II THE GREATER TUNIS REGION

With an estimated 1984 population of over 1.5 million, or 22% of the country's 7.3 million inhabitants, the Greater Tunis Region is the dominant center of Tunisia. Accounting for 24% of industrial and 38% of service jobs in 1980, it has attracted about 32% of all industrial investments since 1973. As a result, it is the major pole of drawing migrants from both rural areas and smaller provincial cities. Fifty-two percent of its annual rate of growth of 5.9% since 1975 is attributable to net migration.

Like all rapidly expanding primate cities in the Third World, Greater Tunis has experienced a deterioration in housing quality evidenced by a growing percentage of families living in one-room units and a significant level of illegal construction on the urban fringe. These so-called informal settlements, built without permits on unserviced land, accounted for no less than 40% of housing starts between 1975 and 1980.

1. HISTORICAL OVERVIEW

The present site of Tunis was first settled in the 12th Century. In 1159, the Almohades rulers built their kasbah (a fortified precinct combining administrative buildings and the residences of the ruler and his family) on the highest point of the strip of land separating the Lake of Tunis from the marshy Lake Sejoumi.

A walled city, or medina, developed below the kasbah on the eastern slope, facing the lake and its outlet into the Mediterranean. During the subsequent rule of the Hafsid dynasty, Tunis evolved into an important religious and commercial city. The Hafsids extended the city outward beyond the original city walls. Eventually a second ring of walls was built to protect the urban extension, to the north and south sides of the original Medina. The main gate, Bab al-Bahar, opened out onto a port on the lake shore.

It is estimated that, by the end of the 13th century, 100,000 people lived within the medina. New construction within the city walls resulted in densification while markets (suqs) extended along main streets to serve the needs of a growing population. The administrators of the various ruling dynasties resided in the kasbah; the city merchants and their families lived in the large, traditional courtyard houses on the upper side of the medina. In spite of the constant change of rulers over the centuries, they maintained a stable social and economic structure that ensured an urban vitality unaffected by the waning fortunes of conquerors and dynasties. The common people lived in dense clusters of smaller buildings in the lower parts of the town.

Starting in the second half of the 14th century, Muslim Andalusians escaping the Spanish "Reconquista" began arriving in Tunis. With their commercial skills, they formed a new merchant class that brought unprecedented economic prosperity to the city. In 1574 A.D. the Ottoman Turks conquered Tunis from the declining Hafsid dynasty.

The social structure that developed during the Turkish period was characterized by a clear physical stratification of the medina. In addition to maintaining the tradition of building small palaces in the town, the Turkish elite built numerous country residences north and west of the city, in the districts now known as le Bardo and Manouba. The Andalusian emigres tended to cluster in their own quarters. Today's rue des Andalous, on the southwest side of the medina, was once the principal street through the Andalusian quarters. Small communities of European merchants, primarily from the Italian city-states and Sardinia and Sicily, began to establish their trading counters wihin the city walls near Bab al-Bhar. A Christian colony eventually developed within the walls in the lower medina centered around various consulates, and merchant inns (funduq). A Jewish quarter, known as the Hara, developed near the marshland of the lake.

1.1 Urban Morphology of the Traditional City

The development of Tunis during the Hafsid and Ottoman periods exemplified Islamic urbanism as practiced in North Africa. Today, the medina of Tunis continues to function in many ways, as a living example of the traditional Islamic city.

Aerial photos of the medina reveal a dense coherent urban architecture, punctured by the repetitive pattern of courtyards. Each building, almost indistinguishable within this homogeneous urban mass, constitutes an inward-oriented unit within the cellular structure of the city. A walk through the narrow, winding, seemingly chaotic streets obscures what is, in fact, a highly logical system of spatial organization that survived a continuous process of demolition, construction, and adaptation of older structures as the urban population diminished in times of epidemics or famines, and rose again as rural migrants flocked to the city. With the exception of monuments, palaces, and larger houses, the average age of residential and commercial structures in the Medina is less than a hundred years. An urbanistic coherence was maintained until recently by the sharia', the Islamic legal code, that governed individual property rights. It allowed owners to build to plot lines while preventing encroachments onto the public way, thereby preserving the street pattern; protected the rights of abutting owners to the unimpeded enjoyment of their property, thus forbidding noxious uses or an invasion of privacy; and ensured a continuity of uses and social groupings by granting owners of adjoining parcels a preemptive right of purchase (shufa') when a property was to be sold. Maintenance rights and the deeding of revenue producing properties to maintain charitable trusts (habous) were strong incentives to maintain usages over time.

The traditional spatial organization of the Tunis medina is still evident today. The major mosque, the Zitouna, is located at the core of the old city, adjacent to important Koranic schools (madrassas). The mosque is surrounded by the covered suqs housing the "clean" trades whose presence adjacent to the mosque would not disturb the serenity of its religious and civic activities: gold and silversmiths, book dealers, perfume merchants, tailors and cloth merchants. Organized into craft and trade guilds collectively responsible for the good conduct of their members, the merchants ensured the physical upkeep of their suq. The more noxious trades -- blacksmiths, butchers, leatherworkers -- were located further out, closer to the city walls.

Warehouses, stables and inns for itinerant merchants (funduks) were located at the city gates and served as transfer points for goods arriving from the interior of the country or by sea. Bulky raw materials (such as animal hides) would be separated and delivered to the nearby "dirty" industries located near the city walls, while lighter materials (such as textiles) were carried by porters to the inner suqs around the Zitouna Mosque. Camels and donkeys would be accommodated after long journeys from inland regions in the fundouk stables without disrupting everyday life in the busy, narrow streets of the inner-city. Farmers sold their produce to the city dwellers in open air markets outside the city walls; the active economy of the produce markets provided rural people with money to purchase needed goods manufactured within the medina.

The spatial hierarchy of street and urban spaces clearly distinguishes between public, private, and semi-private use. The physical and dimensional characteristics of any given urban space thus denotes the degree to which it belongs to public or private domain. No urban space is ambiguous within this traditional spatial hierarchy: each has a defined primary use and is ultimately accounted for in terms of ownership and responsibility.

The primary circulation system, used both by pack animals and pedestrians, defines the edges of the residential quarters, autonomous enclaves with well-defined points of entry. The wider streets leading from the city gates to the Zitouna Mosque and the kasbah are predominantly commercial and major public buildings are found along them. Smaller suqs, neighborhood mosques and such other communal facilities as public baths (hammams) are located along the lesser streets of the primary system. The secondary system provides access into the residential quarters proper, where only a limited amount of economic activities are to be found, usually located near their edges.

