the dimensions of about 489 x 1059 m.; see, Fig. (4.2).

The typical sector was composed of 2296 housing plots - 9 x 12 m. - this was intended to accommodate about 13000 inhabitants, for whom an adequate number of public buildings and services was also provided in appropriate locations.

The total area of the sector - about 51.5 ha. - was divided into the following:

24.8 ha. - about 48.2 per cent - for house plots.

10.8 ha. - about 20.9 per cent - for public buildings and parks.

9.2 ha. - about 18.8 per cent - for roads.

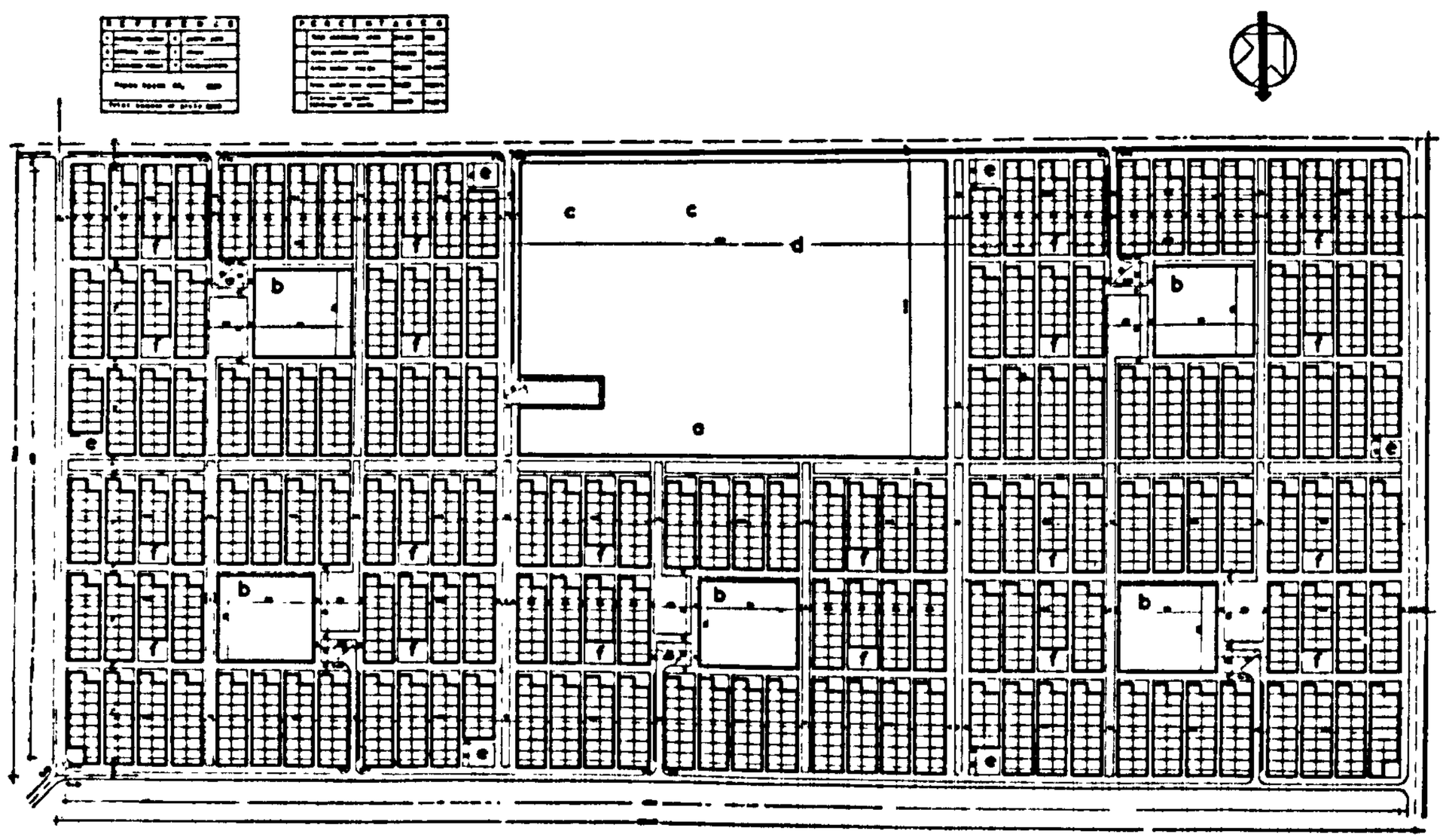
6.7 ha. - about 12.1 per cent - for public squares and avenues.

Also about 25 per cent of the plots were rearranged as an alternative to house families who raise and possess cattle and domestic animals. This was decided upon since most of the rehoused families were economically dependent on the products of their livestock.

The beneficiaries to whom developed plots were distributed have been chosen on the basis of fundamental qualifications, they were as follows:

1. They must be "Sarifa" dwellers.
2. They must have lived in Baghdad area for at least five years prior to their application.
3. They must have large families - 5 members or more.

FIG. (4.2) EASTERN BAGHDAD HOUSING PROJECT
- TYPICAL SECTOR -



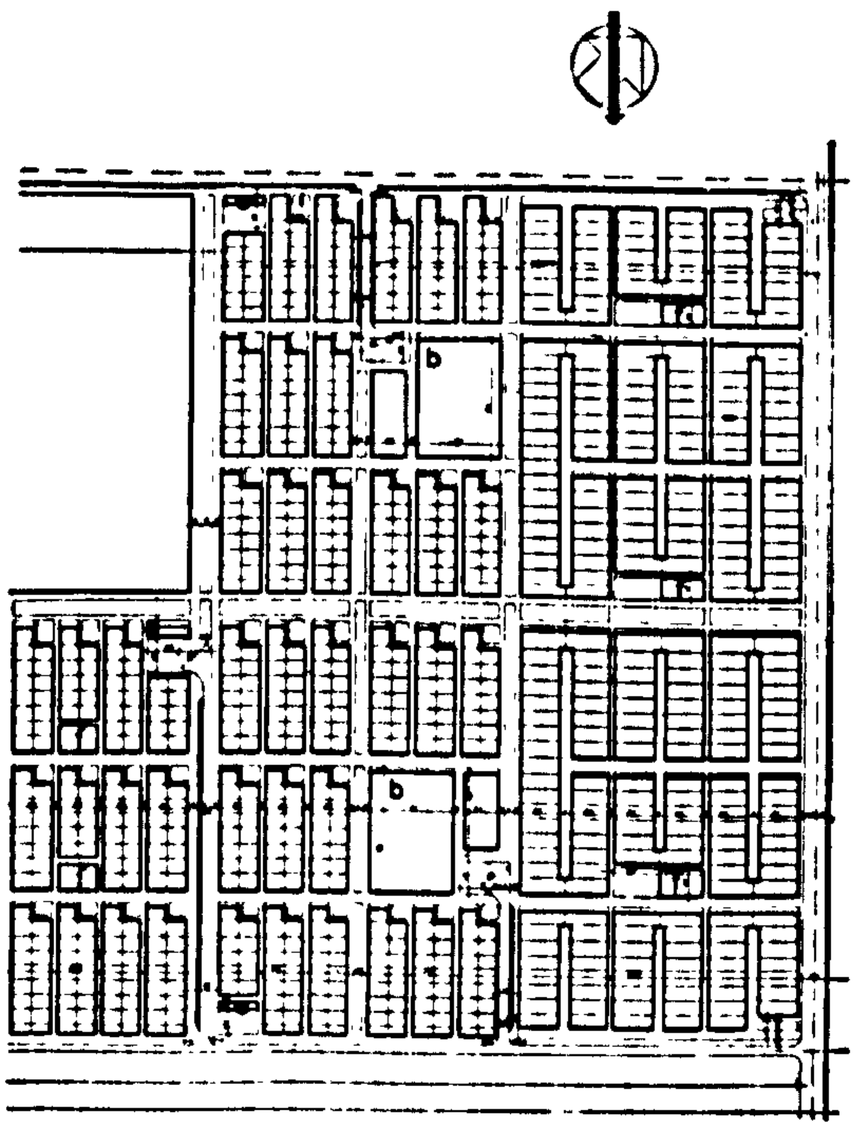
1

a) COMMUNITY CENTER

b) PRIMARY SCHOOL

c) PUBLIC PARK

d) KINDERGARTEN



2

1. TYPICAL SECTOR

2. VARIATION PROVIDING FOR PLOTS FOR RAISING CATTLE
(PEDISTRIAN TRAFFIC IS DIVIDED FROM ANIMAL TRAFFIC)

4. They must be able to pay a monthly rental of 1 ID.

5. They must not possess other land suitable for housing.

In return, the principal obligations of the beneficiary were:

- He must recognise that he is entitled to the use of the developed plot only for a period of 25 years. This measure was intended to prevent the occupants from settling permanently in this area. But later, in 1961, under political and social pressures, the government amended this measure, by making these houses and its land outright property in exchange for a nominal payment of 100 ID.
- He must, within six months of the grant of the plot, establish himself, thereon, construct his temporary shelter and fence the plot, otherwise he will lose his right.
- He must pay one ID per month as rental. Should he delay payment for three months, the state will recover the plot with the buildings thereon, without liability to compensation.
- The plot must be used only for residential purposes.
- He must maintain the facilities which were provided to him with the plot.
- He must observe the rules and regulations of the settlement with regard to order, maintenance, cleanliness, hygiene, etc.
- He will not be able to cede the use of the plot to another person.

Doxiadis Associates envisaged in this project a self help system, that is the persons to benefit under the project will be granted, the land, the most essential community facilities, water, W.C.

sewage, roads, a firm foundation - plinth - and technical assistance in the form of the plan of the house, which they build themselves with materials of their choice, out of their resources. Although these plans have been available from the Housing Department of the Ministry of Housing and Public Works, these have rarely been used and the families built their dwellings according to their own standards.

The estimated cost of the typical sector amounted to about 415000 ID. This cost consisted of an amount of 149000 ID for the plinths of the houses and 266000 ID for the facilities. The cost per house was estimated to amount to about 65 ID for the plinths and 115 ID for the facilities. These costs have never been achieved, due to miscalculations regarding the cost of the building materials, labour, and unlawful profits by the contractors.

Despite the lack of control over building and the sanitary aspects of the project which leave much to be desired, it seems evident that given the stimulus of land, many thousands of the "Sarifa" dwellers, seemingly without resources, somehow have managed to purchase bricks, juss - gypsum - doors, windows and other components and to hire sufficient skilled labour to enable them to build their own houses. Rough estimates indicate that an average family has spent something like 500 ID in addition to manual efforts of its members in erecting its own house; this is despite the fact that in the survey of family expenditure in Baghdad showed that the average monthly expenditure for the "Sarifa" dweller family is only 19 ID.

4.1.2 Western Baghdad Housing Project: see, Fig. (4.1)

This project was first proposed by Doxiadis Associates and submitted for approval to the then Development Board in October 1955. The area covered by the project is located on the western bank of the Tigris, and limited to the North-East by the old airport and the main railway line, to the West by the newly projected railway lines, and to the South by the "Al-Mansur" district. Big tracts of the land covered by the project have come to the ownership of the government through special action implementing law for taking the government's percentage out of "Mulk" land. The area which belongs entirely to the government "Miri" covered approximately 60 per cent of the total area, the remaining part belonged to private holdings "Mulk".

In order to achieve an economic and reasonable development of the area, Doxiadis recommended that the privately owned part of the land should be expropriated by the government, thus, the best type of development can be achieved and the profits of expenditures to be borne by the Development Board will favour the governmental project.

Considering the various socio-economic groups to be sheltered in the area, beginning with the very low income groups to the middle income groups, and excluding only the upper middle and high income groups, Doxiadis envisaged an average density of about 38 inh/ha. to be employed. As the whole area contained about 400 hactares of residential land, it has been subdivided into 15000 plots of average sizes, with an average occupancy of 8 persons per plot,

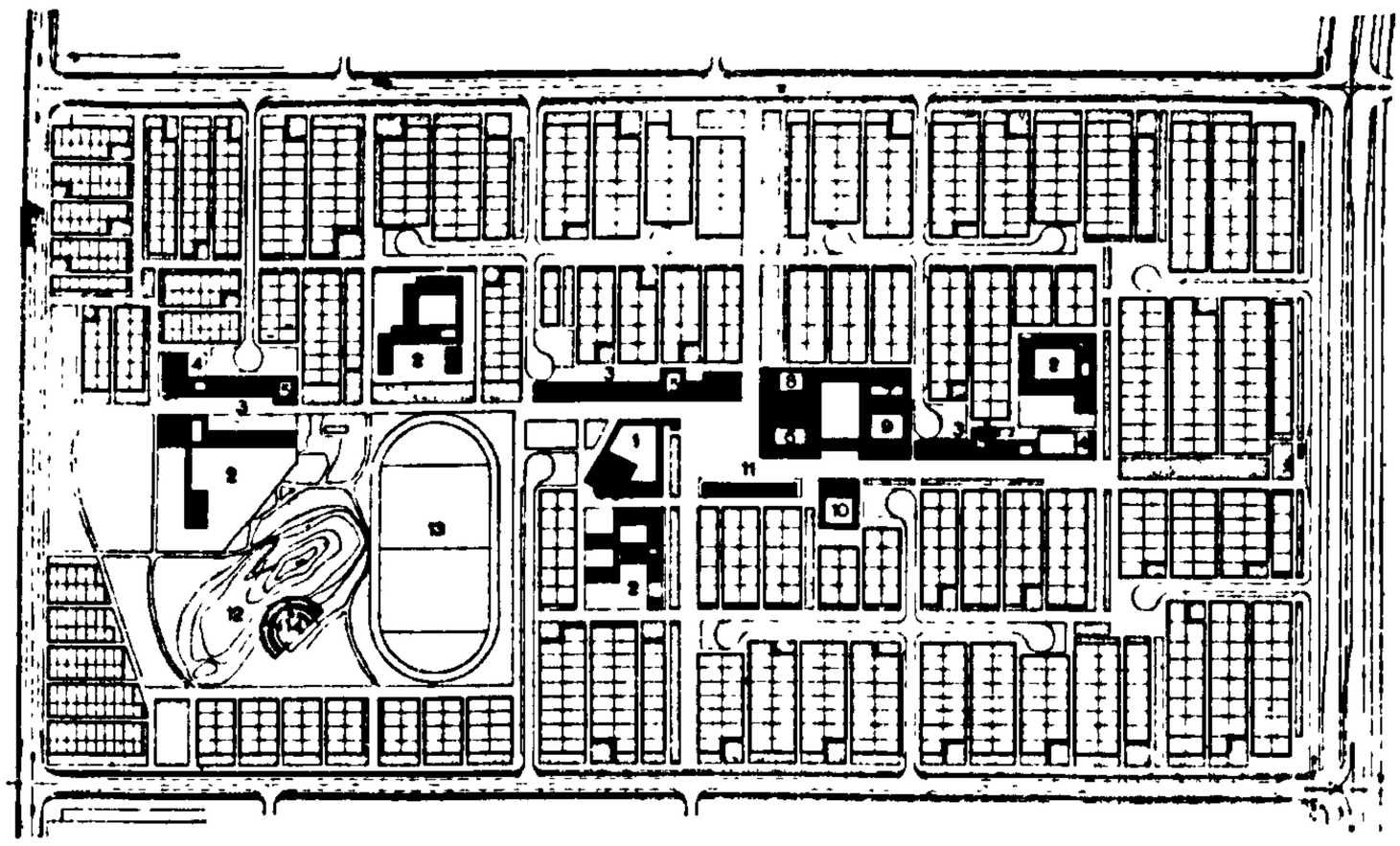
this was based on the assumption that a greater number of family members can be found in the lower income groups and an additional number of servants for the well to do families. This meant that the whole area can house about 120000 persons.

In order to develop the area in the best rational and economic way and create a pattern of life and a community structure which will serve the people best, Doxiadis, subdivided the whole area into 15 units containing an average of 1000 plots each; see, Figs. (4.3 and 4.4). These units were designed to be self-contained communities containing all the functions necessary to serve the families living in them, such as educational facilities, public health and social facilities, marketing and administrative facilities, etc. In addition to these functions and facilities Doxiadis proposed the development of a major centre to serve the whole area, containing a higher order of facilities. The main purpose of the development of such centre, apart from serving the inhabitants, was to contribute to the relief from the mounting pressure on the central area of the city of Baghdad.

These communities were subdivided into smaller units consisting of an average of 200 families, with one elementary school as its focal point; these inturn subdivided into neighbourhoods of 50 - 75 families each, provided with major square and playground for small children. These neighbourhoods were divided into minor neighbourhoods of 10 - 20 families each, and regarded as the basic cell of the project. According to Doxiadis, this system of community classifications offers enourmous possibilities for the solution of the housing problems in a way which will facilitate the organization of a better society in many respects.

FIG. (4.3) WESTERN BAGHDAD HOUSING PROJECT

- SECTOR 10 -



1 Mosque
2 School
3 Market
4 Public Baths
5 Coffee Houses
6 Administration
7 Red Crescent
8 Cultural Centre
9 Public Health Centre
10 Police Station
11 Shops
12 Public Park
13 Sports Ground
14 Open Air Theatre

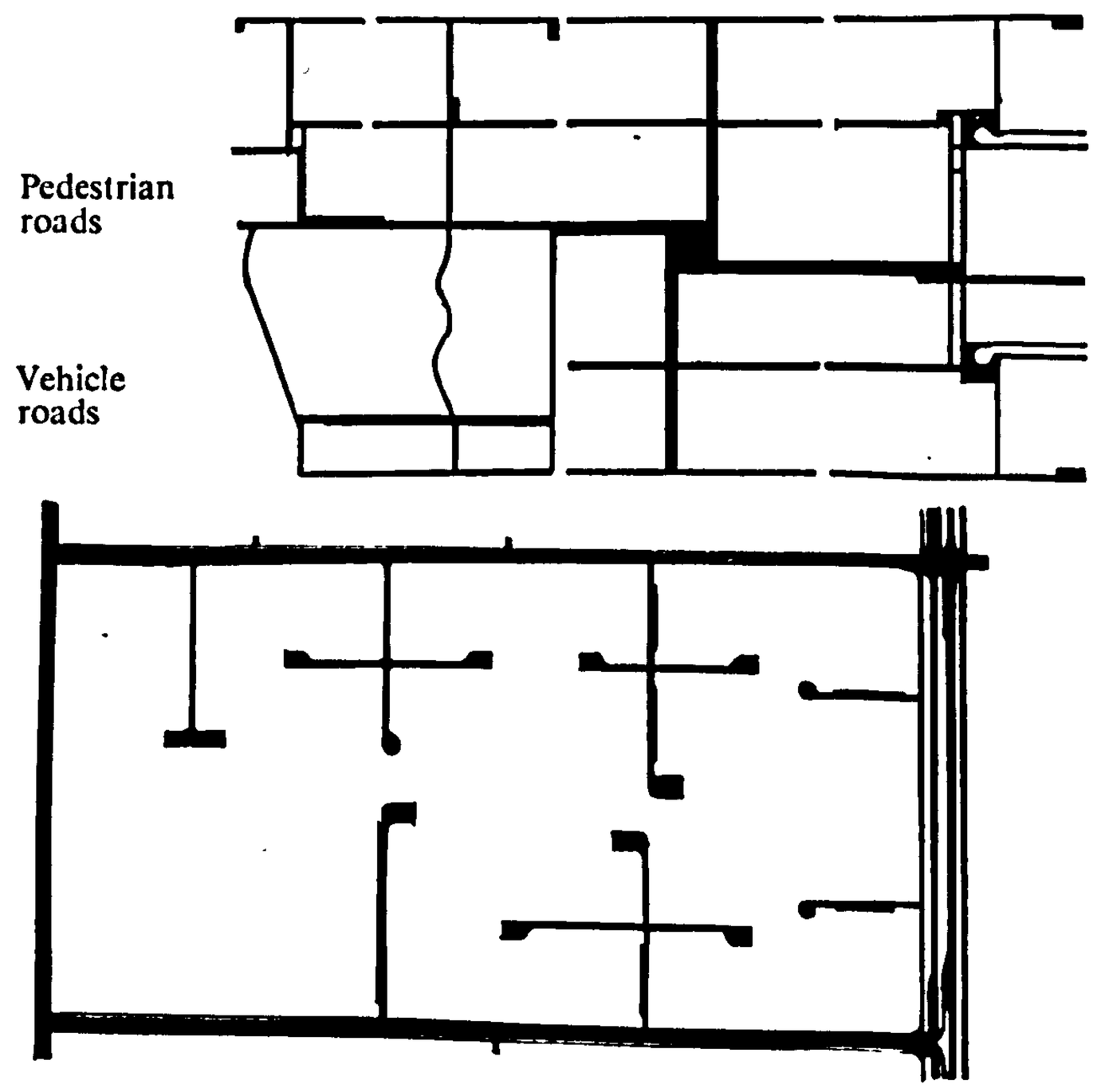


FIG. (4.4) VIEW OF SECTOR 10 , WESTERN BAGHDAD HOUSING PROJECT

A. OVERALL VIEW

B. THE CENTRAL AREA

The principles of development envisaged by Doxiadis Associates were that the Development Board should take the responsibility of land development including opening of streets, water-supply, drainage and sewerage, pavement of streets and planting of gardens. Following such a development, the Development Board should take the initiative for the erection of community buildings, shopping and business buildings. Some of them, especially the community buildings, must be built by the Board itself. For other buildings, such as minor shops and handicraft workshops, Doxiadis recommended that they should comply with the types of designs set by the government in order to achieve better results and facilitate the corresponding functions.

With regard to houses, it has been recommended that they should be built in different ways. A big percentage have to be built by the Development Board itself. It was also recommended that the Development Board should mobilize private initiative for the construction of more houses, to achieve this, the Development Board may sell certain parts either to cooperatives or non-private societies or to the Mortgage Bank and private people. It was advised that in any case no person should be entitled to the purchase of more than one plot irrespectively of whether the purchase takes place directly or through a cooperative, a society or bank. Also the recommendations insisted that the purchase of plots should exclude any person owning a house or a plot in the city of Baghdad. The Development Board can require from the agencies or the persons buying these plots to build them in a certain period of years, not exceeding three years at the most. Then the Board should facilitate the construction of houses by the private people by granting loans through the special agency, by selling building materials at reasonable prices. etc.

In order to proceed with the implementation of the project, Doxiadis Associates recommended the development of a programme consisting of three parts:

1. Land development.
2. Construction of houses by the government.
3. Construction of houses by other agencies.

It was thought at that time that the best results for the development of land, can be achieved in a period of five years. It was advised that one big contractor should be selected for this work and be responsible for the whole development from the implementation of the designes to the opening of streets, setting the water supply network, the sewage and drainage network, the pavement of the streets and the planting of trees. The whole development was phased out as follows:

10 per cent should be developed during the first year,
15 per cent should be developed during the second year, and
25 per cent should be developed during the third, fourth and fifth years.

The construction of community buildings was recommended to be completed and coordinated with the first part of the programme, i.e., the first year, otherwise it has been envisaged that the whole project will be uneconomic and unscuccessful as people will not be interested to live in the area without any community buildings and functions. Only one part of the community facilities had been suggested to be left outside the first part of the programme, that was the pavement of streets for pedestrians, which was to be paved by the inhabitants

through aided self-help schemes. This was part of a policy recommended by Doxiadis Associates that parts of the project should be left in order to be undertaken by the inhabitants themselves through appropriate governmental guidance.

The second part of the programme was devoted to the construction of houses by the Development Board itself. This part was designed to follow very closely the first one and based on a five year effort. Since there were difficulties at that time to estimate how many houses should be built by the government, due to the absence of the overall financing programme, Doxiadis Associates recommended that the government should undertake the construction of only 5000 houses. Later, construction by the government will depend on the demand for plots by private persons, cooperatives, etc., and on the possibility of private people to undertake the construction of their houses by themselves.

The third part of the programme consisted of the disposal of the reamining plots and the facilitation of private people to proceed with the construction of their own houses. This part was envisaged to run up to 10 years, the reason being that private people do not follow governmental activities with the same speed as government itself can move.

According to the programme, if the government itself built around 5000 houses, then about 10000 plots will be made for the private people. And a certain number of plots should be sold or disposed every year so that the government can keep a control on prices of land and not allow them to be very low or very high.

According to Doxiadis, if during the implementation of the programme it was found that private people do not respond to the project due to the lack of financial means or ability to select contractors, to find materials, etc., the government should try its best to facilitate private activity by special measures like making designs available for every private owner, facilitating granting of loans, etc. If in spite of all these measures, the private initiative does not respond satisfactorily to the project, or if the government needed more houses for certain groups of people, then more plots should be shifted to the government sector and built by the government itself. During the whole period of the programme, the government should remain the owner of the plots, which will undoubtedly have higher commercial value. After ten years the government then can sell these plots at the appropriate price.

On the the major problems facing the administration of the project was the definition of the authority which will be in charge of the whole project. Therefore, it has been recommended that the Development Board and the Ministry of Development should take this responsibility since they were the bodies who inititated the project and were financing it. It was also thought that other authorities which were involved in housing development schemes should undertake some activities, but their role and the kind of functions they perform should be defined in advance.

One of the problems facing the implementation of the project was the preparation of the technical department which will supervise the project. Also the problem of defining the authority which will decide about the disposal of parts of the project to other

organizations for the construction of their own houses. Doxiadis recommended that this authority should be the Development Board and the Ministry of Development.

The procedure followed was that these organizations should submit a certain form of application defining their targets and their financial possibilities, with a concrete scheme integrated with the overall housing programme to the Development Board for decision.

4.2.0 Polservice Housing Proposals for Baghdad:

These proposals were put forward by Polservice as part of the Master Plan for Baghdad. [3] They mainly intended to reorganize the existing residential structure of the city to accommodate the expected increases in the population of the city by 1990, also an estimate was made of the number and type of houses which should be implemented.

The principles motivated these proposals were:

1. The creation of self-contained units in respect of service facilities to meet the inhabitants needs, in line with the trends and means characteristic for the different socio-economic groups of the population.

2. The creation of conditions which will contribute to the strengthening of social solidarities within a separate structural unit, both in respect of homegenious socio-economic groups, and also between the different ones.

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3. see, Polservice, "Master Plan for Baghdad", Vol. 1, 2, 3, Municipality of Baghdad, 1968.

3. The elimination from the residential units, existing and proposed, all elements which are objectionable and might endanger the safety of the inhabitants, particularly main traffic routes, and activities which cause pollution.

Polservice proposals in respect to the amount of dwellings needed by the end of the programme, fell short of the analysis of the categorized needs for houses, due to population increases, replacement of substandard dwellings, and the dwellings needed to cover the existing shortage in the stock. Instead, Polservice proposed a figure of 453000 dwellings to be constructed by 1990, and composed of the following:

- 363000 dwellings to accommodate 80 per cent of the population, planned as low density, one-family housing development.
- 90000 dwellings to accommodate 20 per cent of the population, planned as high density, multi-storey development.

The proposals also envisaged the development of a hierarchy of residential units, governed mainly by the size of population it accommodates, and also by the services it provides.

4.2.1 The Residential Neighbourhood

This unit is at the base of the hierarchy, designed to be of homogenious socio-economic pattern, and allowsonly for pedestrian movement. This unit was proposed to accommodate between 6000 and 7000 inhabitants, with a range of 750 to 1166 housing units. As for the services, there will be two primary schools with small shopping and commercial area; see, Appendix (4.3). According to Polservice there will be two types of neighbourhoods, based on the types of

houses it will accommodate. The neighbourhoods will be differentiated by the standards of the plot sizes, and of the dwellings themselves, as well as by the population densities; see, Figs. (12.9 , 12.10).

Each neighbourhood unit, will be divided into 16 Housing Units, inhabited by 380 - 435 people, and their sizes are determined by the children playgrounds and the basic shopping facilities; see, Appendix (4.4) and Fig. (4.5).

As for the principles of the design of these units, Polservice proposed that public traffic by buses and taxi-cars will be the main means of transportation in the neighbourhood units. The distance between bus stops proposed to be not more than 500 m; the index number of private cars is one car for each 10 persons; covered parking places or garages are to be provided in all house plots; public parking places are to be provided at the commercial centre. The following are some of the standards proposed for transportation network in the neighbourhood units:

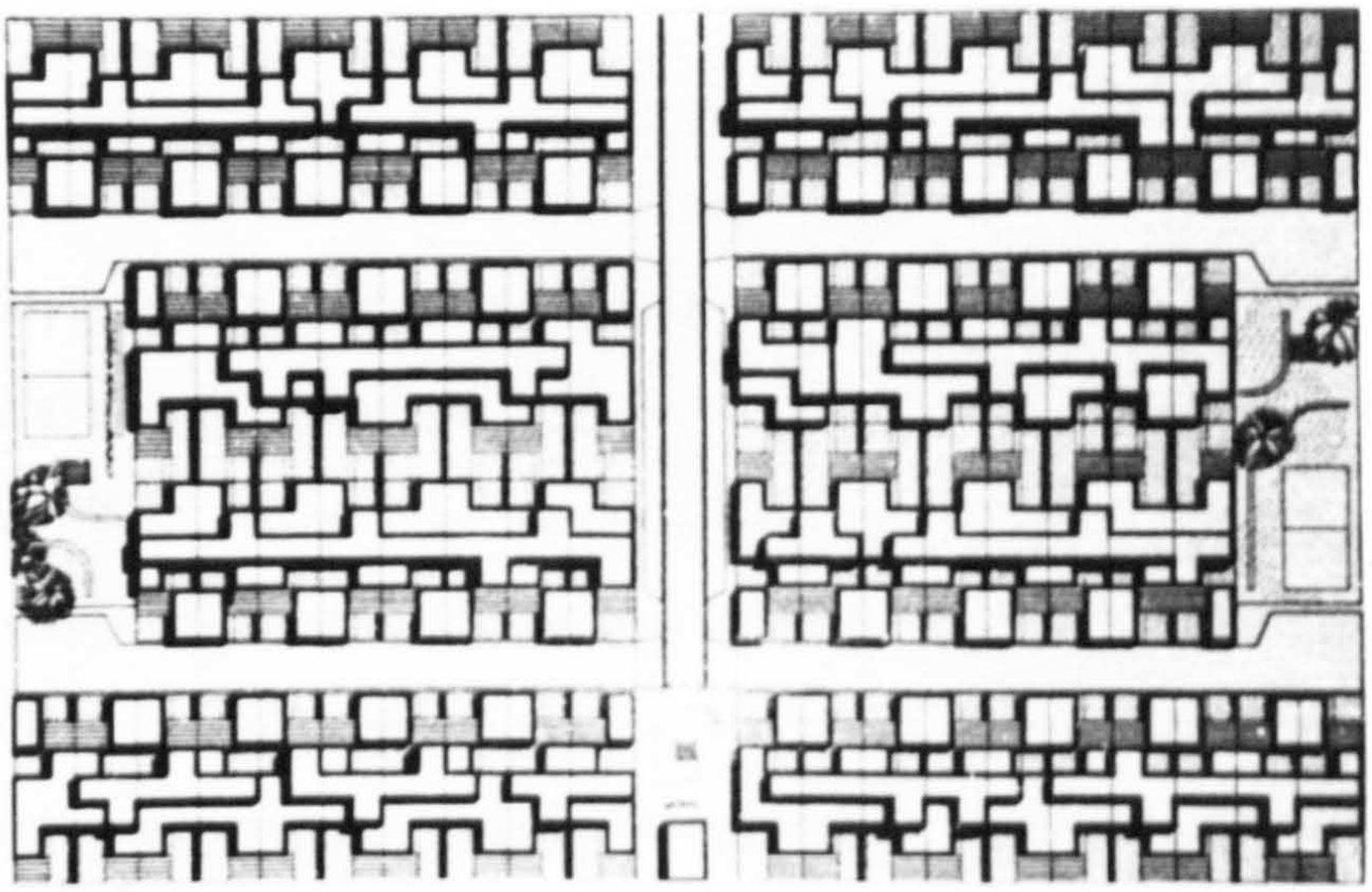
Table (4.1)

Proposed Standards for Transportation Network in the Neighbourhood Units by Polservice:

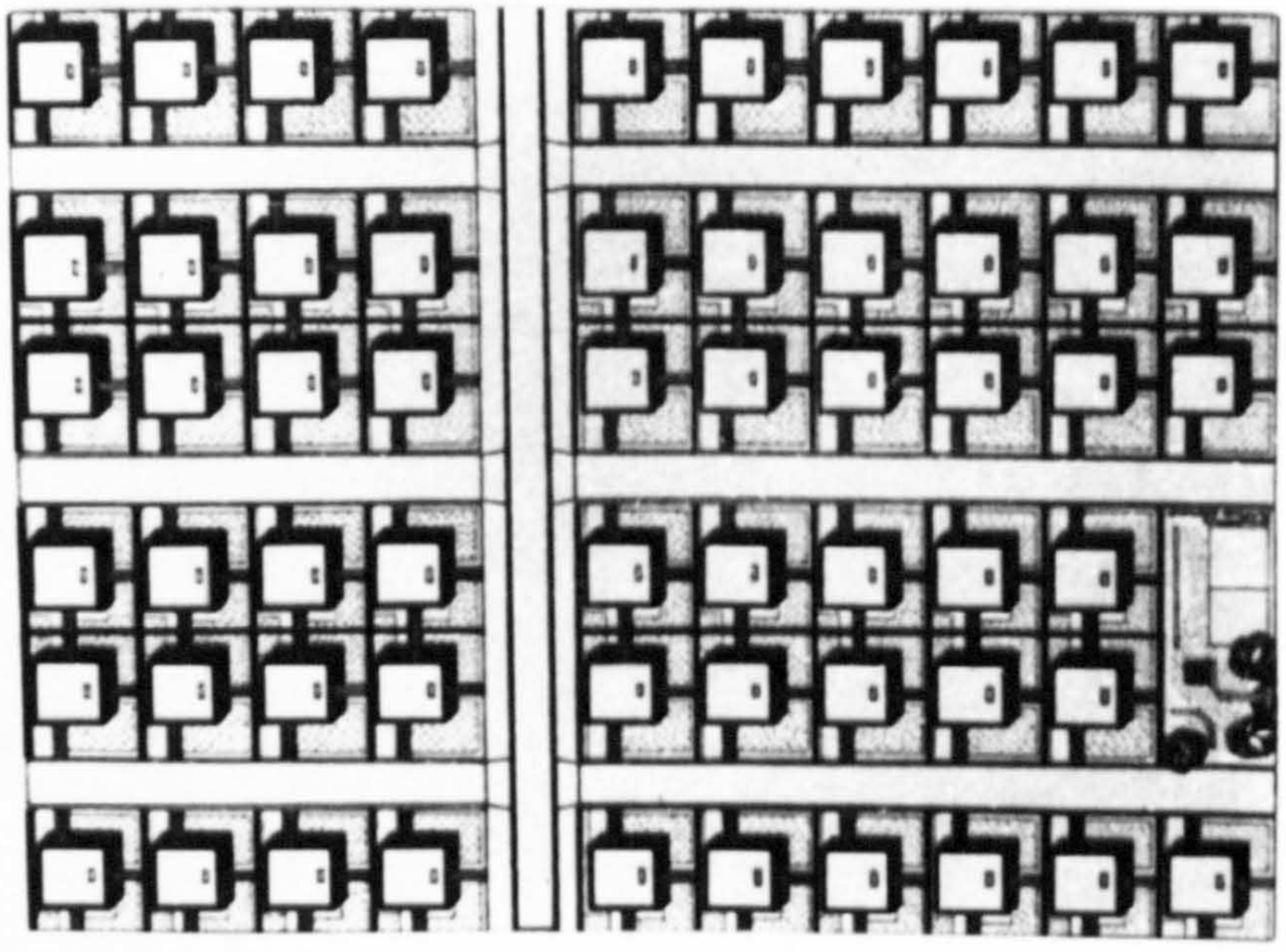
Network Items	Minimum Width of Carriage Way	Minimum Width Between Buildings, Plot Fences or Walls
Footway	-	5 m.
House access road	8 m.	8 m.
Minor road	6 m.	14 m.
Main road	9 m.	30 m.
/ or	2 x 6 m.	40 m.

Source: Polservice, "Master Plan of Baghdad", Typical Neighbourhood Unit, Vol. 2, March, 1967, p.14.

FIG. (4.5) HOUSING UNITS , PROPOSED BY POLSERVICE , BAGHDAD



A. HOUSING UNIT TYPE (A)



B. HOUSING UNIT TYPE (B)

According to Polservice, each housing unit is to be provided with two separate water mains: one for domestic, and one for general municipal purposes, with water meters at each individual supply points.

As far as public sewers are concerned, street sewers shall partially be provided, using separate sewers system. House drains, via septic tanks, shall be connected to street sewers, and further to city collectors. Rain water from house plots shall partially be carried to street gutters, partially to courtyards, and partially to special storage tanks, or to unpaved surfaces. Main streets shall be provided with rain water sewers, taking also water overflows from private and public bathing and other pools.