In some residential quarters, a tertiary system, often consisting of dead-end alleys, provide semi-private access to clusters of housing, within the quarter, finally culminating in the very private domain of the house. These narrow byways become natural extensions of the dwellings: play areas for younger children, a space fo neighbors to socialize and women to carry out common activities. Gaily decorated for festive

occasions, they provide a welcome extension to the crowded units of the lower-classes and symbolize the strength of the residential neighborhood as a social unit.

The narrowness of the streets (typically 8 to 10 meters wide for the primary system, 5 to 7 for the secondary, and often no more than 3 to 4 meters for alleyways) is attributable not only to climatic reasons but to the fact that circulation was restricted to pedestrians and pack animals until recent times. Major streets only needed to be wide enough to accommodate two fully loaded horses or donkeys. Similarly, the frequent bridging of streets by a room connecting two buildings on opposite sides was within the right of property owners as long as it did not impede the passage of a loaded animal or horseman below.

The social order embodied in the street hierarachy of the medina has survived to the present day with minor modifications. Trades are still grouped together even though the manufacture of articles sold on the premises has been mostly replaced by industrialized products, domestic or imported; cars and small pick-up trucks use the wider streets, but porters and donkeys still carry goods on narrower ones. The privacy and social cohesion of residential clusters is still evident, their tranquility presenting a striking contrast to the noise and animation of an adjacent commercial street. The visitor to the medina is thus able to follow easily an itinerary through the suqs. The change in scale and in level of activity immediately signals any deviation from the primary circulation system.

Distinct residential neighborhoods (derb) are formed by clusters of houses. Traditionally, each neighborhood was socially distinct, often populated by people of the same tribal, regional, ethnic, and/or socio-economic group. The entire medina is made of these loosely linked, inward-oriented residential groupings whose morphology, like that of the house, reflects a strong desire for privacy. The larger, more affluent houses are found deep inside the dense building mass of the residential cluster. The smaller, less desirable houses are located along the exterior edges of the neighborhood, along the primary and secondary streets which delineate its boundaries. The grouping of clusters of relatively similar houses in a replicable pattern within the larger-scale framework of the commercial streets created a consistant spatial order throughout the Tunis medina.

The traditional Tunisian urban house reflects a cultural concept of the extended family as the basic cell of society. It is oriented inwardly, presenting an often windowless wall to the street. The main door opens into a small hall (skif'a) which leads to the "inner" entrance into the house, a right angle doorway that blocks effectively views from the street into the interior of the house. The rooms are organized around a central courtyard which provides them with light and air.

Of varying size, according to the importance of the house, the courtyard is admirably suited to the hot, dry climate of summer by trapping the cool night air that sinks into it and creating a daytime air movement as the heated air rises again. In the winter, it acts as a suntrap, heating the rooms opening onto it. The courtyard also provides a private open space for the residents, an active focal point within the domestic structure. Unlike the austere street wall, whose only decorative elements may be high windows and the main doorway, the interior facades are often extensively decorated, covered porches and galleries providing natural transitions between the rooms and the courtyard. With the exception of storerooms, sanitary facilities and, sometime, a cooking area, the use of rooms is not predetermined. Partially built-in storage and seating benches provide for a flexible usage as mattresses are pulled out at night to provide sleeping space in 4 room used as a sitting area at other times. In extended family households, a separate multi-purpose room could be assigned to each nuclear family, ensuring privacy while minimizing space consumption. With the exception of the mansions of the elite, with their separate suites of rooms, servants quarters, and ancillary annexes, the ratio of persons per habitable room was always high, by contemporary Western standards.

1.2 The Western City (La Ville Neuve)

The increasing economic dominance of European merchants and agriculturalists and the impending financial collapse of the Turkish government led to the establishment of a French Protectorate in 1895. Control of Tunisia, in effect, shifted from Ottoman Turks to the French colonial administration whose policies dramatically affected the urban structure of Tunis.

A channel was dredged across the shallow Lake of Tunis to allow the larger European ships access to the old port at the foot of the medina where a railroad carried ores from French-owned mines in the interior. Extensive landfill of the marshland along the lake shore was undertaken for a new European settlement and a new port capable of handling large vessels was built in La Goulette. An east-west avenue connecting the port with Bab el-Bahar became the main commercial axis of the "new city" -- La Ville Neuve.

By 1900, after more landfill, French city planners had laid out a grid of wide avenues extending on either side of the Avenue de France (today's Avenue Habib Bourguiba). A growing European population, attracted to Tunis by the economic opportunities offered by the colonial administation, spurred a construction boom. The Ville Neuve, with its straight streets, broad boulevards and landscaped squares and circles, presented the environment of a French provincial town that stood in sharp contrast to the walled medina. The scale of colonial buildings and the character of the Ville Neuve was, in a sense, an inversion of the

traditional Islamic notion of urban space. In spite of the liberal use of "moorish" architectural motifs, the four- and five-story buildings with their large windows and balconies and the free-standing villas followed an architectural tradition opposite to that of the inward looking one- and two-story courtyard houses of the medina, as did the wide streets of the new city, designed to accommodate horse-drawn carriages and, later, automobiles.

The last city walls were demolished in 1892 by the French administration and a boulevard was built in their stead to provide access to new buildings housing the colonial bureaucracy in the kasbah. Three gates, bab Djedid, bab El-Bahar and bab Souika were left as free standing monumental remnants of the old walls. Three and four story European tenement buildings were built on available parcels on the fringe between the new circular boulevard and the medina. Their height often violated the urban development regulations implicit in the sharia' by allowing intruding views into adjoining courtyard houses.

The growing financial difficulties experienced by the Turkish and Tunisian ruling classes under the Protectorate led to the acquisition of extensive estates on the outskirts of the city by European colonists. The 1885 Land Law, favoring European property owners, led to extensive real estate speculation on the urban periphery and the development of agricultural land for new European garden-suburbs. Land subdivision for private villas began to the north of the Ville Neuve in the present-day suburban Belevedere district. A new colonial hospital and schools were built by the French administration to the west of the medina. The area south of the Ville Neuve adjacent to the port became an industrial zone. By 1925 the entire isthmus separating Lake Sedjoumi and the Lake of Tunis was completely urbanized, with peripheral development taking place along the major transportation axes to the hinterland. This expansion into peripheral areas was facilitated by railroad lines radiating out from the Ville Neuve.

The presence of a thriving European city adjacent to the traditional urban structure of the medina deprived it of much of its economic vitality as modern commercial and manufacturing uses developed in the new retail core and the industrial zone around the port. By 1930, Tunis had been transformed into a "dual city" whose modern districts housed 40% of the population, mainly European, and the bulk of economic activities while the native population still lived in a medina whose small-scale enterprises found it increasingly difficult to compete against industrialized goods. Concurrently, a significant number of upper-class Tunisian families were moving into the more comfortable housing of the Ville Neuve, depriving the medina of its traditional elite.

External factors began to exacerbate the split between the modern and traditional sectors. During the 1930's, Tunisia experienced a period of severe drought, the effects of which were aggravated by the world-wide economic crisis. Forced off the land, the rural poor began migrating to

Tunis in search of jobs, crowding into the housing vacated by the Christian and Jewish minorities who were moving to the Ville Neuve. The first squatter settlements, the gourbivilles of rammed earth, salvaged timber and corrugated iron, began to burgeon on vacant land near the medina. From 1936 to 1946, Tunis experienced a 75% population increase primarily due to rural migration, while the European population began to decline during the Second World War. The total population of Tunis grew from 194,000 in 1921 to 561,000 in 1956 on the eve of Independence from France.

1.3 The Post-Independence Period

Following Independence, several significant transformations altered the social and physical structure of Tunis. The emergence of a new middle class of Tunisians (government employees, professionals, tradesmen), aspiring to live in the modern housing vacated by the departure of most of the European population, resulted in a new exodus from the medina. Concurrently, the restructuring of Tunisian agriculture that followed the breakup of the large European estates increased migratory flows to Tunis. Densities rose in the medina as large houses were divided into cheap one- and two-room dwellings for the newcomers from the countryside while older gourbivilles grew rapidly and new ones sprouted on the outskirts of the city wherever water was available. Growth was particularly rapid if employment could be found nearby. For example, the gourbiville of Saida Manoubia, near the medina, grew in 20 years from a small village in the midst of fruit orchards into a dense, sprawling settlement, without running water or sewerage, that extends into the flood plain of Lake Sedjoumi. More recently, a gourbiville on the urban fringe, Jebel Lahmar, grew to a population of 30,000 within a few years thanks to the presence nearby of a propane gas factory and the railroad depot of El Omrane.

The urbanized area of Tunis grew rapidly as new suburbs were built along three major growth axes: westward, northward into the agricultural zone and the affluent garden suburb of Ariana, and to the southeast, beyond the industrial zone located between Lake Sedjouni and the Lake of Tunis. This expansion was prompted, in part, by the policy followed by the government since 1960 to build large-scale projects on the urban fringe (cites populaires). Intended to house government employees and relocatees from redevelopment projects, they currently house one-tenth of the population of Tunis. As utilities were brought into these hitherto unserviced areas, private development occurred near them, varying in quality from villas to the one- and two-room houses of spontaneous settlements.

Important changes also occurred within the Ville Neuve which started to lose much of its residential character as new government offices and "high rise" commercial buildings were built on vacant and cleared land. Thus, pre-World War II apartment buildings on the Avenue Habib Bouiguiba have either been converted to offices or replaced by new structures,

including the twenty-story Hotel Africa, while new government and corporate office buildings are scattered along Avenue Mohammed V. Since 1970, the demand for office space has prompted a dramatic expansion of the service sector into the older residential districts of the Ville Neuve: Lafayette, Belvedere, and Cite Jardin, where former colonial villas are being replaced by small office buildings as land values rise. The Ville Neuve is rapidly becoming the country's prime service center. It contains 70% of tertiary sector establishments and 80% of all service jobs in greater Tunis. Some 40,000 people are employed in the former colonial city, in diverse activities: government, banking, insurance, the headquarters of major private and public industries and corporations, transport services, a range of wholesale and retail trades, international hotels, modern restaurants, and entertainment.

The transformation into a modern central business district of an urban fabric originally built as a residential area containing small-scale service activities has not been without serious environmental consequences. In spite of major improvements in public transportation, traffic congestion and pollution from buses and private vehicles have become serious problems while parking is largely unavailable. At present, the downtown area lacks the capacity to accommodate the latent demand for office and commercial space without a major redevelopment program. The medina has been relatively untouched so far by redevelopment pressures. Its suqs cater primarily to the needs of tourists and of its resident population, a mixture of well-to-do conservative merchants and craftsmen, and migrants who, for the most part, came to Tunis since the country's Indepencence. Its proximity to the downtown and its rising land values raises questions as to its future. Even though the medina proper was declared a protected historical district in 1974, its late 19th century fringe is a likely area for privately financed, incremental redevelopment. Various small scale public-projects have been undertaken in the past, including clearance and the construction of community facilities and housing. Other, larger scale projects have been contemplated, including the opening of new streets to facilitate taffic between the Ville Neuve and the western sectors of the Tunis region.

2. RECENT DEVELOPMENT TRENDS

The Greater Tunis Region covers an area of about 280 square kilometers, exclusive of water bodies, approximately two-thirds of which are urbanized, the remainder consisting of urbanizing agricultural land. The 1980 population of 1.2 million is growing at nearly 6% per annum, net migration accounting for over half of its growth. At present, nearly a third of the Greater Tunis population is of rural origin, mainly from the mountainous northwest region and from the south. Inter-urban migration from provincial cities to Tunis has become evident in recent years.

2.1 Economic Aspects

Greater Tunis is the country's dominant economic center. Nationally, it accounts for 30% or more of employment in government, transport and communication and financial services, 25% of manufacturing employment and nearly 28% of construction jobs. Within the Tunis region, the public sector is the largest employer (35% of jobs), followed by manufacturing (25%), trade and personal services (17%), and finance, insurance and real estate (14%). About half of the national industrial output originates in the Tunis region.

Food-processing is the most important industry, producing a variety of goods for domestic consumption, exports consisting mainly of olive oil and canned fish. Textiles is second as government programs have modernized traditional handicraft activities, followed by the leather and shoe industries. The production of handicrafts still plays a role in the economy, providing a large number of jobs. As the modern, domestic manufacturing sector is satisfying domestic needs by providing cheaper, mass-produced goods, the demand for artisanal goods comes mainly from tourists and most are sold in the medina. Because Tunis is the main port of the country, wholesaling plays an important role in the urban economy.

The concentration of modern economic activities in the Tunis Region is reflected in the characteristics of its labor force. Even though illiteracy is still high (22% for men and 42% for women) the Tunis population is better educated than that of other cities. Among university graduates, 45% of males and 62% of females are living in Tunis, reflecting the heavy concentration of senior public and private sector administrative jobs, over 50% of professional and managerial level positions and nearly 40% of administrative and clerical employment being located in the region. As a result, Tunis also shows a greater, albeit still modest, labor force participation rate for women: 15.5% as opposed to 13.4% nationally, exclusive of the agricultural sector. Accounting for 17% of the regional labor force, women are employed primarily by government (41%) and in manufacturing (33%).