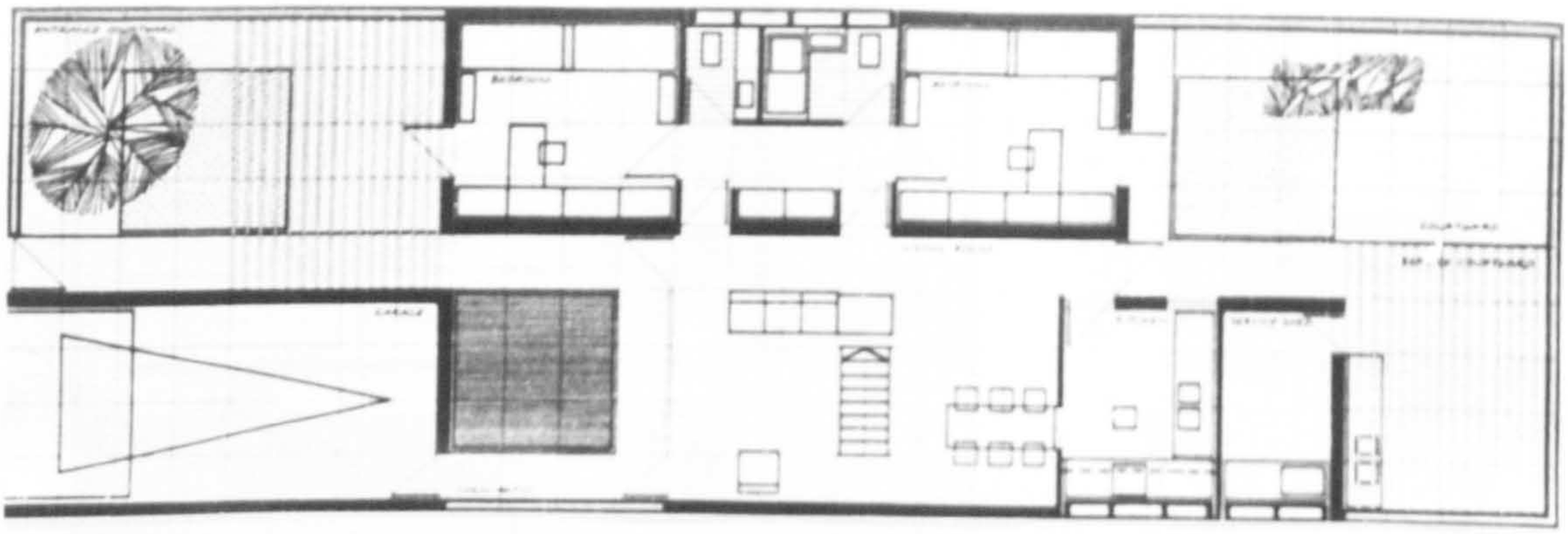
As far as the types of houses are concerned, Polservice, proposed two types:

Type A : Terraced Houses; see, Fig. (4.6)

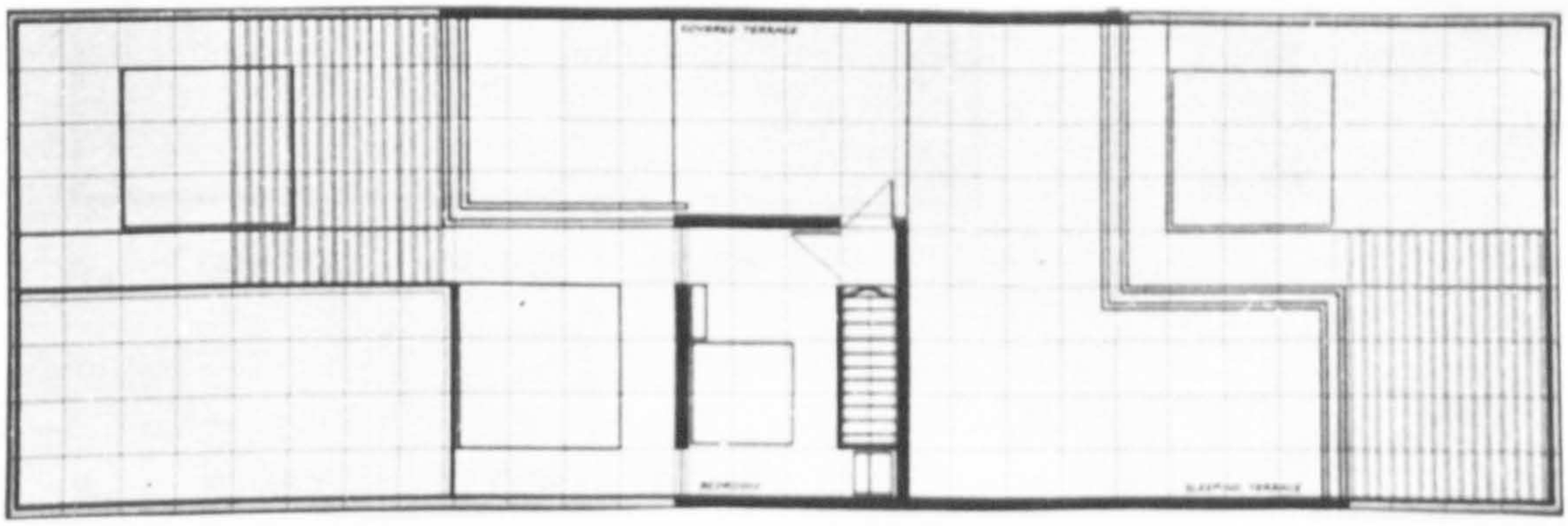
Type B : Detached Houses; see, Fig. (4.7)

These houses will accommodate 80 per cent of the population. Oddly enough, these houses will be airconditioned, regardless whether they will be occupied by low or high income groups. This proposal caused lengthy debate in the Municipality Board, and then later on dismissed as a suitable arrangement to solve the problems of cooling. The proposed houses were to be equipped with bath, shower wash basins, and toilet facilities; see, Appendix (4.5). The basic building

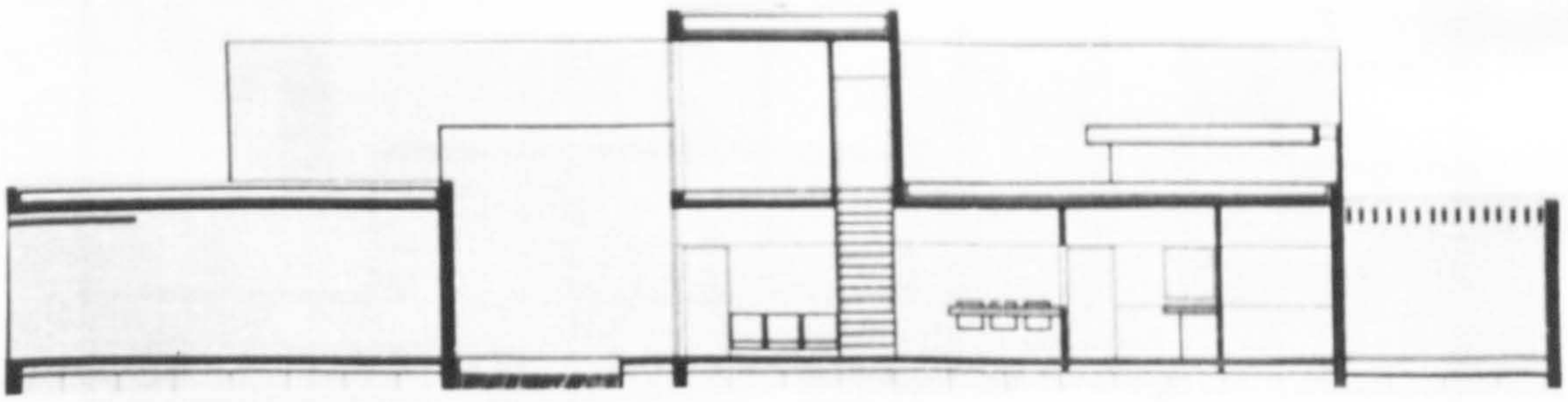
FIG. (4.6) HOUSE TYPE (A) , PROPOSED BY POLSERVICE , BAGHDAD



A. GROUND FLOOR PLAN

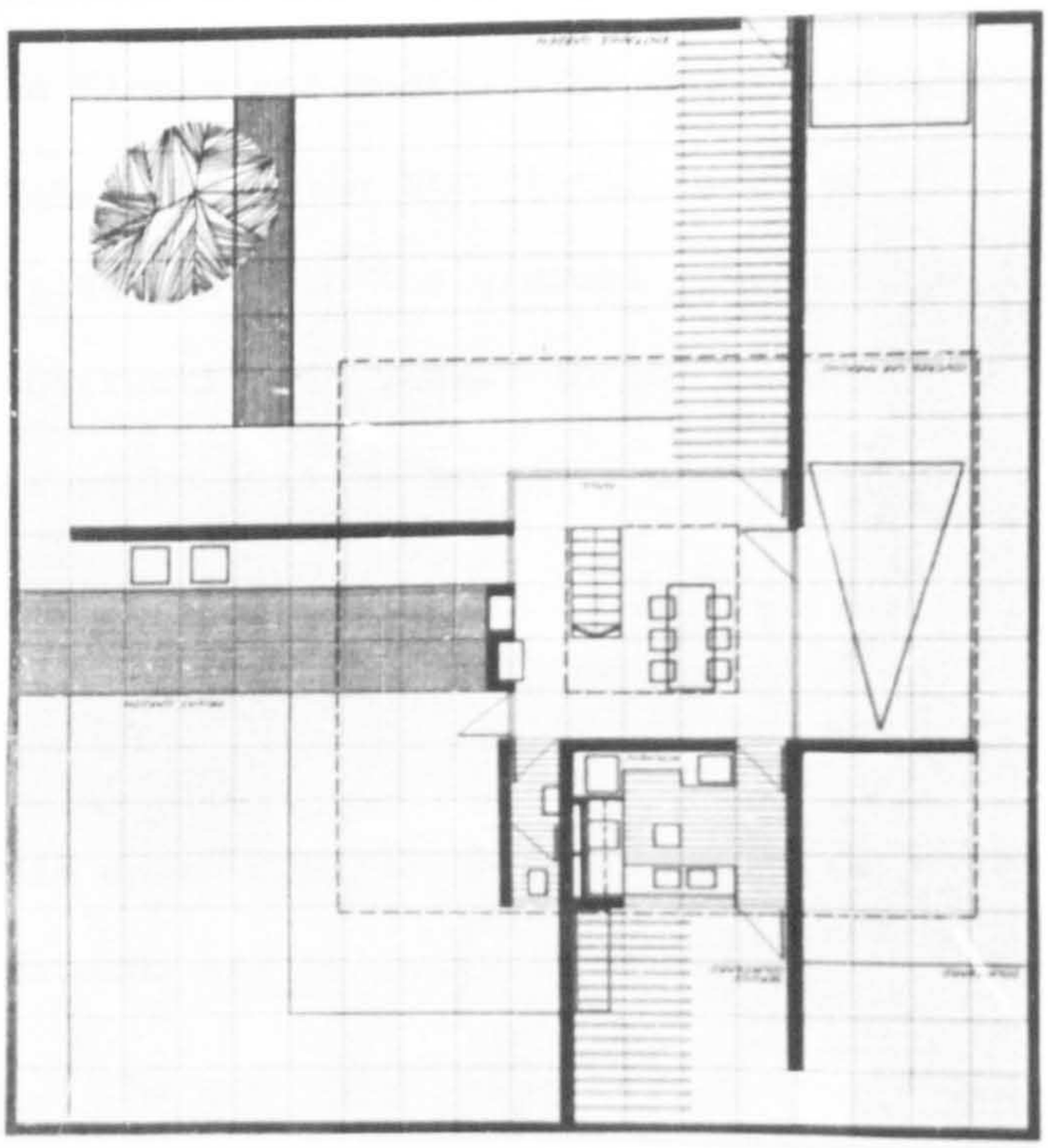


B. FIRST FLOOR PLAN

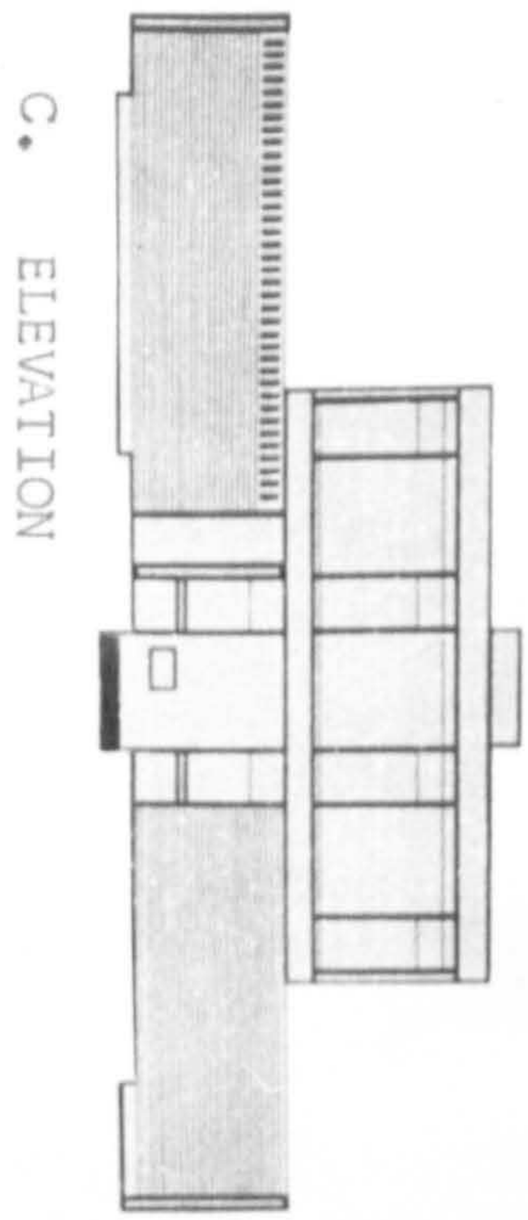


C. SECTION

FIG. (4.7) HOUSE TYPE (B) , PROPOSED BY POLSERVICE , BAGHDAD

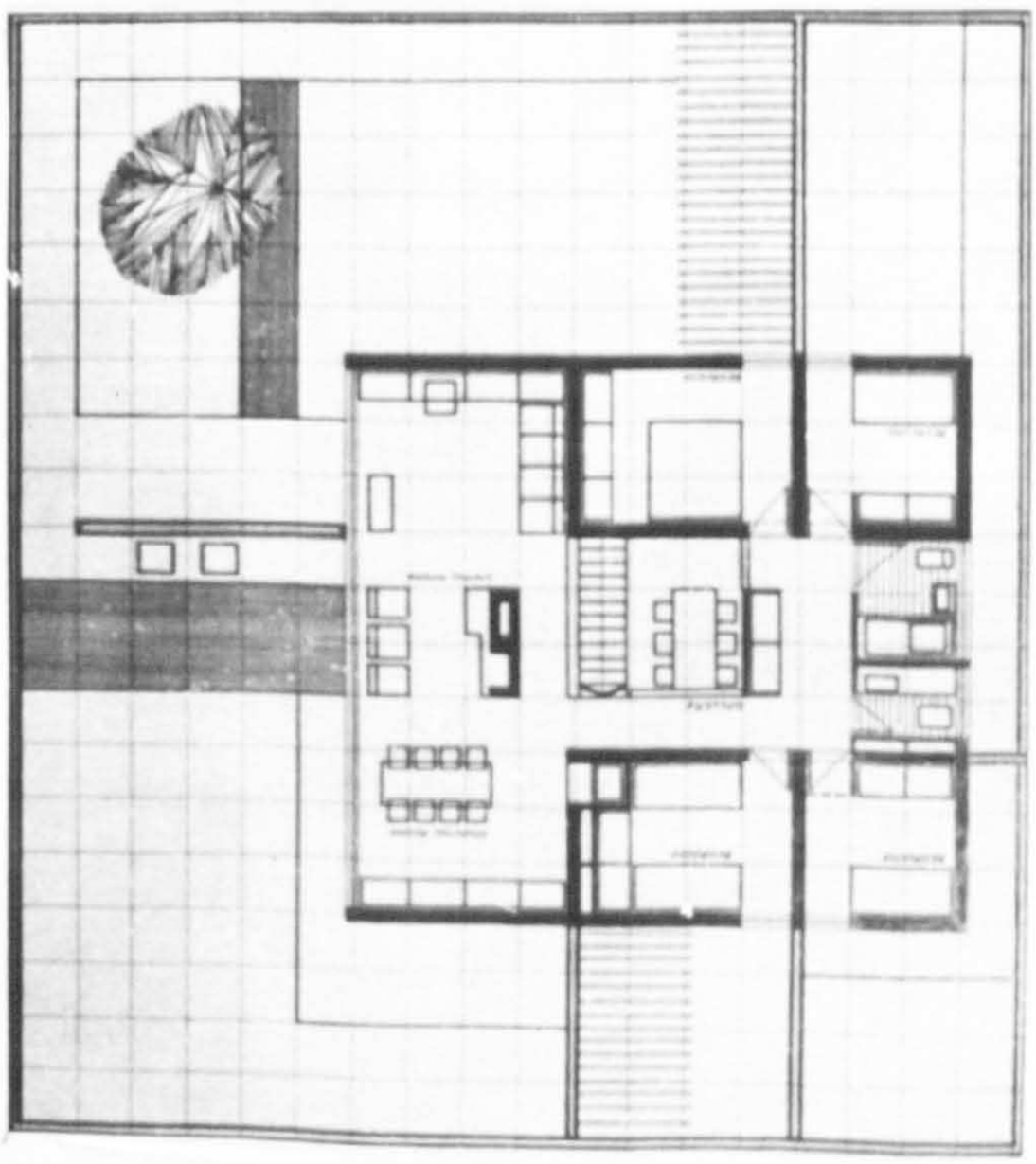


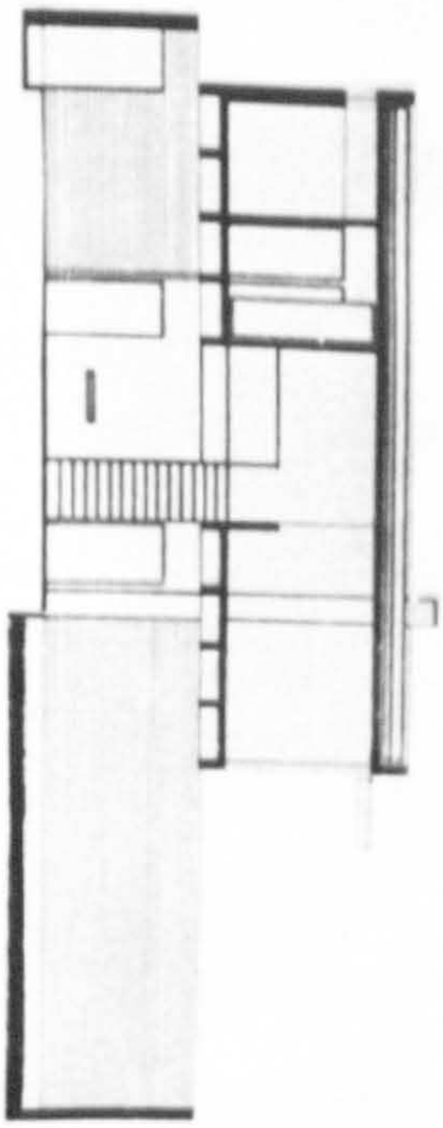
A. GROUND FLOOR PLAN



C. ELEVATION

B. FIRST FLOOR PLAN





D. SECTION

materials proposed in the construction of these houses were; bricks for load carrying walls and partitions, ceramic blocks for the finishes in the kitchen and toilet, and in-situ cast concrete for the floors and roofs. The design of the houses were based on a sq.m. grid, with structural spans of 3.40 and 5.00 m. This has been decided on with the gradual change to mass prefabrication method of construction in view. In the case of the multi-storey development, car parks will be provided on the basis of one per 5 dwellings.