Tunis' modern economy is complemented by a traditional sector, both formal and informal. In 1980, there were nearly 13,000 owners of small industries and handicraft workshops, employing an average of 3.1 salaried workers to which should be added some 12,000 shopkeepers and an unspecified number of small builders providing employment to at least 20,000 construction workers. It can be estimated conservatively that about 40% of the urban workforce is employed in small-scale economic enterprises. To these must be added informal activities, peddlers and daily workers in a variety of retail and wholesale activities and in construction. Not accounted for in official statistics, these marginal occupations are estimated to employ 20% or so of the labor force. Given the age distribution of the population, some 10,000 young people enter the labor force yearly while an additional 6,000 jobs are sought by migrants. Since the increase in gainfully employed enumerated by the

census was only 37,000 from 1975 to 1980 while the number of registered unemployed persons dropped by 3,000, informal sector employment grew by some 46,000 jobs over that period. This sector is expected to become the main source of employment for the unskilled urban poor, whether migrant from rural areas or young people entering the labor force.

At present, Tunisia is completing its Sixth National Plan (1982-86) which proposes to invest some TD 8,000 millions divided almost equally among labor intensive, capital intensive and intermediate investments. Roughly 25% of this amount is allocated to the Greater Tunis Region, primarily in industrial development and in housing and public facilities and services. Even though other regions, particularly the South, will benefit from major public investments -- in agriculture, industry, mining and basic infrastructure -- the economic dominance of Tunis will continue unabated. It will therefore continue to be the prime destination for migrants in search of economic opportunities. They are expected to add some 55,000 people yearly to its population until the end of the decade.

2.2 Population and Income

In 1980, the Greater Tunis Region had a population of 1,233,000, growing at an annual rate of 5.9%. The rate of natural increase was 2.6%, the balance being the contribution of net migration. Although somewhat more mature than the Tunisian population as a whole, Greater Tunis still contains a high proportion of young people, as 36% of the population is under fifteen years of age. Among the economically active population, that is between 15 and 65 years of age, there is a slight preponderance of males, reflecting the presence of young migratory workers, 18-25 years old. Typically, they go to the city alone, bringing their family or marrying once they have secured a job.

Of the population 10 years of age and older, 30% are illiterate. The national priority allocated to education since Independence is evident in the age structure of illiteracy: among both males and females, it is prevalent in the population over 30 years old and very low among younger people. Even the higher rate of illiteracy that is common among females in traditional societies is becoming less evident in spite of the continued influx of rural migrants. Under the age of twenty-five, 3% of males and 11% of females are illiterate, 9% of males and 35% of females for the 25-29 age group, while 50% of males over the age of 40 and 86% of females are illiterate.

The average family size is 4.7 persons for nuclear families and 5.9 persons for extended families. Since doubling-up is common among lower income families, the average household size is 6.8 persons. Median household income in the Tunis region is estimated at TD 128 per month; approximately 10% of the households are below the absolute poverty threshold, defined by the World Bank as "the local cost of minimum nutritional and non-food requirements." The following table gives the distribution of household incomes by quintile:

TABLE 2: INCOME DISTRIBUTION, TUNIS DISTRICT

Lowest 20%	Under 80 Dinars
20-39%	80-138
40-59%	139-160
60-79%	161-210
Top 80%	over 210

In spite of the marked improvement that has taken place over the last ten years, urban incomes having risen faster than the cost of living index, essential expenses on food, clothing and transportation consume a major portion of resources, given the large size of households. The amount available to pay for shelter, fuel, and household furnishings is therefore limited, varying according to income and household size. The distribution of the percentage income available for rent or a monthly mortgage payment vary from TD 6-12 for the two lowest quintiles on the income distribution curve.

TABLE 3: SHELTER EXPENDITURES AS A PERCENT OF TOTAL EXPENDITURES
(Urban Households)

Income	Household Size: 1-3 Persons	4-5 Persons	6-7 Persons	8+ Persons
lowest 20%	11.6%	11.7%	10.9%	9.5%
20-30%	11.5	11.6	10.8	9.5
40-59%	10.2	10.2	9.5	8.3
60-79%	10.5	10.6	9.9	8.7
upper 20%	16.5	16.5	15.3	13.5

Source: INS. Consumption Survey, 1975 adjusted to 1980 prices.

The ability of households to acquire housing is however improved by the remittances of Tunisians working abroad which are not accounted for explicitly in the income distribution. Even though the government housing assistance program described in Section III are generally not affordable for the two lowest quintiles and only marginally so for the third, large scale construction, of generally good quality, by individuals able to purchase small plots on the urban fringe testify to the presence of a hidden mass of savings fed by foreign remittances. The incremental development of a home -- the purchase of a plot; later, the construction of a one-room dwelling to be expanded at a future date as more resources are available -- has become the normal channel to invest savings in preference to opening an interest-bearing bank account except for households in the upper 40% of incomes. It is the logical response of the urban masses to a chronic housing shortage exacerabated by land speculation that has eluded so far all forms of government interventions. As shown in Table 22, the median income in a spontaneous development on the urban fringe, Ettadhamen, is TD 75, only marginally higher than that in a residential quarter of the medina which is just above the urban poverty threshold (Table 17).

The successive waves of rural migrants, together with a high birthrate, have nearly doubled the population of Tunis every ten years since Independence. This very high rate of urbanization is expected to continue in the foreseeable future and is expected to disrupt further the equilibrium between city and countryside as well as influence the social, economic and physical fabric of the city. At the national level, in the absence of effective government interventions to counter current trends, 70% of the population is expected to be urbanized by the end of the century, as opposed to 30% in 1955, on the eve of Independence. It has been argued by Tunisian social commentators that the resulting urban inventment needs -- creating employment, building housing and its associated community facilities -- will preempt limited public resources to the extent that little will be left to improve the quality of life in rural areas. The growing inequalities between city and countryside will encourage further migration and progressively transform the country's agricultural sector into a mixture of subsistence farming and large, mechanized holdings employing a growing rural proletariat.