4.2.2 The Residential Community:

This unit comprising of a set of neighbourhoods. Its characteristic features are as follows:

1. The area of the residential community is limited by a radius of about 200 m. facilitating access on foot in about 10 minutes time to the community centre.
2. The population size would generally range between 20,000 to 50,000 inhabitants, depending on the proportion of different socio-economic groups, and upon area location.
3. It provides different types of residential densities to various groups of population in a variety of housing types and forms.
4. The area of the community will furnish a good deal of pedestrian movement.
5. The area of the residential community will generally contained within routes of mass transportation, and is not intersected by routes carrying traffic of transit character in relation to the unit.

6. The public green open spaces and protective green belts will be arranged according to the requirements of climatic protection.

7. The community centre will contain the following facilities:

- Mosque - one per community unit -.
- Secondary school - one per 8000 inhabitants, area per school is about 1.2 hectare -.
- Health station - one per community, area per station is about 0.3 hectare -.
- Commerce and commercial services - 250 sq.m. shopping per 10000 inhabitants -.
- Car parks - 50 - 100 car spaces per community unit -.
- Post office - one per community unit -.
- Green and sport areas - 2 sq.m. per inhabitant -.

It must be stated here that service facilities are the same for the different community units in respect to quality, but in respect to quantity, they are proportionate to number of population.

4.2.3 The Residential district:

Residential district is the largest unit proposed by Polservice within the structure of residential areas. It is almost a self-contained town, but by no means entirely independent of the central areas. Although it is to furnish possibilities of employment, shopping and other community facilities, it would have viable linkages and relationships to the central areas of the city. Residential district is composed of the following elements:

1. Sets of residential communities.
2. Large service centre, which will include shopping, commercial buildings and government departments related to municipal affairs.
3. Sport and recreation areas.
4. Industrial and warehouse areas.
5. Transport facilities, i.e. main transport routes, and parking facilities.
6. Green areas for productive and protective types.

The inhabitants of the residential districts will vary in size, between 300000 to 500000, depending on the local physical conditions and the stage of development of the existing residential structures. i.e. the socio-economic structure, and the relative location of the district to other land uses in the city as a whole.

The service centre of the district proposed to be located in conjection with the intermediate transportation routes, thus making it more accessible than the city centre, therefore, encouraging people to use it more frequently. As for the high density multi-storey residential development, it was proposed to be grouped in the vicinity of the centre, to achieve better utilization of the area, especially at night when the shopping activities will be closed.

According to Polservice, as the present activity in the residential development of Baghdad is mostly of spontaneous character, and based mainly on private initiative, and at the same time the current legal regulations do not facilitate the implementation of adequate development policy; an attempt should be made to create a system of encouragement and limitations, which would direct development towards areas selected

as most suitable for housing development. In order to achieve this, Polservice envisaged that financial means available to the Municipality of Baghdad for the construction of local streets, basic services and facilities of the infrastructure, should be directed to those areas, where development is advisable from the economic and social point of view, and contribute to the harmonious development of the whole city organism.

Polservice also proposed that a substantial improvement of the existing housing conditions should not take place, unless a comprehensive residential development financed by the public sector be constructed. The reason given for such restrictions, is that these improvements might contradict with government programmes, for the comprehensive reappraisal of the housing situation of the city.

4.3.0 Evaluation:

Having examined and analysed the causes and magnitude of the housing problems in Iraq in general and Baghdad in particular; the government attitudes and policies towards them; and the different housing programmes which were formulated and to some extent implemented to deal with these problems, in the last two chapters. It appeared that these programmes were deficient in one or more of a number of respects.

In the first place, assessment of needs has often been made from inadequate information, or the questionable results of special surveys. This lack of information situation can be seen in the Doxiadis Associates housing programme which proceeded without any overall plan

of the city within which it would be implemented. Second, the role of change in both housing standards and the general economic and political situation has not been fully evaluated. This led to projects rapidly becoming outdated. However, the most important deficiency has almost certainly been the lack of liaison and integration between the housing programmes and the policies of successive governments. Government policies and priorities, especially in the field of fiscal policy have changed considerably and as a consequence the programmes have become outdated. In other situation proposed development have exceeded the magnitude of investment and placed a great strain on government budgeting.

In the implementation side of the programmes, the criteria used was far from adequate, for instance, the location criteria of some of the projects, particularly the Eastern Baghdad Housing Development did not involve any analysis of its impact on the urban structure of Baghdad as a whole. It did not consider for example the effects of the projects on:

a. The existing road networks, particularly the parts which are leading to and from the city centre;

b. The existing centres of employment;

c. Land values, and the possibility of land speculation;

d. The socio-economic pattern of the community, where in the case of the Eastern Baghdad Housing Development, some 50000 of low income families were resettled in one area, "Al-Thawra" district.

In addition to these shortcomings, there have been many deficiencies in regard to the design of housing areas and the houses themselves. These deficiencies were primarily caused by the almost complete lack of understanding and appreciation by the consultants who prepare these designs to the basic social, cultural, and even environmental conditions of the society and the area in which these houses are going to be built. Two examples may be referred to in this respect: the first example is the housing area which was designed by Doxiadis Associates for the military officers east of Baghdad, "Al-Dhubbat" district. In this project most of the houses were designed on the western concept of layout, for instance, with no provision for guest room in addition to the living room. The absence of such room, which is regarded by almost all the Baghdadi households regardless of their socio-economic status as an essential space, not only for the mere entertainment of guests, but also a space with which maximum privacy can be obtained, resulted for most of the households who occupied these houses to make major alterations to them, changing the use of the rooms, and in many cases building additional spaces to fit their needs. The second example of the deficiencies in the housing designs may be observed in the housing models proposed by Polservice as part of the master plan for Baghdad; see, Figs. (4.6 and 4.7). Although these houses have not been built, and in the author's judgement will not be built, one can, by examining their concept of design, draw the conclusion that they lack basic principles which make them inadequate. First, there is a lack of roof for sleeping in the summer. Although Polservice recommended that all these houses should be fully airconditioned, it seems that this proposition is economically

unrealistic. Thus the need for roof is essential; see (11.22). Second, there is a lack of guest room separated from the living room, this is particularly noticable in house type (A), where the living room, which is supposed to be private, is located in the front of the house without provision for a space which can be utilized for guests.

Although most of the blame for such deficiencies may be directed towards the consultants who failed to understand the constraints and opportunities of their proposals and to conduct the necessary and relevant surveys in the social, cultural, economic, and environmental fields; some of the blame should also be directed towards the different government departments directly involved with the consultants for their failure to prepare a well defined terms of reference for the consultants, and to organize a central and qualified agency or committee to deal directly with the consultants and act as a liaison between them and the ministry or ministries concerned.

C H A P T E R 5

ASSESSMENT OF HOUSING NEEDS

The social concept of housing "need" has to be distinguished from the economic concept of housing "demand". The effective demand for housing relates to the accommodation for which people are able and willing to pay. It takes no account of social factors or social aspirations which fail to bear fruit. Housing needs on the other hand, is the extent to which the quantity and quality of existing accommodation fall short of that required to provide each household in the population, irrespective of ability to pay or of particular personal preferences, with accommodation of a specified minimum standard and above. The predict of housing needs and demands are not as sharp as these definitions might suggest. As Needleman points out:

> "the choice of minimum socially acceptable standards is not completely independent of the incomes and prices prevailing in the country concerned, while the same demographic factors that largely determine housing needs also strongly influence the effective demand for dwelling units". 1

To calculate demand is very difficult and as present techniques stand, very unreliable. The variables of past demands, past movements in income, house prices, interest rates and the rest are all relevant. In a fast changing situation as in Iraq, the calculation of demand using these variables is little more than an academic exercise. Estimates of need are in a different category where demand

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1. see, L. Needleman, "The Economics of Housing", Staples Press, London, 1965, p. 18.

projections predict what will happen, need projections predict what ideally must happen if certain minimum or maximum policy assumptions are made of housing standards.

In order for the predictions to be achieved, the predicting agency must set its standards at some socially and economically reasonable norm and the implementing agency, which may be in the form of combination of government and private sector must create the conditions where these standards can be achieved. Prediction of housing needs is based upon forecasts of future population size and structure; the accuracy is much higher than for demand especially for a period not exceeding twenty years, because for this period no assumptions about birth rate are required, since all the potential households of twenty years hence are already born, In addition to assessing how many people and how many households they will form, the projections of housing need may also include those houses which need replacement, those houses which will be lost to the present stock through demolition and planning action, and those which are vacant. In an ideal projection of need the size distribution of houses should also be attempted. However, such a projection is difficult in practice, particularly where it seems likely that past trends, as in Iraq and Baghdad, have been strongly influenced by housing availability. As Needleman suggests:

> "it is futile to expect there ever to be a perfect match between the distribution of households and the number and size of houses available. Whatever accommodation standards are chosen there will probably be some overcrowding and some under-occupancy. In addition, the relative number of families of different sizes change over time, so that even if the houses matched the housholds in numbers and size at the target date, there might well be considerable discrepancies between the two after a few years." 2

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2. see, L. Needleman, op.cit., p. 29.

An assessment of size distribution of households can be useful to give an indication of how present and future household sizes are and will be served by the housing programme. Difficulties and qualifications run with varying depth throughout the presentation of these projections and must reinforce the premise that ideally there must be regular and overlapping checking of household size projections and the housing needs which stem from them. This is particularly true in Iraq in the situation where one is forced to accept and use data which were based on 1965 general census, which are almost 10 years out of date. Both Cullingworth in "Housing Needs and Planning Policy", and Dr. P.A. Stone writing in "Architectural Review", suggest that the prediction of need, rather than the more ephemeral demand is a good starting point. This course is followed in this study and the aspects of demand are introduced implicitly through considerations of cost and standards of the housing produced. Finally it is relatively easy to make projections of how many houses are needed; far less easy to prject the size of houses or number of rooms which they will contain or to project what any chosen standards might imply for the country's economy or for individuals.

5.1.0 Housing Needs and Shortage in Iraq, up to 1990:

Before calculating housing need and shortage in Iraq, the following assumptions have to be made in regard to the number of households that likely to be up to the year 1990, the rate of the annual obsolescency of the housing stock, and the percentages of houses that are going to be demolished through town planning action, and those which are staying vacant for one reason or another.

5.1.1 Number of Households:

The following are estimates of the total population of Iraq, average household size and the total number of households, 1956 - 1990, based on five year periods: see, Appendix (1.6).

Table (5.1)

Estimates of Total Population, Average Household Size, and Total Number of Households in Iraq, 1956 - 1990:

Year	Total Pop. (Mill.)	Average Household Size	Total Households (Mill.)
1956	4.50	6.05	0.744
1960	6.93	6.65	1.042
1965	8.20	7.40	1.108
1970	9.49	7.65	1.241
1975	11.21 - 11.65	7.90	1.419 - 1.474
1980	13.40 - 13.97	7.65	1.752 - 1.826
1985	16.08 - 17.00	7.40	2.173 - 2.297
1990	19.32 - 20.73	6.50	2.972 - 3.189

Notes:

- 1965 population figures are from the general census, 1965.
- 1975 - 1990 population figures are based on forecasts made by K. Ueda. United Nations demographer.
- Population figures for the other years are from estimates made by the Central Statistical Organization, Baghdad.
- 1956 average household size is based on the figures provided by the housing census of Iraq which was conducted at that year.
- 1965 average household size is based on the figures provided by the general census for Iraq which was conducted at that year.
- 1960 average household size is based on an annual increase of household size of 0.15 per cent, this figure is worked out from the 1956 and 1965 figures which reveal an increase of 1.35 per cent for the period.

As for the average household sizes for the years 1970 - 1990, they are estimates made by the author based on the following assumptions:

a. The period had been divided into four stages:

Stages		Rate of Increase in Household Size
(1)	1956 - 1965	1.35 per cent - whole stage -
(2)	1965 - 1975	0.45 per cent - whole stage -
(3)	1975 - 1985	0.45 per cent - whole stage -
(4)	1985 - 1990	0.80 per cent - whole stage -

b. These rates are based on the following assumptions:

i. In the first period, the increase in the size of the household was due to the fact that there was a rapid urbanization and mass migration to the cities accompanied with no real increase in prosperity, which in turn caused people to form large households to offset the lack of financial capabilities for separate houses; also caused by the lack of adequate town planning programmes to facilitate for the rapid increase in the cities population, as well as the social tendency of keeping large, extended families, which characterized the social pattern in Iraq.

ii. For the second period, it has been assumed that the pace of urbanization will slow to a modest level, accompanied by a modest increase in prosperity due to the rising revenues from the oil, as well as the present attempts by the Government

to adopt town planning as an instrument to provide better working opportunities for the low income groups, and eleviate their economic capabilities, thus encouraging them to formulate separate households. Also the decrease in the rate of household size based on the assumption that the government policy of distributing land for housing development through the cooperative societies will encourage young couples to build their own houses, thus reducing the rate of household size, especially in the big cities, such as Baghdad.

iii. As for the third and fourth periods, the assumption was that: with the anticipated rapid growth of the country's wealth from the oil, and the realization of the development plans which stress on industrialization as its prime objective, as well as the development of regional population distribution strategies and the anticipated continuation of land distribution, to the low income groups; all these factors will tend to reduce the size of the households more rapidly than before.

5.1.2 Rate of Obsolescency:

The following are estimates of the annual rate of obsolescency in the housing stock in Iraq, based on a study by A.E. Alcock, "Low Cost Housing in Iraq":

Table (5.2)

Estimates of the Annual Rate of Obsolescency in the Housing Stock in Iraq:

Period	Annual Rate of Obsolescency
1956 - 1965	1.32
1965 - 1990	1.40

Note:

- The rate for 1956 - 1965, is based on A.E. Alcock study, which stated that the number of houses becoming obsolete each year are around 3483. Also, see, U.N.E.S.O.B., "Progress and Trends in Building, Housing and Planning in the Arab Countries", Sept. 1969.

- As for the period between 1965 - 1990, it has been assumed that the rate of obsolescency will increase slightly due to the anticipated rapid deterioration of the stock made possible by the lack of maintenace and population movement from one locality to another.

As for the percentage of dwellings to be demolished through planning action and those which lay vacant, it has been estimated on average that:

0.6 per cent of the stock will be vacant during the period

0.2 per cent of the stock will be demolished during the period.

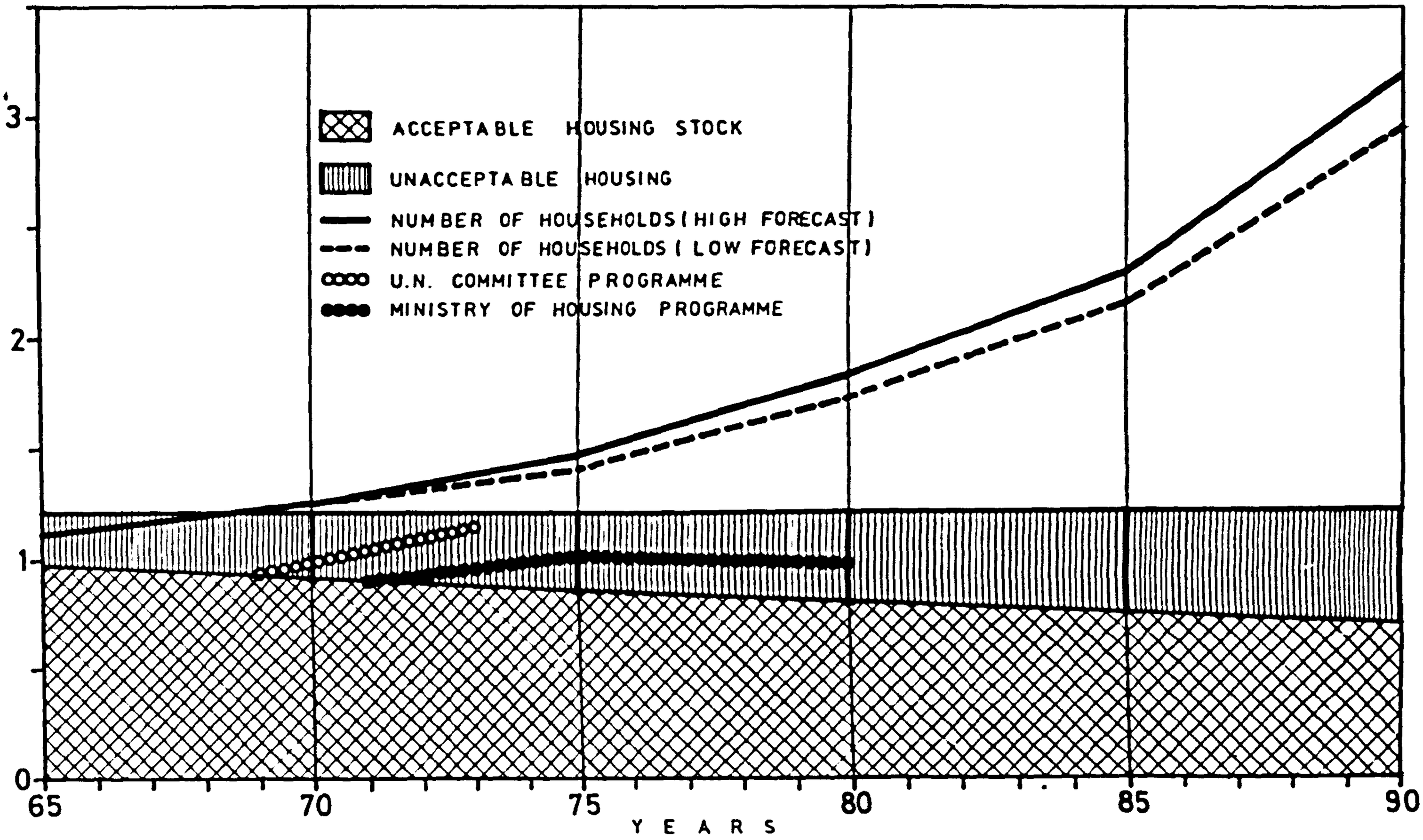
Note:

The percentage of vacant dwellings was arrived at from the general housing census of 1956, Table 4.

5.1.3 The Needs

Following these assumptions and facts, it has been estimated that during the period 1970 - 1990, Iraq should construct between 2.555 - 2.775 millions dwellings, this represents an annual average of about 127700 - 138700 dwellings; see, Table (5.3) and Fig. (5.1). In

FIG.(5.1) HOUSING NEED AND SHORTAGE IN IRAQ UP TO YEAR 1990.



order to evaluate these results, a comparison has been made with other estimates made by the U.N. and the Ministry of Housing and Public Works, which reveals the following:

- United Nations estimate, 1969 - 1973 : 56600 dwellings per annum; see, Appendix (4.1).
- Ministry of Housing and Public Works, 1971 - 1980 : 36300 dwellings per annum; see, Appendix (4.2).
- This study estimates, 1970 - 1990 : 127700 - 138700 dwellings per annum.