The sustained flow of migrants to large cities, and particularly the Tunis region, has had, and is expected to continue to have significant impacts. The high proportion of young people seeking employment among the migrants has depressed further a labor market already strained by the rate of entry into the labor force of a very young population. Low wages and sporadic employment among the unskilled coupled with the high cost of urban housing and food prices that have risen steadily as costly government subsidies have been lessened progressively have led to the marginalization of roughly a third of the urban population in spite of a per capita gross domestic product of $1490 in 1981. The inability of the urban poor to partake in the relative national prosperity of the late 'seventies and early 'eighties, while the gross domestic product was

rising at an average annual rate of 6.2% after inflation, is manifest in the growing incidence of overcrowding in housing and in the urban riots of 1978 and January 1984 that followed a reduction in the level of subsidization of basic staples.

The traditional division of society into upper, middle, and lower class no longer holds true. The extensive restructuring of urban culture in Tunisia since World War Two, brought about by modernization of the economy and of the country's institutions, by compulsory education as well as by rapid urbanization, calls for a more complex model, according to the Tunisian sociologist Frej Stambouli. He points out that there now is a cleavage between a westernized minority and the bulk of the urban population who still live according to at least partially traditional values. Tunisian urban society is now headed by a new elite composed of senior officials of the government (including the armed forces), of wealthy businessmen and modern industrialists, amounting to about 10 percent of the population. The middle-class can now be divided into "westernized" and "traditional" components. The first, some 5 % of the population, is composed of professionals, for the most part educated in French universities. The second are, in a way, the successors to the traditional urban elite of merchants and religious leaders, and account for another 10% of the population. Engaged in traditional mercantile and handicrafts occupations, ulemmas in mosques, teachers in Coranic schools and universities, they believe in the values of the past, are still guided by them in spite of their daily contacts wth the new values of a modern society. Importantly, they are looked upon as leaders by those among the 75% of urban society belonging to the lower class that are being influenced by the rise of Islamic fundamentalism.

The stratification of contemporary urban society therefore reflects different values as well as income or education. Generally, the 15% or so of the population who can be described as westernized contain a fairly broad spectrum of wealth as do the more traditionally inclined other 85%. If the latter group obviously includes the urban poor and recent migrants, the inability of the Tunisian economy to provide a sufficient number of adequately remunerated jobs to its recent university graduates has created the paradoxal problem of continued dependency on experienced foreign experts while educated young people are unable to find employment suitable to their education or must work in better paid activities for which they are overly-educated. The distinguishing traits between the two groups pertain to the primary language used (French or Arabic), cultural identification, modes of dress and behavior, the belief in a religious or secular ethical system.

The sprawl of Tunis in recent years reflects the evolution of its social structure as well as the workings of the land and housing markets. The new elite has taken over and expanded the more prestigious colonial suburbs north of the city, as have the better-off members of the westernized middle class, the balance finding housing in the clusters of government housing projects scattered to the west and south. The more

traditional elements of the middle-class are intermixed with the lower-class in the medina and the Ville Nouvelle as well as in the proliferating new suburbs that are consuming land at an annual rate of about 150 hectares. The medina itself, with a population of about 140,000 and an average density of 520 inhabitants per hectare, has become an area of concentrated poverty as two-thirds of its population are recent rural migrants. Extreme overcrowding and the rapid deterioration of both buildings and infrastructure threaten the survival of the historic urban pattern. Spontaneous developments fall into two categories. Older ones, such as Saida Manoubia and Kram Ouest, are mainly dense shanties lacking all urban services and housing a significant number of low-income households; newer ones, such as Ettadhamen land Methalith, are a mushrooming form of suburbanization undertaken by a population of modest income but with a small amount of capital. Although lacking essential public services, this second type is quite different from the first insofar as its housing is commonly built of permament materials such as concrete blocks and bricks. Each contains a broad spectrum of household incomes.

Table 4 compares the employment profile of heads of households in the medina, in fringe informal settlements and in Tunis as a whole. The differences, although evident, are not as striking as one might expect and illustrate the evolution of a spatial stratification that reflects the dynamics of spontaneous housing development and social factors as well as the economic status of the population.

Thus, the very high infantile mortality rate in informal settlements (166 per thousand as opposed to 8 per thousand in the wealthy suburbs) is due to polluted water, lack of sanitation and a dearth of health facilities rather than to poverty.

The social organization of informal settlements illustrate the revival of traditional institutions and their ability to cope with at last some of the practical problems of community building. In spite of the lack of governmental regulations, land development is orderly, the spatial hierarchy of public spaces clear and respected by abutters, and the dwellings constructed respect the rights of neighbors. Mosques are built with local donations and assume that their ulemmas often become community leaders, adjucating neighborhood disputes and acting as spokesmen before the authorities. In spite of the lack of police protection there is little evidence of the criminality or juvenile deliquency that is common in the older gourbivilles or in some public housing projects. A likely explanation is that the new informal settlements are composed predominantly of owner-occupants who have managed to find a viable personal solution to the housing problem. They are obviously unable to undertake the public works necessary to pave streets, lay water and sewer lines or build community facilities. But they are clearly concerned with the quality of their new environment, street and neighborhood as well as house, and are willing to participate in community activities to safeguard and improve it.

TABLE 4: EMPLOYMENT PROFILE BY PLACE OF RESIDENCE

	Medina	Informal Settlements	Tunis District
Owners of Business	1.4%	2.9%	5.1%
Professionals	-	2.2	8.7
Managers	3.2	5.8	11.3
White Collar Workers	1.1	4.7	3.5
Blue Collar Workers	25.5	16.1	16.6
Service Workers	17.8	19.7	17.5
Artisans	9.5	10.5	7.4
Day Laborers	16.1	12.8	6.8
Street Vendors	3.4	1.1	1.0
Unemployed	11.2	12.0	8.7
Other (including casual employment)	10.8	12.2	13.4
	100.0%	100.0%	100.0%

Source: USAID/National Savings and Loan League, Tunisia Shelter Sector Assessment, 1979. Corrected for underestimation of unemployment.

2.3 Spatial aspects

The Tunis urban region is estimated to have doubled in size between 1975 and 1983. Some 445 hectares of land have been developed annually while almost 1,100 hectares are currently under development. As of 1983, the following pattern of land utilization pertained: housing — 2,557 hectares or 72% of the built-up area, of which the medina accounted for 11% and informal settlement for 44%; commercial, office and industrial zones -- 660 hectares or 19%; such large scale public facilities as universities, hospitals, airports, railroad land, and parks -- 332 hectares or 9%.