The significantly low figures of the other estimates was due to the fact that they did not include in their calculations the necessity to replace substandard dwellings, as well as they use the family size instead of the household size, this is particularly applicable to the Ministry of Housing estimates.

To estimate the sizes of dwellings to be constructed, one may refer to a study made by the Ministry of Housing and Public Works, based on the 1965 general census, which classified the sizes of households and the number of bedrooms required for them; see, Appendix (5.1).

Table (5.3)

Forecast of Housing Needs, Shortage, and the Number of New Dwellings Required in Iraq, 1965 - 1990:

	1965	1970	1975	1980	1985	1990
Total Population (Millions) :	8.20	9.49	11.21-11.65	13.40-13.97	16.08-17.00	19.32-20.73
Number of Households (Mill.):	1.11	1.24	1.42- 1.47	1.75- 1.83	2.17- 2.30	2.97- 3.19
Unacceptable Dwellings (Mill):	0.238	0.300	0.362	0.422	0.477	0.529
Vacant Dwellings, 0.6 per cent:	7300	7300	7300	7300	7300	7300
Dwellings lost through planning action, 0.2 per cent:	2440	2400	2400	2400	2400	2400
Total Housing Need (Mill.) :	1.358	1.550	1.792-1.842	2.182-2.262	2.658-2.788	3.510-3.730
Acceptable Dwellings (Mill.) :	0.982	0.920	0.858	0.798	0.743	0.691
Shortage (Millions) :	0.376	0.630	0.934-0.984	1.384-1.464	1.915-2.045	2.819-3.039
50% of Unacceptable Dwellings subject to Rehab. or Redev. :	0.119	0.150	0.181	0.211	0.238	0.264
Number of New Dwellings required:	0.257	0.480	0.753-0.803	1.173-1.253	1.677-1.807	2.555-2.775

According to these classifications, the estimated number of different dwellings to be constructed annually is as follows:

Table (5.4)

Estimated Annual New Dwellings to be Constructed in Iraq, 1970 - 1990, According to Size in terms of No. of Bedrooms.

Number of Bedrooms	Number of Dwellings	Percentage
1	35000- 38100	27.46
2	53300 - 57900	41.73
3	29500 - 32000	23.10
4 and over	9900 - 10700	7.71
Total	127700 -138700	100.00

5.2.0 Housing Need and Shortage in Baghdad up to 1990:

During the last fifteen years or so, the population of Baghdad has increased at a mean rate of over 80000 people per annum; see, Fig. (1.1) and all the available data and estimates indicate that the population will continue to grow at even higher rate; This would require substantial expansion of the existing housing stock, which is estimated in 1970 at about 280000 dwelling units, and related community facilities and services. Moreover, a city of this size and due to its metropolitan character would require a great variety of building types to suit different requirements of the families of the different socio-economic groups. In view of these trends it seems desirable to provide for several kinds of dwelling types for which more flexibility and choice can be exercised. Also, it

is important that while housing of various types should be built and even, where necessary, densities may be enhanced, care must be taken so that the character, norms and standards are maintained at an acceptable level so as not to increase the already widening gap between incomes and costs.

The following are estimates of the expected housing needs and shortages, and the number of dwelling units required to be constructed annually in Baghdad up to the year 1990. Before doing so, assumptions and forecasts must be made in regard to population, number of households and their distribution, rate of obsolescency in the housing stock, vacancies and rate of demolishing through planning action.

5.2.1 Population Projection for Baghdad:

When approaching this problem it must be appreciated that the determination of the number of population in the city of Baghdad meets specific difficulties. Accepting that the area of the city is marked by the boundaries of the municipality, it must be stated that such an area is not to be found in the official statistics of the country and has no counterpart in the territorial divisions accepted in the successive general censuses. The censuses distinguish units of lower rank, i.e. "Qadha" and "Nahiya" within the province "Mohafadha". But, in the case of Baghdad, the boundaries of these units run in such a way, that on some areas it is almost impossible to determine whether the population recorded there by

the census should be included into the city or not. The differentiation of the population into rural and urban population made by the censuses, also is not suitable for this purpose. Therefore, all the data illustrating the number and composition of the population in Baghdad must be taken as estimates.

In the last twenty years, many estimates and forecasts were made for the population of the city of Baghdad, these were as follows: See, Fig. (5.2).

A. 1956 - 1977 : Doxiadis Associated - 0.93 - 2.00 mill. inhabitants -

B. 1958 - 1975 : Minoprio - 0.75 - 1.50 mill. inhabitants -

C. 1962 - 1981 : Ministry of Interior - 1.07 - 2.00 mill. inhabitants -

D. 1965 - 1990 : Ministry of Planning - 1.50 - 2.50 mill. inhabitants -

E. 1965 - 1990 : Polservice - 1.50 - 3.20 or 4.30 -.

Polservice forecast was based on the following assumptions: [3]

1. Natural increase:

   a. Lower alternative: [4]

      1970 - 1975 = 3.3 per cent per annum.

      1975 - 1990 = 2.0 per cent per annum.

   b. Higher alternative:

      1970 - 1990 = 3.6 per cent per annum.

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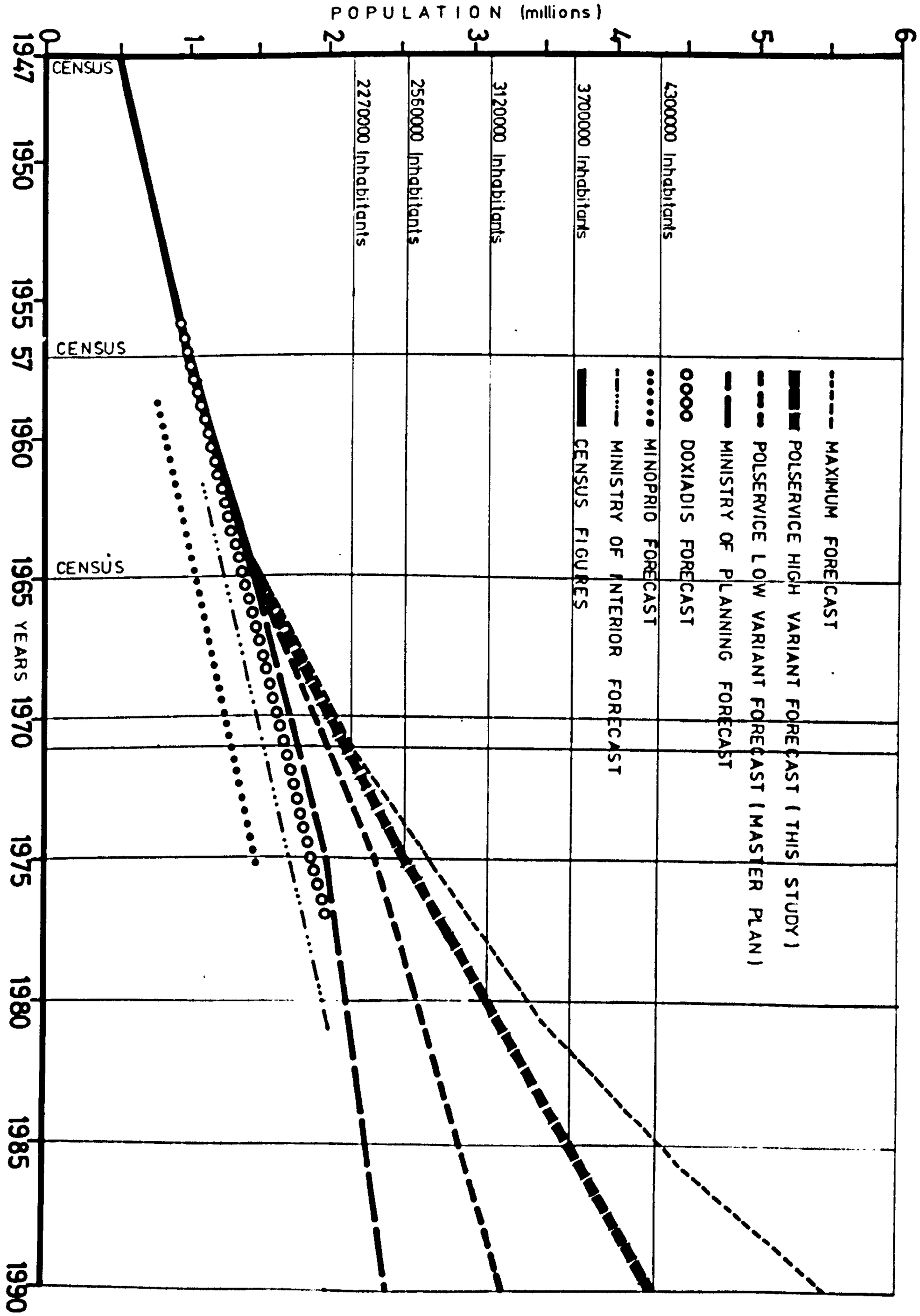
3. see, Polservice, "Master Plan of Baghdad", Vol. 1, p. II - 11.

4. this estimate was based on the assumption that there will be no change in the rate of population increase, natural increase, during the first period than that of the previous years; while an expected fall of the birth rate was expected for the second period.

FIG.(6.2) POPULATION PROJECTIONS FOR BAGHDAD UP TO 1990



2. Immigration:

a. Lower alternative: [5]

1970 - 1975 = 20000 persons will come every year to Baghdad.

1975 - 1990 = 15000 persons will come every year to Baghdad.

b. Higher alternative: [6]

1970 - 1975 = 25000 persons will come every year to Baghdad.

1975 - 1990 = 30000 persons will come every year to Baghdad.

On the basis of these assumptions, the following results have been obtained:

	1975	1990
The lower alternative	2.350 mil.	3.200 mil.
The higher alternative	2.560 "	4.300 "

For the purpose of this study, the higher alternative was adopted, this decision was based on the following reasons:

1. So far, the measures taken by the government to minimize the in flow of migrants to Baghdad have fallen short of what was expected by Polservice in the lower alternative forecast.

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5. this estimate was based on the assumption that the flow of population to Baghdad will fall provided there will be an undertaken of long term intensive and coordinated activity of the authorities directed towards a well proportioned development of the whole country and regulating the spontaneous processes.

6. these estimates were based on the assumption that the authorities compaign of protecting Baghdad from the in flow of population does not wholy succeed.

2. Estimates made by Polservice in 1971, indicated that the population of Baghdad is growing on the same line predicted in the higher alternative forecast, where the population was around 2.27 millions inhabitants, instead of 2.00 millions inhabitants in the lower alternative.

Therefore, the population of Baghdad will be as follows: See, Fig. (5.2).

Table (5.5)

Estimates of the Total Population of Baghdad, 1970 - 1990, Mills:

	1970	1971	1975	1980	1985	1990
Baghdad Population	2.17	2.27	2.56	3.12	3.70	4.30

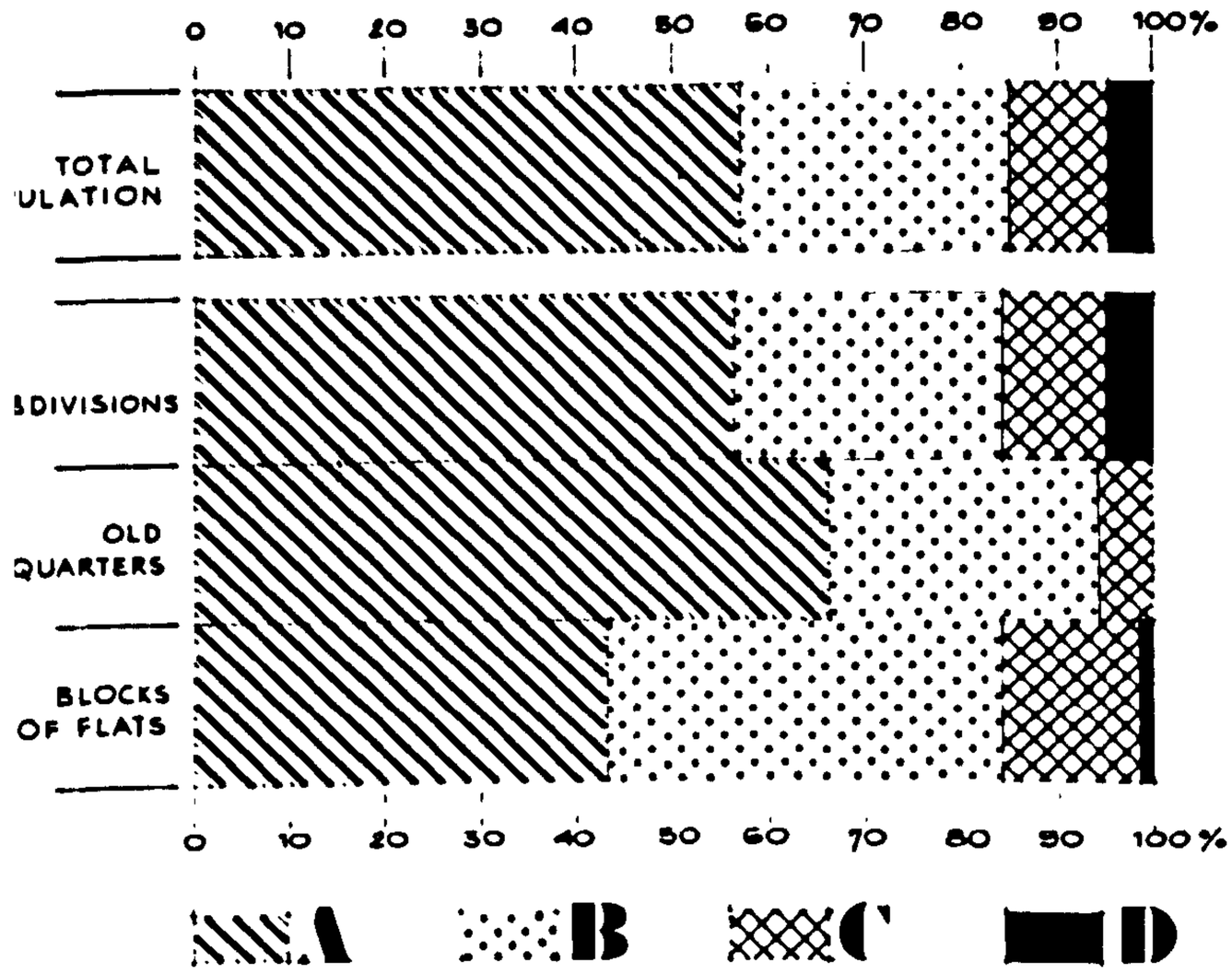
Note:

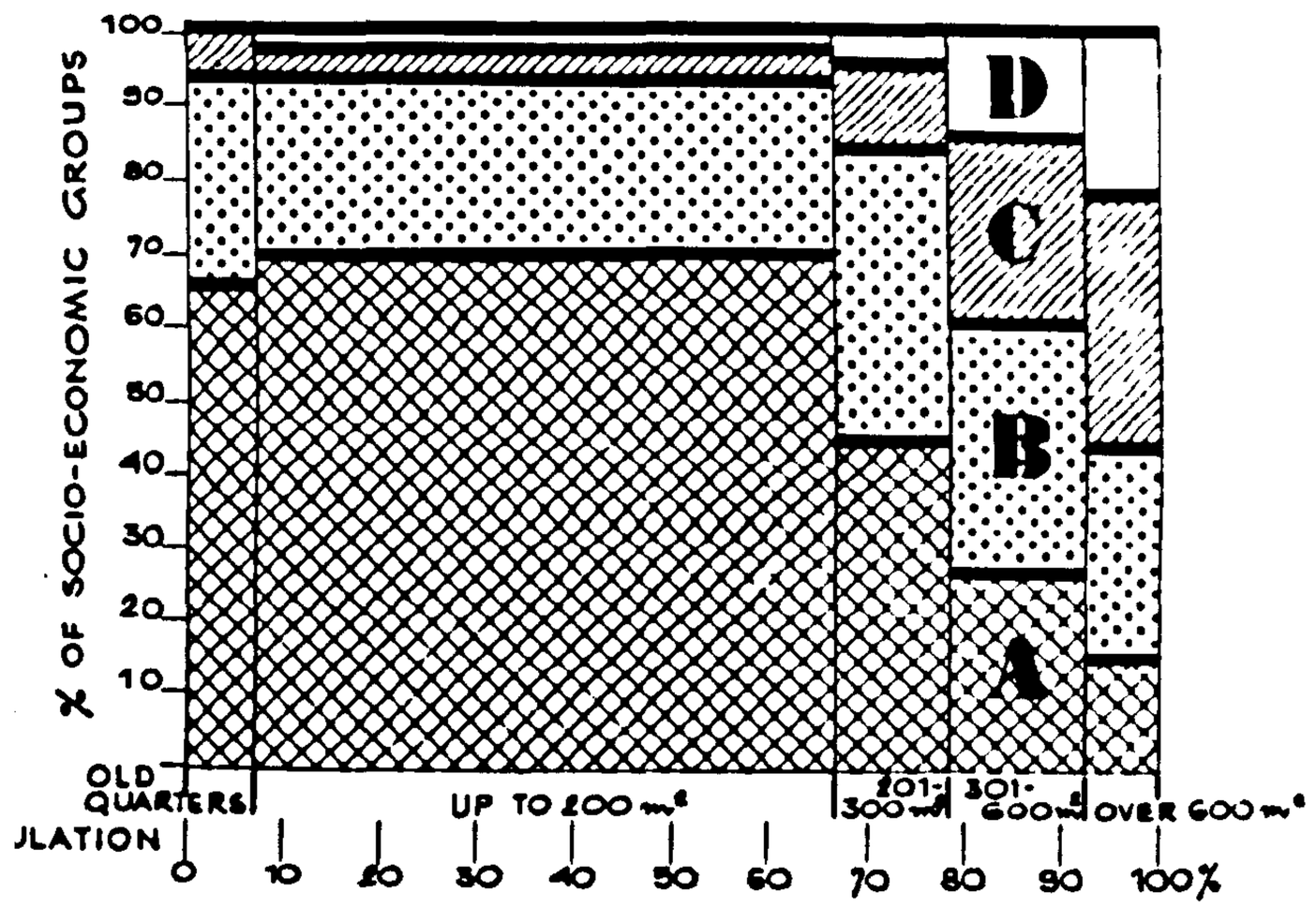
- 1970 population was based on K. Ueda estimates; see, Appendix (1.1)
- 1971 population was based on Polservice, "Civic Survey for Baghdad", Baghdad, 1972.

5.2.2 Population Distribution According to Socio-Economic Groups:

According to Polservice, in 1971, the distribution of the socio-economic groups in Baghdad revealed that the majority are of low income groups; see, Fig. (5.3) and (3.3.1). This situation is expected to change by 1990 due to the expected increases in the incomes and the level of education, particularly between the low

FIG. (5.3) DISTRIBUTION OF SOCIO - ECONOMIC GROUPS IN BAGHDAD ACCORDING TO HOUSE TYPES , 1971





income groups. As a result, the following percentages were envisaged for the distribution of the population according to the socio-economic groups, up to 1990: See, Fig. (5.4).

Table (5.6)

The Distribution of Population According to Socio-economic Groups in Baghdad, up to Year 1990, Percentages:

S-E Groups	1971	1975	1980	1985	1990
A	57.60	50.70	43.80	36.90	30.00
B	27.80	30.85	33.90	36.95	40.00
C	10.30	12.73	15.15	17.57	20.00
D	4.30	5.72	7.15	8.58	10.00
Total	100.00	100.00	100.00	100.00	100.00

Notes:

- The percentage of (A) will decrease by about 1.45 per cent/ annum.
- The percentage of (B) will increase by about 0.64 per cent/ annum.
- The percentage of (C) will increase by about 0.51 per cent/ annum.
- The percentage of (D) will increase by about 0.30 per cent/ annum.

The percentages of the year 1990, seems to confer generally with the predictions made by Municipality of Baghdad which envisaged a decrease in the low income classes and significant increase in the higher income classes particularly those in the middle classes; see, (3.3.1).

On the basis of these projections the following distribution of population has been arrived at:

Table (5.7)

Population distribution in Baghdad according to Socio-economic Groups, up to Year 1990, Millions inhabitants:

S-E Groups	1971	1975	1980	1985	1990
A	1.31	1.29	1.36	1.36	1.29
B	0.63	0.79	1.05	1.36	1.72
C	0.23	0.32	0.47	0.65	0.86
D	0.10	0.16	0.24	0.33	0.43
Total	2.27	2.56	3.12	3.70	4.30

5.2.3 Number of Households:

According to Polservice, the average household size according to the different socio-economic groups in 1971 was as follows:

Table (5.8)

Household Sizes According to Socio-Economic Groups in Baghdad, 1971:

S-E Groups	H.H. Size
A	8.61 persons
B	7.66 "
C	7.00 "
D	6.07 "

Source: Polservice, "Comprehensive Civic Survey for Baghdad," 1972

In order to assess the number of households up to the year 1990, the following assumptions must be made: See, Table (5.9).

S-E Groups

A : Household size will decrease by 0.09 per cent/ annum.

B : Household size will decrease by 0.14 per cent/ annum.

C : Household size will decrease by 0.22 per cent/ annum.

D : Household size will decrease by 0.27 per cent/ annum.

Table (5.9)

Average Household Sizes in Baghdad According to Socio-economic Groups up to the Year 1990:

S-E Groups	1971	1975	1980	1985	1990
A	8.61	8.57	8.53	8.49	8.46
B	7.66	7.60	7.55	7.50	7.45
C	7.00	6.92	6.85	6.77	6.70
D	6.07	5.99	5.91	5.83	5.75

These percentages will give an average decrease of 0.18 per cent per annum, which is in line with the trend between 1956 - 1971, where the size of the household was reduced from 7.5 to 7.3 persons; see, Table (3.2).

Therefore, the number of households according to the different socio-economic groups, up to the year 1990 will be as follows: See, Table (5.7)

Table (5.10)

The Distribution of Households According to the Socio-economic Groups in Baghdad, up to the Year 1990:

S-E Groups	1971	1975	1980	1985	1990
A	152000	150000	159000	160000	152000
B	82000	104000	139000	181000	230000
C	33000	46000	68000	96000	128000
D	16000	26000	40000	56000	75000
Total	283000	326000	406000	493000	585000

5.2.4 The Distribution of Socio-economic Groups up to 1990:

In order to assess the distribution of the socio-economic groups in to the different housing types up to the year 1990, the following objectives have been put forward:

1. The rationalization of the present distribution of the income groups into the different housing types, so as to achieve a balance between households incomes on one hand and the size of dwellings represented by their plots size, where at the present for instance, some 25 per cent of the low income groups i.e. group (A) occupying dwellings with plots of more than 300 sq.m. which are beyond their economic capabilites to maintain as well as being costly for the municipality to provide adequate services; see, Fig. (5.3)

2. The encouragement of the low income groups to live in blocks of flats, thus reducing the area required for housing, as well as hindering urban spread. This should be accommpanied with an extensive research on the reasons and factors behind the present disinclination of the inhabitants for such type of living, as well as to look for acceptable and suitable ideas in designing such buildings to cope with the present and expected social, economic and environmental conditions.

3. The promotion of social integration. This should be based on the harmonization between incomes, housing types, densities and standards. Where at the present there are almost complete segregation between the different socio-economic groups; see, Fig. (3.12), which is causing social disparities as well as disparities between the housing areas in respect to housing standards, municipal services, and the quality of the environment in general.

On the basis of these objectives, the following assumptions and proposals for the redistribution of the socio-economic groups have been made: See, Fig. (5.4).

FIG.(5.4) SOCIO ECONOMIC GROUPS AND HOUSE TYPES IN BAGHDAD UP TO YEAR 1990

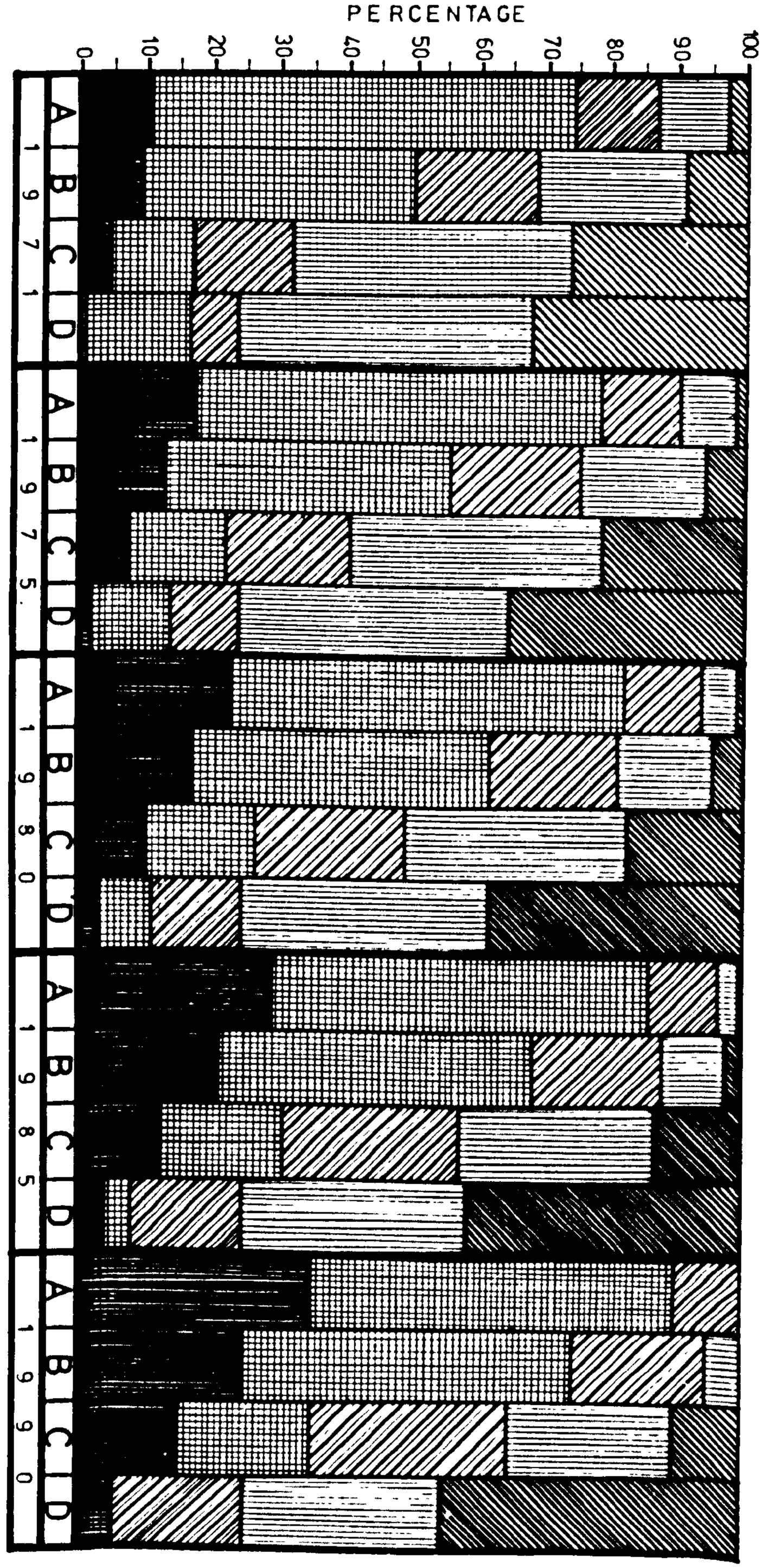


Table (5.11)

Distribution of Socio-Economic Groups into Different Housings Types in Baghdad up to 1990, Percentages:

	Housing Types	Socio-Economic Groups A	B	C	D
1971	a	9.8	7.3	3.2	-
	b	1.0	1.6	1.4	0.2
	c	63.2	40.1	12.4	16.0
	d	12.5	18.9	14.4	7.1
	e	10.7	23.1	42.3	44.3
	f	2.8	9.0	26.3	32.4
	Total	100.0	100.0	100.0	100.0
1975	a	7.3	5.5	2.4	-
	b	9.5	7.4	4.8	1.4
	c	61.1	42.5	14.3	12.0
	d	11.8	19.2	18.3	10.3
	e	8.1	18.6	38.0	40.7
	f	2.2	6.8	22.2	35.6
	Total	100.0	100.0	100.0	100.0
1980	a	4.8	3.7	1.6	-
	b	18.0	13.2	8.2	2.6
	c	59.1	44.9	16.2	8.0
	d	11.2	19.4	22.2	13.5
	e	5.5	14.1	33.7	37.1
	f	1.4	4.6	18.1	38.8
	Total	100.0	100.0	100.0	100.0
1985	a	2.3	1.8	0.8	-
	b	26.5	19.0	11.6	3.8
	c	57.0	47.3	18.1	4.0
	d	10.6	19.7	26.1	16.7
	e	2.9	9.6	29.4	33.5
	f	0.7	2.4	14.0	42.0
	Total	100.0	100.0	100.0	100.0
1990	a	-	-	-	-
	b	35.0	25.0	15.0	5.0
	c	55.0	50.0	20.0	-
	d	10.0	20.0	30.0	20.0
	e	-	5.0	25.0	30.0
	f	-	-	10.0	45.0
	Total	100.0	100.0	100.0	100.0

Notes:

A : monthly income up to 50 ID

B : " " 51 - 100 ID

C : " " 101 - 200 ID

D : " " over 200 ID

a : old, traditional house

b : blocks of flats

c : one family house on plots up to 200 sq.m.

d : " " " " " 201 - 300 sq.m.

e : " " " " " 301 - 600 sq.m.

f : " " " " " over 600 sq.m.

As such, the following are the distribution of households in Baghdad according to their socio-economic structure, and the type of housing they may occupy up to the year 1990.

Table (5.12)

The Number of Households in Baghdad, Distributed According to Socio-economic Groups and Housing Types, up to Year 1990:

	Housing Types	Socio-economic Groups A	B	C	D	Total
1971	a	14900	6000	1000	-	21900
	b	1500	1300	500	30	3330
	c	96000	32900	4000	2560	135460
	d	19000	15500	4800	1110	40410
	e	16200	18900	14000	7100	56200
	f	4400	7400	8700	5200	25700
	Total	152000	82000	33000	16000	283000
1975	a	10950	5720	1100	-	17770
	b	14250	7700	2210	360	24520
	c	91650	44200	6580	3120	145550
	d	17700	19970	8420	2680	48770
	e	12150	19340	17480	10580	59550
	f	3300	7070	10210	9260	29840
	Total	150000	104000	46000	26000	326000

	Housing Types	A	B	C	D	Total
1980	a	7630	5140	1090	–	13860
	b	28620	18350	5570	1040	53580
	c	93970	62410	11020	3200	170600
	d	17810	26970	15100	5400	65280
	e	8750	19600	22910	14840	66100
	f	2220	6530	12310	15520	36580
	Total	159000	139000	68000	40000	406000
1985	a	3680	3260	770	–	7710
	b	42400	34390	11140	2130	90060
	c	91200	85610	17370	2240	196420
	d	16960	35660	25060	9350	87030
	e	4640	17380	28220	18760	69000
	f	1120	4700	13440	23520	42780
	Total	160000	181000	96000	56000	493000
1990	a	–	–	–	–	–
	b	53200	57500	19200	3750	133650
	c	83600	115000	25600	–	224200
	d	15200	46000	38400	15000	114600
	e	–	11500	32000	22500	66000
	f	–	–	12800	33750	46550
	Total	152000	230000	128000	75000	585000

5.2.5 Rate of Obsolescency:

As it has been mentioned earlier, about 39.0 per cent of the housing stock in Baghdad was regarded as in good condition from the point of view of structural soundness and health requirements, while about 46.8 and 13.4 per cent were in medium and bad conditions respectively see, Table (3.1).

For the purpose of this study, all the housing stock of medium conditions will be regarded as suitable housing, but their rate of obsolescency will vary according to the type of housing and the size of plots they occupy, since there is a relationship between housing conditions and size. As such, the following are estimates on the rate of the annual obsolescency up to the year 1990:

Table (5.13)

Estimates of Annual Rate of Obsolescency According to Housing Types in Baghdad:

Housing Type	Annual Obsolescency Rate
a	3.0 per cent
b	1.0 per cent
c	2.0 per cent
d	1.5 per cent
e	1.0 per cent
f	0.5 per cent

Note:

- The average rate of obsolescency is about 1.5 per cent per annum. This is slightly higher than that assumed for Iraq as a whole; this is due to the accepted trend that dwellings in cities tend to deteriorate at a higher rate than in small towns or villages caused by their intensive use and occupany level.

According to these estimates, the percentages of the housing stock regarded to be unacceptable for habitation are as follows:

Table (5.14)

The Percentages of Unacceptable Housing in Baghdad According to their Type up to the Year 1990:

House Type	1971	1975	1980	1985	1990
a	96.8	100.0	100.0	100.0	100.0
b	16.8	20.8	25.8	30.8	35.8
c	14.0	22.0	32.0	42.0	52.0
d	1.5	7.5	15.0	22.5	30.0
e	0	4.0	9.0	14.0	19.0
f	1.8	3.8	6.3	8.8	11.3

Accordingly the following are the number of dwellings classified according to their type in Baghdad up to the year 1990 regarded to be unacceptable:

Table (5.15)

Estimated Number of Unacceptable dwellings According to their Types in Baghdad:

House Type	1971	1975	1980	1985	1990
a	21200	21900	21900	21900	21900
b	560	690	860	1000	1180
c	18960	29800	43300	56900	70440
d	600	3030	6060	9090	12100
e	-	2200	5060	7850	10680
f	480	980	1620	2260	2900
Total	41800	58600	78800	99000	119200

5.2.6 Housing Vacancy and Demolition Rates:

In order to assess the rate of vacancy in dwellings in Baghdad, it has been assumed that during the period, 1971 - 1990, some 100 dwellings of different types will lay vacant; this represents about 0.35 per cent of the stock.

As for the number of dwellings which are likely to be demolished annually, two assumptions were made:

a. 5.25 per cent of the stock of the old, traditional houses will be demolished annually, this will give a figure of about 1150 dwellings. This rate of demolishing is equivalent to that envisaged by Polservice in the current master plan of Baghdad.

b. 0.05 per cent of the stock, excluding the old, traditional houses, this will give a figure of about 130 dwellings which are likely to be demolished annually - Author's estimates based on information obtained from Baghdad Municipality, 1972.

5.2.7 Assessment of Housing Needs:

On the basis of previous assumptions, regarding population projections, number of households, rate of obsolescency, rates of vacancy and demolition, the following assessment of housing needs in Baghdad up to year 1990 has been made:

Table (5.16)

Housing Needs in Baghdad up to the Year 1990, Classified According to Housing Types:

Housing Types	1971	1975	1980	1985	1990
a	43290	39800	35920	29800	22060
b	4070	25370	54630	91300	135020
c	154670	175780	214660	254500	296070
d	41200	52050	71700	96600	127240
e	56400	62000	71600	77400	77370
f	26370	31000	38490	45400	49840
Total Need	326000	386000	487000	595000	707600

5.2.8 Housing Shortage:

By subtracting these needs from the existing acceptable housing stock, the housing shortage will be assessed as follows:

Table (5.17)

Housing Shortage in Baghdad up to 1990:

Housing Types	1971	1975	1980	1985	1990
a	21390	17900	14020	7900	160
b	1300	22730	52160	88970	132870
c	38170	70120	122500	175940	231050
d	1390	14670	37350	65280	98930
e	200	8000	20460	29050	31850
f	1150	6280	14410	21960	27040
Total Shortage	63600	139700	260900	389100	521900

In order to assess the number of new dwellings to be constructed by the year 1990, it has been assumed that about 50 per cent of the unacceptable dwellings may either be rehabilitated or redeveloped; therefore the number of dwellings needed to be constructed to satisfy the shortage are as follows:

Table (5.18)

Number of New Dwellings to be Constructed in Baghdad by the Year 1990:

Housing Types	Number of New Dwellings
b	132300 flats
c	195800 houses
d	92900 "
e	26500 "
f	25600 "
Total	473100 dwellings
Total per annum	24900 "

This total is almost equivalent to the number of dwellings envisaged to be required in Baghdad by the year 1990, by Polservice in their master plan of Baghdad; see, (4.2.0), while the number of flats required to be constructed are higher than proposed by Polservice by about 47 per cent.

In order to compare the proposed rate of 24900 new dwellings required to be constructed annually with the average rate of construction by the private sector and the Ministry of Housing, which is

responsible for about 70 per cent of the houses constructed by the public sector; see, Appendix (5.2), it has been found that present rate of house construction in Baghdad should be increased by almost 2.7 times.

5.2.9 Land Requirements:

The assessment of the needs for land to accommodate the required new dwellings is a very complicated matter, since it depends largely on the densities at which the additional dwellings are to be developed, as well as on the rate at which dwellings are to be replaced, where for instance, the replacement of dwellings creates a demand for additional land, while on the other hand their demolition naturally releases land suitable for other type of development, such as the case of the old, traditional houses in the central area of Baghdad where the land to be released from their demolition could be used as multi-storey residential development.