The Tunis Urban Development Plan prepared in 1976-7 set forth an ambitious strategy to relocate the older transportation and warehousing facilities that preempted valuable land in the Ville Neuve and contributed to traffic congestion; achieve a better balance between the location of industrial jobs, that had preempted large areas south of the city center since Independence, and housing developments whose sprawl throughout the urban region was wasteful of land and difficult to service; protect valuable agricultural development pressures; and stabilize the growth of the capital at an annual rate of 3.2% yielding an average land consumption of 390 hectares per annum to the end of the century. In order to achieve these objectives, the Plan proposed a number of large-scale infrastructure, housing and industrial projects to shift housing construction to the southern zone of the Tunis region and increase employment opportunities in the western and northern zone. Public facilities were to be constructed in areas where they were lacking, the center city was to be beautified, the Lake of Tunis cleaned, and reforestation of eroding land undertaken. Strategically located areas were to be land-banked to structure the regional pattern and anticipate growth in the last 15 years of the century by providing nearby the primary infrastructure required for their orderly development.

As shown in Table 5, land development occured at a much faster rate than that proposed by the Urban Development Plan, legal housing construction accounting for 40% of the land consummed and illegal housing for 32%. Moreover, the Plan's objective to achieve a better regional equilibrium in the spatial allocation of economic activities was largely unsuccessful (the southern parts of the Tunis region absorbing three-quarters of new economic activities) as was the effort to divert housing from the northern and western portions of the region. In spite of consideable effort to construct public facilities, their zonal allocation failed to parallel housing development. It is worth noting that even though much of the continued high rate of urbanization to the north and, particularly, the west of the region is attributable to illegal housing desvelopment, the role of public agencies was also significant. Thus, AFI continued to develop industrial sites to the south and was generally unable to shift its operations northward and westward, as proposed by the Plan, while AFH and SNIT, the major developers of legal housing, were similarly unable to operate a major southward shift in their activities. Concurrently, the key land-banking component of the Plan was not implemented, for both financial and political reasons.

The inability of the government to implement a well-conceived and ambitious plan illustrates an underlying weakness of the planning process in Tunisia. The intricate division of responsibilities among the several public agencies responsible for key sectorial interventions has complicated further the already difficult task of managing urban growth. Each agency (described further in Section 2.4) has nationwide responsibilities and undertakes relatively long-term capital programs. They are therefore slow to respond to any change in role. Their inability to alter the location of their interventions in the Tunis region, as called for by the Plan, may have been due partially to an institutional reluctance to follow the instructions issued

Table 5: DISTRICT OF TUNIS: PLANNED AND ACTUAL DEVELOPMENT BY ZONE, 1975-1983 (in hectares)

	DEVELOPMENT PLAN	ACTUAL DEVELOPMENT				
		Economic Activities	Public Facilities	Legal Housing	Illegal Housing	Total
Urban Area						
Central City	-	-	4	3	-	7
North	378	76	40	502	198	816
South	584	385	89	274	166	914
West	449	78	40	313	634	1065
Outer Area						
North coast	259	3	134	129	96	362
South Coast	238	118	24	208	35	385
Total	1908	660	331	1428	1129	3549

Source: District de Tunis, "L'urbanisation . . . de 1975 a 1983," 1983.

by a local authority, the District of Tunis. However, the time lag needed between the decision to build a large industrial or housing project and its completion, clearly impeded their ability to respond to the new spatial orientation of the 1976-7 Urban Development Plan. Furthermore, the yearly variations in the budgets of the ministries responsible for their activity has often led to confusion in the programming and implementation of urban development projects and poor coordination among them. This is particularly evident in the Tunis Region where the agencies are most active, for both political and practical reasons. For example, 45% of the 4300 hectares of housing sites made available nationwide by AFH are located in Greater Tunis. Similarly, major investment programs undertaken by SONEDE and ONAS increased the percentage of dwelling units supplied with running water from 71% in 1975 to 81% in 1980 and of sewered units, from 65% to 76%.

In spite of these shortcomings, the Tunis Region plan has a number of achievements to its credits: the improvement of pulic transport with three light rail lines, radiating to the north, west, and south, and the bus fleet; depolluting the Lake of Tunis by constructing sanitary and storm interceptor sewers along its northern shore; improvements in the collection and disposal

of solid waste; protecting the medina and the archeological area of Carthage from inappropriate development; undertaking several large-scale urban upgrading projects, in the Hafsia quarter of the medina as well as in informal settlements in the city center (Melassine, Saida Manoubia) and on the urban fringe (Jebel Lahmar, Ettadhamen); and improving significantly the availability of educational and health facilities. The accelerating rate of illegal housing development undertaken in the informal sector, and the concomitant disappearance of prime agricultural land and environmental degradation, remains the most worrisome aspect of the growth of Tunis over the last decade.

2.4 Planning and the Provision of Public Services

Sixteen municipalities are included in the District of Tunis, which has assumed a prime responsibility for planning since 1972. Local municipal governments are responsible for the operation and maintenance of the physical plant, undertaking selected public works of a strictly local nature, preparing detailed project plans, and with a range of bureaucratic activities, including the delivery of building permits. The fiscal dependency of local governments on the central administration, local resources being limited to a low yield property tax, has hampered
their effectiveness to plan and provide the necessary public infrastructure and services. Although the District has no executive powers, its role as a regional planning agency, as a consultant to the municipal governments and advisor to the various ministries concerned with urban affairs has given it considerable authority.

Several ministries and public agencies share the responsibility for planning and managing urban growth. Primary responsibility for physical planning is vested in the Ministere de l'Equipement (MOE - Ministry of Public Facilities) where a Direction de l'Amenagement du Territoire (DAT -- Regional Planning Directorate) prepares regional and urban master plans in consultation withg the local authorities. A Ministère de L'Habitat (MOH - Ministry of Housing) was established in 1980 to supervise and coordinate the activities of the various housing finance agencies described in Section III. A specialized agency under the MOH was created in 1981 to undertake urban upgrading and renewal projects: the Agence pour la Réhabilitation et la Rénovation Urbaine (ARRU). Both the ministry and ARRU have recently become part of MOE. Other public agencies directly involved in urban planning include the local communities' support fund (Caisse des Prêts et de Soutien des Collectivités Locales - CPSCL) which provide low interest long-term loans to urban governments to carry out public projects and two land assembly agencies which acquire and improve land for housing (Agence Foncière Habitat-AFH) and industrial projects (Agence Foncière Industrielle - AFI).

The planning, construction, operation, and maintenance of urban infrastructure systems is divided among several national utility companies: water is provided by the SONEDE (Société Nationale

d'Exploitation et de Distribution des Eaux), under the Ministry of Agriculture; urban sewerage and drainage is the responsibility of ONAS (Office National de'Assainissement) under MOE; electrical power production and distribution is undertaken by STEG (Société Tunisienne d'Electricité et de Gaz), which also provides the bottled butane used as cooking fuel, and operates under the Ministry of National Economy. The Ministry of Interior provides local governments with the funding necessary to collect and dispose of solid wastes.

The operational independence of the national agencies responsible for the urban infrastructure has often resulted in a lack of synchronization between their intervention and that proposed by municipal master plans. While SONEDE and STEG have usually been able to provide their services within a relatively short time after development has occurred, their activity has tended to follow rather than anticipate development. As a result, they intervene ex post facto in illegal as well as legal developments whose size and density make servicing economically justifiable, the delays in providing services resulting mainly from technical constraints -- the location of the settlement relative to existing and planned primary and secondary networks and, in the case of SONEDE, water storage capacity. As a result of the backlog of demand for services in most urban areas, the delays encountered by planned development are often lengthy.

The sewerage of urban areas has lagged far behind new development due to the longer time required to design and construct the primary and secondary systems. Although the rate of implementation of ONAS's program is expected to increase in the coming years, the inability of municipal governments to anticipate and control the location of spontaneous housing developments does not allow ONAS to prepare realistic sewerage plans and investment programs. While it is feasible to rapidly adjust the electrical distribution lines, and still relatively simple for the water distribution network to respond to locational changes in demand, the greater magnitude of the public works involved in sewering, their cost, and the technical constraints inherent in a gravity system make it spatially inflexible. Since the servicing of a developing area will rapidly increase land values and thus displace informal developments toward unserviced peripheral lands, a significant proportion of urban housing will continue to be unsewered. Paradoxically, the ability to provide running water to these areas will tend to worsen environmental conditions as individual septic pits on small lots are unable to accommodate the five- to eight-fold increase in water consumption that invariably accompanies a unit's connection to the water supply network.

As stated earlier, the large-scale land purchases undetaken by AFI and AFH have influenced haphazardly the direction of urban growth in the Tunis Region. The former, a specialized agency of the Ministry of Industry, initiates large industrial projects programmed as part of the national plan or acts as the developer of industrial estates at the behest of the municipalities. The maximum unit cost of the land it

acquires (either through negotiated sales or by eminent domain) is regulated by its statutes; it has therefore concentrated its development activities either on publicly owned land or in areas where land prices are low, usually on the periphery of urbanized areas. Since its sites are serviced relatively quickly, thanks to a generally effective coordination of its activities with those of ONAS, SONEDE and STEG, they provide the impetus for illegal development nearby. The presence of employment as well as the availability of electrical and water lines inevitably attracts spontaneous growth.

Although the scale of its operations to date and the higher income housing market it caters to have restricted the impact of AFH on urban development, its increased activity during the period of the Sixth Plan will give it considerable importance. Like AFI's, AFH's land acquisition policy has been determined pragmatically, the costs of purchase and servicing appearing to be the preeminent criteria. Its land holdings have little bearing on the actual localization of housing demand and have not been integrated fully into local physical planning. Scattered development areas for the beneficiaries of public programs as well as for the legal private sector are being created, with potential spillover effects and an inevitable impact on the value of adjacent open land.

Other community facilities are provided directly by the ministries concerned. The high priority given to education in Tunisia is reflected in the massive investments that have been made since Independence; between 1975 and 1980, for example, annual government expenditures rose from TD 86.6 million to TD 179.7 million. In spite of this effort, progress has been marginal in attracting and retaining school-age children in the educational system, even in urbanized areas. In the Tunis Region, the enrollment ratio among 6-14 years old dropped from 78.9% in 1975 to 75.2% in 1980. This decrease reflects the interplay among several factors. Foremost is the increase in the number of school-age children resulting from the broad-based age distribution of the Tunisian population and exacerbated by the migration of entire families to the city. Secondly, limited resources have constrained the government's ability to build new schools, most of the budget being spent on salaries and other operations expenditures. Between 1977 and 1980, for example, only 3% of the educational budget went to the construction of new schools in the compulsory primary educational cycle. As a result, the number of pupils per teacher now stands at nearly 40. Thirdly, the rapid growth of new settlements on the urban fringe has outstripped the ability of the government to provide them with new schools. The combination of long journeys to reach existing schools and the economic necessity among the urban poor for most family members to be gainfully employed has resulted in many children dropping out of school once they have learned how to read and write.

Public expenditures on health services have also risen rapidly, from TD 5.8 per capita in 1975 to TD 12.1 in 1980. The level of health services available in Tunis is by far the best in the country with 4.5

hospital beds and 0.7 physicians per 1000 population as opposed do 2.0 beds and 0.3 physicians nationwide. As in the case of education, however, facilities tend to be concentrated in the center and the developing urban fringe is poorly serviced. There is also a lack of such intermediate health facilities as walk-in clinics and dispensaries, an essential element in maintaining health standards in dense urban environments whose inadequate infrastaructure fosters a broad spectrum of gastrointestinal diseases and where tuberculosis and schistosomiasis are still common.

3. CURRENT CONDITIONS IN THE MEDINA

The Tunis medina proper and its extensions to the north and south (Bab Souika and Bab Dzira) has a total population of 140,000 inhabitants. With an area of 270 hectares, it has the highest density in the Tunis Region; its 28,000 households are crowded into 15,000 dwellings whose median size is less than two rooms. Of the 45,500 inhabitants of the central medina, 56% live in older, deteriorated houses that have been subdivided into one-room dwellings (referred to generically has oukala) housing 5 to 6 person families. Out of 2945 structures in the medina, 25% are considered oukalas. Spot densities reach 1000 persons/hectare in some neighborhoods.

While high densities and deteriorated structures are prevalent throughout the medina, conditions vary among its neighborhoods reflecting their individual socio-economic make-up. The lower part of the medina, historically a fringe district, is little more than a slum. Most of its residents are poor migrants living in overcrowded houses owned by absentee landlords. The upper medina, where the most historically significant architecture is found, includes stable neighborhoods where many residents belong to the baldi class -- old Tunis families who are owner-occupants of houses which their families have lived in for generations. The following assessment focuses on current conditions in the central medina. The medina extensions, Bab Souika and Bab Dzira, with a population of 95,000, have similar socio-economic and physical characteristics.

3.1 Physical Characteristics

A substantial part of the housing stock and many buildings of historic significance are in an advanced state of deterioration as a result of a lack of maintenance by absentee owners, whose profits are limited by rent control, and of conversions for both commercial and residential uses which have caused extensive damages to older structures.