For the purpose of this study, the number and area of the land needed to be developed to accommodate the required dwellings up to the year 1990 was worked out on the basis of the data provided by Polservice on the number of plots of different sizes which are laying vacant or subject to the Municipality of Baghdad's approval, see, Figs. (5.5 and 5.6). As such, the number of plots required will be around 167620 plots classified as follows:

FIG. (5.5) STOCK OF PLOTS

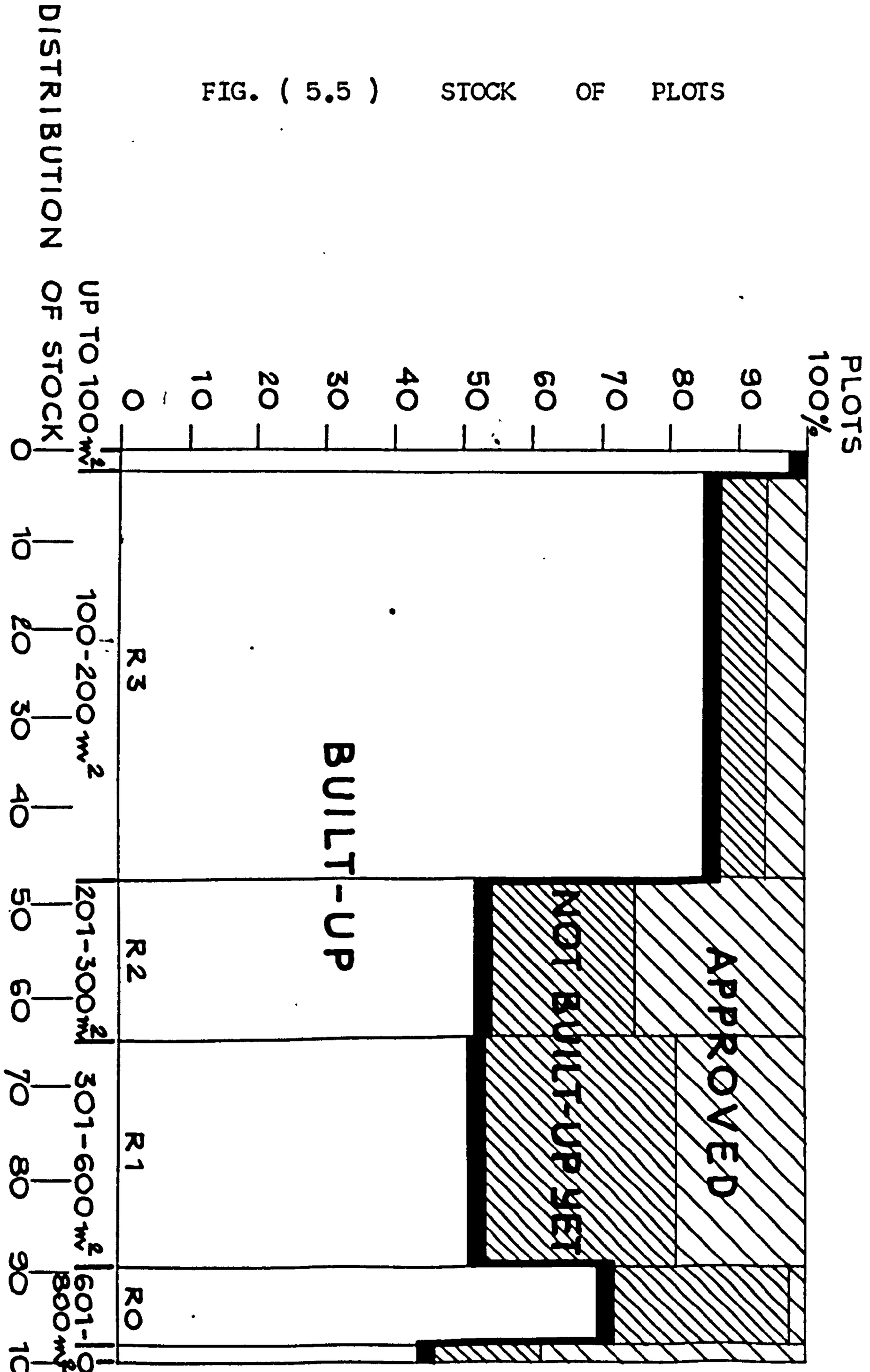


FIG. (5.6)

HOUSING · BUILT-UP PLOTS BAGHDAD

0 1 2 3 4 5 KM

Source : POLSERVICE

Table (5.19)

Estimation of Residential Land Required to Accommodate the New Dwellings in Baghdad up to 1990, According to their Size:

Plot Size	Needs up to 1990	Available Plots	Plots Required up to 1990	Total Area ha.
up to 200 sq.m.	195800	35130	160670	up to 3213
201 - 300 " "	92900	12440	80460	1617-2414
301 - 600 " "	26500	18290	8210	247- 492
over 600 " "	25600	7320	18280	1096- over
Total	340800	73180	267620	up to 7215

Notes:

- The number of plots required up to 1990 are only those to accommodate the one family houses, and they are not including plots required for house type (b), which is the multi-family blocks of flats, since the number of such plots and their sizes depends on the size and design of these blocks.

- The total area of the plots do not include the urban services, i.e. roads, public open spaces, etc.

5.3.0 The Problems of Sub-standard Dwellings:

As it has been estimated earlier, some 13200 dwellings should be either rehabilitated or redeveloped in Iraq annually; see, Table (5.3). This was based on the assumption that about 50 per cent of the unacceptable dwellings are not in such a bad condition to be demolished

out right. In this case, the decision to be taken by the government or individuals is very difficult one; apart from its economic significance, there are many factors involved, such as social and political.

Rehabilitation as a solution to the housing problem is a relatively recent phenomenon in terms of official attention even in the developed countries though as an activity, it is as old as the houses themselves. The term rehabilitation covers all forms of maintenance, repair and alteration made to a building or area subsequent to initial construction and up to but excluding its demolition and redevelopment. It must be said at the outset that rehabilitation is just one means of improving housing conditions. More precisely it constitutes a phase in the life cycle of a house. It must be seen in conjunction with redevelopment as an integral part of the evolution of the townscape. This aspect appears to be neglected at times with undue emphasis being placed on one method at the expense of others.

In recent years, many studies have been made on the question of rehabilitation and redevelopment of housing areas regarded as below the minimum acceptable standards. Most of these studies seem to conclude that rehabilitation is a better course from the economic point of view than redevelopment. In a large number of instances this conclusion has been reached from a consideration of costs only, without regard to the socio political implications involved.

It must be pointed out that it is seldom desirable to make decisions on whether to rehabilitate or redevelop the housing stock in an area purely on economic grounds. Social, political, ethical and other factors must be of prime importance in the decision, for it is often better in human terms to make a less efficient use of resources in order to achieve objectives such as an improved environment, better health, or social structures more conductive to the fulfilment of the individual. Although this is true it is still necessary to examine the alternative courses of action from an economic point of view for they must involve the use of resources.

With the increasing demand on resources in Iraq to produce commodities, accommodation and services such as education, health and transport etc. it is, therefore, necessary that in the provision of housing, resources are not being used wastefully, and the most efficient use should be made of them. To do this, the government must make an economic assesment of the alternatives even if, in the final analysis, the decision as to the course of action is made on non economic grounds. If this is done, it can be argued that the economic aspect has been considered along with others, whereas if no economic assessment have been made, it is difficult to counter the charge of waste or inefficiency.

For the purpose of this study, it is recommended that the economic assessment of whether to rehabilitate or redevelop should follow the concept developed by Needleman,[7] which suggests that the choice between redevelopment and rehabilitation depends on four factors:

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7. see, L. Needleman, "The Economics of Housing", Staples Press, London, 1965, p. 201.

i. the rate of interest.

ii. the future length of life of the improved property.

iii. the difference between the running costs of the new and improved property.

iv. the difference between the rent returns of the new and improved property.

Needleman model postulates that rehabilitation will be the more efficient use of the economic resources if:

$$b \geq m + b\,(1+i)^{-n} + b\,\frac{(r+p)}{i}\left[1-(1+i)^{-n}\right]$$

Where:

b = the cost of clearance / redevelopment

m = the cost of rehabilitation

i = the rate of interest

n = the useful life of the rehabilitated property in years

r+ p = the difference in running costs and rents between a new and rehabilitated property expressed as a percentage of the economic value of the new property.

This model implies that rehabilitation will be worthwhile only if the sum of the costs of rehabilitation, the present value of the cost of redevelopment in (n) years time, and the present value of the differences in annual running costs and rentals over (n) years, is less than the present capital cost of redevelopment.

This model may be adjusted to allow for the difference in the standards between new and rehabilitated dwellings. [8]

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8. see, Dept. of Environment, Curcular, 65/69.

C H A P T E R 6

ASSESSMENT OF HOUSING STANDARDS

The term "standard", in the expressions housing standard and construction standard, is used in two senses: It may describe a certain level of existing housing conditions, and it may also mean the current norms used for determining the level of satisfaction of housing needs and the quality of the housing built. A standard then is an instrument of building policy regulating the character of the building.

The construction standard may express more or less accurately the floor space, the equipment, and the finish which residential buildings must provide for the users. Also the term standard is often widened to include town planning elements such as housing densities, and the supply of public services. The definition of all these factors predetermines the cost of construction, and it thus becomes possible to reduce the notion of the construction standard to a single synthetic index, i.e. the average cost of constructing a dwelling of a certain size and a certain quality.

Housing standards are basic to planning, since any attempt to regulate standards is likely to affect the cost of the dwelling, and hence the number of dwellings built, and the number of families housed, within a given capital allocation. Furthermore, control of density standard affect the plot coverage or siting, and hence the layout of residential areas.

Housing standards in any country are a product of the building technology and economic resources available, although the social value placed on housing will in part determine whether it receives a smaller or larger share of these resources. In general, housing standards tend to rise with national wealth; for instance, the average number of rooms per dwelling is far higher in the wealthier, more developed countries than in the poorer, developing ones, although in the wealthier countries households are on an average smaller; see, Table (6.1).

The function of regulations governing standards and the method of enforcing them depends, like the other components of building policy on the general conditions and the social and economic structure of the country, and on the extent to which the public authorities intervene in problems of housing construction.

Table (6.1)

Housing and National Wealth; International Comparison:

Country	1	2	3	4
Iraq	7.3	3.1	2.6	117
Iran	5.0	3.0	2.3	108
Syria	5.9	2.5	2.3	173
Greece	3.8	2.6	1.5	340
Poland	3.4	2.5	1.7	475
Netherland	3.7	5.1	0.8	836
UK	2.9	5.5	0.7	1189
Sweden	2.7	3.6	0.8	1380
Canada	3.7	5.4	0.7	1947
USA	3.3	4.9	0.7	2577

Notes:

1 Average Size of Household

2 Average No. of rooms per dwelling

3 Persons per room

4 G.N.P. per capita, £.

Source: United Nations Statistical Year Book, 1970.

In the planned economy countries, for instance, public investors are required to comply with the provisions governing the size and equipment of the planned dwellings. Similar but more general and flexible regulations are also applied to construction carried out with the aid of State funds. On the other hand, in the free economy of Western European countries, the extent to which this field is governed by regulation depends on the housing situation and the degree of State intervention in housing construction. The regulations are more restricted, however, since they relate in the main only to construction for the low income population and to State subsidized building. [1]

In the U.K. for instance, the notion of minimum acceptable housing standards was originally introduced to improve the health situation of the people, but in later periods, with the increasing scope of powers given to the local authorities for securing comprehensive redevelopment and for controlling ill-managed property, minimum standards regulations were gradually extended beyond the confines of traditional slum clearance procedures. According to D.V. Donnison,

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1. see, "Finance of Housing in Europe", (E/ECE/328) ECE, Geneva, 1958

if the replacement programmes is to be greatly enlarged, an increasing number of local authorities will find they have cleared all the houses that could properly be described as "unfit", yet they will not have eliminated bad housing conditions. [2]

In a recent paper published by Dr. R. McKie a discussion was made on the physical basis of conventional concepts in urban renewal in the U.K., in which three main questions were asked on the housing standards and its implications on urban renewal. [3] These were:

1. How far should standards be revised upwards just because we are now three quarters of the way through the 20th century?.
2. Should such revisions go beyond simple provisions required to deal with 20th century nuisances like aircraft and motorway noise?
3. Are our expectations always rising, or have standards already been set too high?.

At the present in Iraq, there is no general censuses as to what constitute substandard housing. For example, is absence of a private bath always an indicator of a substandard dwelling unit?. Are reed structures always substandard, even when they are well-suited to climate and may be gracefully designed?. Is a traditional dwelling, often functionally arranged around a private courtyard; see (3.2.2),

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2. see, D.V. Donnison, op.cit, p. 289

3. see, Dr. R. McKie, "Cellular Renewal, A Policy for the Older Housing Areas", Town Planning Review, Vol. 45, No. 3, July 1974, p. 275.

to be considered obsolete because it lacks the amenities present in modern dwellings?. These questions on what constitute substandard housing have often been ignored when housing needs in Iraq were estimated and evaluated, which has led to defining the situation in such a bleak terms as to make it hopeless.

In the present phase of industrialization and urbanization in Iraq, when the volume of construction does not cover the growing need for housing; see, (5.1.0), the restrictive function of the standards is of the utmost importance. Also it is extremely important to define the level of the standard as a basis for the preparation of the housing programme and a guide for construction policy. In this respect, the main factors governing the dwelling standard fall into two groups: First, the present and future economic resources of the country allocated to housing. Second, the present housing situation, the magnitude of the housing requirements at the time, and their rate of development.

Since housing standards are relative to time and place and cannot be simply, automatically or universally applied, the question then will be, on what basis can Iraq at its present stage of development set its minimum housing standards and when should it raise or lower them? The minimum standard in this context expresses the minimum sanitary and utility and space requirements with which the dwelling must comply.

In this chapter, an attempt will be made to answer these questions by first analysing the basic factors affecting the establishment of housing minimum standards; the economic resources available to achieve these standards; the possible combinations of standards and their consequence; and finally the assessment of the standards for facilities related to housing.

6.1.0 Factors Affecting Standards:

The basic factors to be considered in connection with the establishment of minimum standards for housing in Iraq should be: Climate; Custom; Health and Sanitation; Space; Density; and finally the policy regarding construction of dwellings at above minimum standards.

6.1.1 Climate

Since Baghdad, and for that matter Iraq in general, suffer from severe climatic conditions; see, (11.2.2), minimum housing standards should include provision for adequate shelter from heat, direct sun, and dust storms. In Iraq, the people have traditionally developed solutions for such climatic conditions, therefore it is recommended that those solutions that have proved effective in relation to the local climate should be considered in settling the minimum standard for houses.

The following are the proposed basic minimum climatic requirements that may be considered in setting minimum housing standards in Baghdad: [4]

1. External brick walls should not be less than 24 cm. in thickness.
2. Internal floors should be paved with sub layer of concrete, minimum 6 cm. in thickness.
3. Each room should have at least 1 sq.m. of ventilation window.

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4. As far as other parts of the country, this depends largely on the building materials and the system of construction, i.e. the use of stones in the northern region.

4. Each dwelling should have an access to the roof for sleeping on summer nights.
5. Each roof should be provided with parapet, between 1.50 - 1.70 m. in height.
6. Each window should be protected from direct summer sun by providing it with projection of not less than 40 cm. width. This is except in the northern and western directions, where in the case of the former, there is no need for such projection since the sun cannot penetrate from the north; while in the case of the latter, openings should be discouraged in any way; if existing vertical screens should be provided.
7. The total area of windows in any room should not exceed 3 sq.m. so as to protect them from solar radiation.
8. Each dwelling should be provided with shaded area of no less than 3 sq.m.
9. Exposed roofs should be provided with at least one insulation layer.

These requirements are by no means conclusive, since there are other factors which effect climatic standards, i.e. the arrangement of space; the provision of open space within the dwelling; and the general layout of the housing area.

6.1.2 Custom:

Imposing minimum standards that are completely out of line with local customs is both unrealistic and unworkable. By studying local building methods, materials and designs, many satisfactory and

indeed ingenious devices may be found which, if adopted generally, would improve existing levels of housing. Some aspects of traditional designes, such as the concept of court yard, may turn out to be more efficient, attractive, and in many aspects economic than the forms of the artificially developed model houses which are largely based on concepts and standards imported from other cultures, particularly the western culture. Alien dwelling forms, such as the model houses proposed by Polservice as part of the recent master plan for the city of Baghdad; see, (4.2.1), often require high level of technology and imported parts, recourse to unfamiliar and expensive building techniques and the waste use of foreign exchange. The method suggested here is to identify the better features of the traditional housing, and try to develop them and build them into the standard. It must be emphasised here that the use of these features should not be confined to decorative purposes only, but as functional elements within the dwelling's fabric.

6.1.3 Space:

Regardless of the level of income of the people, they still carry on the basic human functions in their houses, such as preparing and eating meals, resting and sleeping, washing and drying clothes, spending leisure time, conversing with and entertaining guests. For these and other functions, they need space and privacy.

The appropriate space standard per person is affected by the size of the households; according to the Ministry of Housing and Local Government in the U.K., a household of six persons will require less

than three times as much accommodation as a two-person household. [5]

Ideally, accommodation standards should take account not only of the size of the household but also of its composition. For instance, in the case of a four-person household, a family consisting of a married couple with two young children would have different space requirements from one composed of a widow and three grown-up children. But in practice, it is not possible to allow for such refinements, particularly in a large housing programme.

It is clear that space is not a simple concept but a multi-dimensional one. Accordingly, standards should be concerned not only with floor space per person, but with rooms per person, household size and many other factors as well. In Iraq generally typical space used per household varies from one part of the country to another, so widely that no acceptable standard can be said to exist. Nevertheless, in the urban areas, and the large cities, some kind of uniformity exists. For instance, most of the houses do have guest rooms in addition to the living room, this is almost regardless of the socio-economic status of the household; another typical space is the roof for summer night sleeping and drying clothes. The need for space and its utilization depends largely on the living pattern of the household, and the equipments used in the dwelling, and indeed the design concept of the dwelling itself. Therefore, as in other aspects of housing standards, an analysis should be made on the ways people

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5. see, Ministry of Housing and Local Government, "Homes for Today and Tomorrow", H.M.S.O., 1960 - The Parker Morris Report -, ch. 2, pp. 7 - 35.

live, and the existing space occupied by the typical low income households, and the setting of the minimum standards should take into account the present level of development, and the expected and attainable level of improvement for the bulk of the population.

6.1.4 Density:

Since the aspect of density has been discussed in greater detail in a later chapter; see, (11.2.0), it is important here to mention the particular aspects of density related to the question of housing standards.

The significance of housing densities in the assessment of housing standards stem from its effects on public health. Perhaps one of the first planning attempts to link densities with standards and public health was in the mid-nineteenth century in the U.K. where the first attempt to define slum or substandard housing took the form of legislation designed to control the menance to health presented by the slums of the industrial cities of that time, where it was observed that the highest incidence of infectious disease in these cities occurred where the population was most densely clustered. Overcrowding and its association with ill health still influences thinking on the regulation of housing standards in the U.K. although it is proving increasingly inadequate for several reasons. For instance, there is no longer any clear relationship between health, physical or mental, and housing conditions. Rising housing standards and the progress of curative medicine, resulting in the decline of some diseases and a relative growth in

the importance of others have weakened and confused the always uncertain relationship between housing and health. [6]

If high densities are not necessarily a threat to physical health, there is still the question of whether they have other detrimental effects on human behaviour or mental health. Although this is very difficult to assess in precise terms, studies in the U.K. have established positive correlations between densities in urban areas and pathological factors such as suicide, delinquency and mental health, but usually these correlations disappear when income and social status are also considered. The question remains open, however, as to whether there is some minimum amount of space in dwellings expressed as sq.m. per person, or persons per room, below which the individual is likely to experience undue stress, but it is clear that restricted space can limit behaviour, and plays a part in shaping patters of living. [7]

Though individual dwellings and their equipment can be improved or replaced with better ones, the layout of buildings in relation to one another, once set, can be improved only with the greatest difficulty, since this will involve the altering of the streets pattern, the creation of new spaces on the expense of the existing structures, etc. This implies that, though minimum construction of dwellings may be set at a lower level than say the anticipated

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6. see, D.V. Donnison,"The Government of Housing", Pelican Books, 1967, England, p. 287.

7. see, R.E. Mitchell, "Some Social Implications of High Density Housing", American Sociological Review, Vol. 36, Feb. 1971, No. 1, pp. 18 - 29.

resources will permit in the foreseen future, the standards in relation to street and utility costs should be as high as possible, thus catering for future improvements in the residential area.

Another point to be considered is that overloading a piece of land to reduce land costs per dwelling unit may be a temptation, but in the long run it may be self defeating, since it results in patches of excessive density interspersed with low density development or unused vacant plots, with no real savings in utility costs and, in the totality, no lower land costs than would result from a well distributed pattern of residential development.

In Iraq generally, and in Baghdad in particular, it is important that standards should include the provision of sufficient open space between buildings to enable adequate light, air, and where appropriate, sunshine, particularly in winter, to penetrate into the rooms and to provide useable open areas for children play and adult recreation, in addition to its contribution to privacy. Accordingly, too generous open space standards will inevitably involve excessive costs for streets, utilities, and other related facilities, and if adopted would require standards to be lowered in other respects. In this connection may be mentioned the costs of providing urban services to luxury housing on large plots, which are excessively burdensome when resources of the Municipality are limited. Here again, a minimum standard may call for a mximum standard to be set also, if it is to be an effective tool in housing programming.

6.1.5 Health and Sanitation:

Cleanliness requires that the standard include facilities, even though simple ones, for bathing and toilet use, that are adequately illuminated and ventilated and can be kept clean, and that some definite means of sewage disposal that guarantees freedom from pollution be provided. The standards to be adopted in regard to health in Baghdad and Iraq must include the provision of window screening, which are necessary, particularly in summer, to prevent flies and insects which cause eye diseases such as "Trakhoma" and other communicable diseases. Whatever compromises that might be made on other aspects of standards, it is essential that standards should be set so as to meet basic requirements for the protection of the people's health.

6.2.0 Dwellings above Minimum Standards:

As far as the policy regarding dwellings at higher than the minimum standards, the provision of houses above the minimum standard in Iraq may be a necessity in relation to other development objectives, such as to keep professional people from leaving the country or to attract skilled people to remote areas outside Baghdad. The additional costs involved may thus be considered part of the price of assuring the success of the overall development plan, rather than as chargeable to the costs of achieving certain housing standards or objectives as such. If, in addition, the country's housing policy permitted the construction of high standard or luxury dwellings by those who can afford them, it might be unable to sustain the desired rate of new dwelling construction unless the required capital investment were taken from some other sector of the economy.

Since averages are sharply affected by extremes, a relatively small proportion of expensive dwellings can sharply reduce the number of dwellings a given investment can finance. In order to expand on this issue, the following is an attempt to examine the effects of different combinations of minimum and expensive dwellings on the number of dwellings that can be produced in Iraq and Baghdad.

In the case of Iraq, the following assumptions were made:

a. The capital available for housing investment is 40 millions ID. This is based on the allocations made in the 1970-1974 National Development Plan, amounting to 160.25 millions ID for the plan period, see, (3.4.0).

b. The minimum standard dwelling costs about 600 ID. This is excluding the cost of land, and does not take into account the possibility of self-help method of construction.

c. The average luxury house costs about 6500 ID. This is also excluding the cost of land.

The estimates of the costs of the minimum standard and luxury dwellings were based on the costs of dwellings in Baghdad; see, Table (6.4) assuming that in Iraq these dwellings will cost about 20 per cent less.

Table (6. 2)

Possible Combinations of Minimum Standard and Luxury Dwellings in Iraq, and its Effects on the Number of Houses that could be Built, Based on 1970 Total Population:

(1)	(2)	(3)	(4)	(5)	(6)	(7)
100	0	600	66670	7.0	66670	-
90	10	1190	33610	3.5	30250	3360
80	20	1780	22470	2.3	17980	4490
70	30	2370	16870	1.7	11810	5060
60	40	2960	13510	1.4	8110	5400
50	50	3550	11270	1.2	5635	5635
40	60	4140	9660	1.0	3860	5800
30	70	4730	8450	0.9	2540	5910
20	80	5320	7520	0.8	1500	6020
10	90	5910	6770	0.7	680	6090
0	100	6500	6150	0.6	-	6150

Notes:

(1) Minimum standard dwellings percentage.

(2) Luxury dwellings - percentage.

(3) Average cost per dwelling, ID.

(4) Total Number of dwellings that could be built.

(5) Rate per 1000 population.

(6) Number of minimum standard dwellings.

(7) Number of Luxury dwellings.

From Table (6.2), it is evident that the number of dwellings to be built is strongly affected by what proportion of the dwellings is built at costs higher than those required by the minimum standard. It also reveals that even if all the dwellings were to be built at the minimum standard cost of 600 ID, the allocation of 40 millions ID is only capable of producing 48 per cent of the estimated number of new dwellings needed to be constructed annually in Iraq up to 1990; see, (5.1.3). This situation calls for a substantial increase in the allocations, amounted to about 150 millions ID per annum, so as to achieve a construction rate of about 12.7 new dwellings per 1000 population, i.e. 127700 houses, composed of 90 per cent of minimum standard dwellings, and 10 per cent of luxury dwellings. [8] With the estimated Gross National Product, in 1974, at about 3000 millions ID this allocation will represent about 5 per cent, which is well within the percentage recommended by the United Nations Committee for housing investment in Iraq during the period 1969 - 1973; see, Appendix (4.1).

In Baghdad, however, it is suggested that the basic minimum housing standards should be high enough to represent an improvement over the current level of living of the bulk of the inhabitants, but not too high to be unattainable by them in the relatively near future. Though it might be impracticable to require that all the new housing be built down to this minimum standard, it may be necessary to set a maximum standard as well, so that scarce resources will not be used to benefit only a favoured few, i.e. the high income groups.[9] A high proportion

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8. The term luxury dwellings, means houses above the minimum standard.

9. The maximum standard is the limit which must not be exceeded, in order to counter excessive demands by certain individuals on socio-economic groups, disregarding both the economic capacity of the country and the housing situation.

of the households in Baghdad still have incomes well below average, and some of them are expected to continue on this income level for the next twenty years. They will not be able to afford even the minimum standards without public aid in the form of subsidies of some sort. [10] To lower the minimum standard to what these latter households can afford would be tantamount to having no standards at all. Although it must be appreciated that the application of the household's own labour, mutual self-help, and other non-monetized resources can, of course, increase what it can afford, but may still not be able enough to achieve the standard.

The following is an attempt to analyse the effects of different combinations of construction standards on the total cost of houses to be built annually in Baghdad, and the options open in the event that the allocations are not increased to meet these standards. To do so, the following assumptions have to be made:

A. As it has been estimated in the last chapter, the number of dwellings needed to be constructed in Baghdad annually up to 1990 is about 24900 dwellings; see (5.2.8). In order to classify those dwellings into different sizes in terms of number of bedrooms, the following percentages are proposed:

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10. For the expected changes in the income levels of the inhabitants of Baghdad up to 1990; see, (3.3.1).

Table (6.3)

Proposed Classification of the Dwellings needed to be Constructed in Baghdad Annually, According to the Number of Bedrooms:

Dwelling Size, B.R.	Percentage	Number of Dwellings
1	30.0	7470
2	33.5	8340
3	26.5	6600
4 - 6	10.0	2490
Total	100.0	24900

Note:

The above classifications are based on the distribution of families in Baghdad according to their size; see, Fig. (1.3) and the classifications made by the Ministry of Housing and Public Works, on the number of bedrooms needed for each household size; see, Appendix (5.1).

B. In order to assess the average cost of dwellings built in Baghdad of different construction standards and sizes in terms of number of bedrooms and floor space, a number of interviews were carried out by the author in Baghdad in 1972 with contractors and consultants on the prices of house construction per sq.m. The results were then applied to 150 house designs of different sizes in terms of number of bedrooms and floor space. Table (6.4) demonstrates the findings of this analysis:

Table (6.4)

The Relationships Between, Number of Bedrooms, Floor Space, and Dwelling Cost According to Different Standards of Construction in Baghdad, 1972:

	Low cost		Med. Cost		High Cost	
No. of Bedrooms	F.S.sq.m.	Cost ID	F.S.sq.m.	Cost ID	F.S.sq.m.	Cost ID
1	50	750	65	1170	70	1610
2	70	1050	75	1350	85	1955
3	100	1500	120	2160	150	3450
4	150	2250	180	3240	220	5060
5	180	2700	250	4500	300	6900
6	220	3300	300	5400	350	8050

Notes:

- The cost of the dwellings was calculated on the basis of the average cost of 1 sq.m. of construction, which includes: building materials, labour, and profit. They are as follows: (1972 prices)

  Low Cost : 15 ID per sq.m.
  Med. Cost : 18 ID per sq.m.
  High Cost : 23 ID per sq.m.

- The floor Space was averaged from 50 houses designs for each type of construction standard.

Source: Data obtained from interviews with contractors and consultants in Baghdad, 1972.

C. On the basis of the assumptions in (A) and (B), all the possible combinations of the three construction standards of dwellings was made according to their number of bedrooms. This was made on the basis of 10 per cent ratios for simplification purposes: see, Appendices (6.1; 6.2; 6.3; 6.4; 6.5; 6.6; 6.7; 6.8 and 6.9).

The results of these possible combinations revealed that even if all the dwellings were to be built at the low construction standard, the total cost would be around 31.1 millions ID, which is almost 78 per cent of the total allocation for the whole country; see (3.4.1). Since in actual practice not all the dwellings are going to be built at the low construction standard for the reasons mentioned earlier; the following is the suggested combination: 60 per cent low standard, 30 per cent medium standard, and 10 per cent high standard, i.e. combination (e - E); see, Appendix (6.1). This assumption was based on the socio-economic structure of the population of Baghdad as of 1971; see, Table (5.2.4), assuming the socio-economic group (A) will occupy the low standard dwellings, similarly, group (B) will occupy the medium standard dwellings, and groups (C and D) will occupy the high standard dwellings. Because it is extremely difficult to recommend different combinations for each house size (i.e. by number of bedrooms) it is assumed that the recommended combination will be applied to all the dwellings regardless of their size in terms of number of bedrooms. The following table illustrates the number of dwellings to be constructed annually in Baghdad according to their standard of construction, size, in terms of bedrooms, their average cost, and finally the total cost of the dwellings as a whole.[11]

11. It must be emphasized that these costs do not include the cost of land purchased through the free market.

Table (6.5)

The Recommended No. of Dwellings to be Constructed Annually in Baghdad, According to their Size; Standard of Construction;

No. of B.R.	L. Standard	M. Standard	H. Standard	Average Cost	Total Cost
1	4480	2240	750	960 ID	7.1 mill. ID
2	5010	2500	830	1230 ID	10.2 " ID
3	3960	1980	660	1890 ID	12.4 " ID
4 - 6	1490	750	250	3620 ID	9.0 " ID
Total	14940	7470	2490	1925 ID	38.7 mill. ID

Note:

It is important to notice that the average cost of dwelling recommended to be built is almost 15 per cent more than the average cost of dwellings built in Baghdad during the period 1960 - 1971; see, Appendix (3.10).

The above table revealed that, in order to achieve the rate of dwelling construction needed annually in Baghdad, with the recommended combination of standards, the sum of 38.7 millions ID is required to be allocated. If, for instance, this sum is not allocated, for either political or economic priority reasons, then the following alternatives are available:

1. To lower the minimum standards; this is based on the assumption that the costs cannot be reduced without lowering the standards.
2. To maintain the standards, but find ways to lower the cost through:
   a. Standardization of main construction components, i.e. doors, windows, staircases, plumbing, etc.

b. More efficiency in the labour organization and the building industry.

c. The introduction of large scale construction units based on mass production system, such as roofs, fences etc.

3. To maintain the standards and build a lower rate of new dwellings per 1000 population.

4. To emphasize aided self help programmes capable of bringing non-monetary resources into house construction, thus increasing the ratio of minimum standard new dwellings to population.

5. To build large proportion of core houses capable of being enlarged and equipped, within a relatively small number of years, to meet the minimum standards.

As far as the first alternative is concerned, which is to lower the minimum standards it is not advisable, because the minimum standard is already just meeting the rock-bottom health and space requirements, and any lowering of these standards will bound to result in the use of structurally unsafe and undurable materials, and reduction in the space which will have major consequences on health, safety and privacy.

The second alternative which is to maintain the standards but find ways to lower the cost, is recommended even if the allocations for housing development is increased, since it offers more productivity, and lower unit cost. In Iraq, construction can hardly be called an organized industry, apart from few construction firms, the majority of the construction industry consists of individuals or small groups

of individuals building small structures, such as single houses, one at a time. It should be remembered here that even in some advanced countries, this was a common method of house-building until twenty or thirty years ago. If large scale construction operations are to be encouraged to meet the rising needs, they will need capitalization and credit facilities, and investment resources should be made available. Since these resources are no different, basically, from those needed by other industrial sectors, it can be assumed that economic development plans will provide for them as they do for other expanding industries whose output is deemed necessary to the balanced development of the economy.

Alternative three, which is to maintain the standards and build a lower rate of new dwellings, is only possible if it is combined with the fourth and fifth alternatives, since lowering the rate of construction alone will result in further deterioration of the existing housing stock due to overcrowding and over loading the existing utilities, and bound to create squatter areas, and force the rents upward, in addition to its speculative effects.

As for alternative four, which is to emphasize aided self help programmes, and can of course be combined with the fifth alternative, it depends for its success on a number of factors such as the existence of unemployment or under employment, the availability of trained leadership such as community organizers and skilled building workers, to supervise the effort, and materials suitable for unskilled self-helpers to handle. Though usually this alternative is evaluated as more likely to be successful in rural

than urban areas, some self-help housing projects carried out in Baghdad, particularly the Eastern Baghdad Housing Project; see, (4.1.1), demonstrated that they can contribute to the meeting of housing needs. The actual self-help operation can vary from building simple temporary shelter on building plots laid out in advance and provided with minimum services and utilities, through finishing roof and post skeletons furnished to the self helpers, constructing core houses designed ultimately to meet the minimum standard or even constructing complete permanent houses.

The fifth alternative, which is to build large proportion of core houses, is recommended particularly in the case of housing the newly arrived migrants, who otherwise will start to erect their "Sarifa". This alternative permits maintenance of the desired standard but makes possible a higher ratio of new dwellings which, even in their core stage, will represent an improvement over the "Sarifa" conditions.

6.3.0 The Standards of Utilities and Community Facilities:

The problem of the housing standards and building standards cannot be isolated from the much broader problem of community facilities and municipal services. Although it is possible to determine a minimum housing space standard, it is not easy to determine standards for utilities and community facilities, such as streets, water, sanitary sewage, electricity, schools, clinics etc., because they are not as readily measurable, and standards for them are more likely to relate to the presence or absence of a given utility or facility, or to quite different kinds of facilities appropriate under different conditions.

6.3.1 Utilities:

This includes streets, water, sewage collection and disposal, electricity and drainage.

It is suggested that the approach to minimum standards for the provision of these utilities should be based on the following considerations:

1. The cost of providing the tentative minimum standard of utilities per household should be related to the household incomes and the cost of amortizing or renting the minimum standard dwelling itself.

2. The next step might be to estimate the extent of the failure of existing residential areas to meet the tentative minimum standards set, and the cost of providing them with whatever they now lack to bring them up to the desired level. In the absence of detailed censuses of housing and community facilities, this is difficult to measure. Nevertheless, some rough estimate of the cost of bringing existing developments up to the standard or standards postulated has to be made to see whether it bears a reasonable relationship to the resources which may be available or allocated.

3. The cost of providing existing residential areas with utilities might then be added to the estimated cost of providing the new dwellings with utilities at the basic minimum standard. Such total costs would then be divided by the number of years in the time period, i.e. 1970 - 1990, to determine an estimate average annual cost of the provision of utilities at the standards selected.

4. The next step might be the determination of the ratio of this average annual cost to the average annual cost of constructing the new dwellings and dwelling improvements themselves. If this ratio seemed higher than reasonable, consideration might be given, for example, to:

   a. Lowering the basic minimum standard

   b. Increasing the time period set for provision of the minimum standard for all dwellings.

If, on the other hand, this ratio was unreasonably low, consideration might be given to:

a. Raising the basic minimum standard of utilities.

b. Shortening the time period for their provision to all households.

6.3.2 Community Facilities:

The provision of the general community facilities, such as schools, clinics, social service, entertainment facilities, and other public buildings and services, is related less to the construction or improvement of specific dwellings as such than to the general urban development. In Iraq and Baghdad, the levels these facilities are provided are not dependent so much on what the individual household can afford as on what the country and the municipality can provide for all households of the resources available, and the cost of these facilities is not normally considered as part of the household's expenditure, but rather as a general social overhead item not paid directly out of the household income as such, but out of general

tax revenues, and in many cases as part of the government other resources. This particularly is the case in educational and health facilities, where the provision of these facilities at a higher level than most of the household capability to pay for out of their incomes is regarded by the government as a sound social investment in terms of increased productivity of the workers and the future development of the country. Therefore, the minimum standard for these facilities depends upon the resources of the economy as a whole and upon the relative weight given to them in the national development plans. [12]

6.4.0 Conclusion:

In establishing housing standards, much can be learned from the practice and experience of other countries, but it seems clear that effective standards for housing and related facilities in Iraq must take account of conditions ranging through climate, type of structures, economic resources and the method of financing housing, and the living patterns of the people to be housed. Another point to be considered is the gap between what might be considered a desirable minimum standard and what the low income people of the society can afford to pay. In the U.K. for instance, attempts were made to bridge this gap through a large programme of public housing, built under subsidies, but this has only been partially successful in housing the poorest groups of the society. The definition and

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12. In the 1970-1974 National development Plan, for instance, the allocations for cultural and health facilities were estimated to be around 0.3 and 0.4 per cent of the total plan allocations respectively; see, Planning Board, "The National Development Plan, 1970-1974", April 1970, pp. 39-42.

control of minimum standards for housing and related facilities can make an important contribution to an improved standard of living, but will not, in itself, solve the social and economic problems which tend to be associated with the most unsatisfactory housing.

Finally, in fixing housing standards it had to be borne in mind that if standards are set too high other sectors of the economy will suffer unduly; and if high standards are adopted too early there may be insufficient resources to provide facilities at that level, except for a minority, for years to come. If, on the other hand, standards are set too low, their subsequent rise will result in early obsolescence and resources will be wasted in modifications or rebuilding.