The traditional houses which once accommodated the extended patriarchal families of middle-class merchants and artisans have lost their original function for the most part. They have been transformed extensively over the years to accommodate the original influx of rural migrants. Today, they house the urban poor as well as the small-scale

manufacturing activities that have proliferated in the medina. The financial incentive of increased rents encouraged absentee owners to subdivide their property to the maximum extent possible and structures once occupied by an extended family now shelters several low-and moderate income households, often sharing a single toilet. The abolition of the habous in 1957 and the transfer of properties held by these charitable trusts to the municipal government, deprived such public buildings as madrassa, kittab, and funduq of their traditional sources of income. Once vacant, they were taken over by squatters. The Tunis Municipality is currently the largest de facto slum landlord, unable to either collect rents from squatters or maintain the properties. Evictions are not feasible unless relocation housing is provided, an expensive proposition at best.

Disinvestment in private properties is not due solely to rent control. Larger properties are commonly owned jointly by several absentee owners, Islamic inheritance law prescribing a set allocation of shares among the descendants of owners of real estate. The inherent difficulty in obtaining a consensus among joint owners tends to maintain the status quo. Furthermore, the current high demand for cheap housing in the centrally located medina is a disincentive to invest in upgrading. Any dwelling can be rented, regardless of its condition. The eventual collapse of a building will bring a windfall profit to the owner, given the value of the land and that new buildings, are exempt from rent control.

The deterioration of the medina is borne out by a detailed inventory of sanitary conditions in 1970. Only 48% of dwelling units had running water and a private toilet. The remaining 5000 households obtained their water either from a tap supplying the occupants of a structure or from a public fountain, and had to share a lavatory with one or more other household; 18% of households had no electricity. Furthermore, increasing densities and lack of maintenance have overstressed the infrastructure system built at the begining of the 20th century. Consisting of lead water pipes laid in shallow ditches under the street surface and of ceramic pipes and surface drains to carry off waterbourne sewage, the system suffers from frequent breakdowns which create serious environmental problems.

In short, the traditional urban fabric of the medina is losing its ability to provide a satisfactory living environment to a broad socio-economic spectrum. With the exception of the upper medina, where the level of maintenance is higher and some gentrification is taking place, the transformation of structures brought about by demographic pressures have transformed what was once desirable housing into dilapidated tenements. The traditional courtyard in each house, which served as a private, enclosed outdoor family space, are now shared by several households in a subdivided house.

Economically, many changes are also taking place, responding to the needs of the current inhabitants of the medina. While goods are still sold in the old suqs, the products have changed as handmade goods have been replaced by cheaper, mass-produced items affordable to a lower income population. Souk el Grana, the former cereal market, now contains small-time vendors of cheap clothes, textiles, low-quality plastic household goods, and inexpensive radio and cassette players imported from the Far East. Rue de La Kasbah specializes in cheap shoes while Rue Djama'a Zitouna provides shops where handicrafts are sold to tourists. Only around the mosque are traditional items still to be found: perfumes, jewelry, carpets and leather goods.

More importantly, the traditional segregation of trade and manufacturing activities from residential areas is breaking down as the demand for commercial space increases with the population. Residential quarters are interspersed with produce shops, bakeries, and small general stores. Mechanized workshops, with their electrically operated looms, lathes and printing presses, have moved in large houses formerly inhabited by the Turkish elite. Second-hand clothing dealers set up their stands in any easily accessible open area. A black market thrives on Rue Zarkoun in a depressed neighborhood.

The economic strength of the medina today is due in part to it becoming the commercial center for a large segment of the low-income population of Tunis. The need to transport raw materials and consumer goods has brought a growing number of cars and small trucks, not easily accommodated on the narrow streets, but whose presence has become a vital part of its economic base. In recent years, the conflict between vehicles and pedestrians has become serious and has lead to congestion. Large cars and trucks are too wide to move without great disruption through the pedestrians crowding the commercial streets while smaller vehicles move too fast fo their safety. Vehicular access into the medina is through such wider streets as Rue du Pacha, Rue Tourbet el Bey and Rue de la Hafsia. Open spaces in Hafsia and Kherba provide trucks with a space for parking and unloading goods and transferring them to smaller vehicles. On streets where truck access is impossible, the covered suqs around the Zitouna Mosque and Souk al Grana, for example, goods are moved on push carts or by porters. Some secondary residential streets in the upper medina are wide enough to accommodate vehicles. They have become desirable locations for the small number of residents who own cars or are being transformed by the penetration of commercial uses.

3.2 The Population of the Medina

The population of the medina is predominantly young, with a median age of 20.3 years; 22% are under the age of ten and only 4% above sixty-five. The contribution of migration is evident insofar as 38% of the population was born outside of Tunis; the disproportionate ratio of males between the ages of twenty and thirty is indicative of young migrants coming to the city in search of work. As a result, the medina

population has a lower level of education than that of Tunis as a wole: among males forty years of age and older, 93% have either not completed primary schooling or attended school at all as opposed to 22% for Tunis. It is therefore not surprising to find that a large segment of the working population are employed as unskilled day laborers and as semi-skilled workers in construction and industry. Only a third of the labor force both works and lives in the medina, mainly in small-scale workshops and in trade. Both unskilled workers and better educated service and office workers commute to their jobs, in the Ville Neuve and to the industrial zones on the periphery. Unemployment is higher than in Tunis as a whole and underemployment affects most migrants involved in casual jobs.

At around TD 75 per month, median 1982 household incomes in the medina are substantially lower than the TD 132 for the Tunis region. Given an average household size of 6.5 persons, it should come as no surprise that the majority of the medina's inhabitants live under conditions of severe overcrowding. A series of surveys undertaken since the early 1970s by the Association de Sauvegarde de la Medina (ASM) document these conditions. (Tables 7, 8, and 9). The majority of households live in one- and two-room dwellings of which the predominant type is the oukala. While traditional individual houses are still the most common form of dwellings, many of them have been subdivided into one-and two-room units; the average household in the medina thus occupies only 46 square meters of floor space. Seventy-two percent of households are tenants and 19% owners; 9% occupy their premises without paying rent, either in abandoned, dilapidated structures in the lower medina or in former habou properties now owned by the municipality.

Living conditions generally reflect the origin of the population. The largest group, nearly 65% of households, are of rural origin although over half of them have been living in the medina for 20 years or more, having migrated to Tunis in the decade following Independence. They make up a significant part of the population in all neighborhoods and are an overwhelming majority in the lower medina, where densities are greater than 600 persons per hectare, reaching 1000 in some blocks. Incomes are lowest in these areas as are the number of families living in oukalas. The rural origin of this segment of the population is reflected by the high illiteracy rate of heads of households and the low level of skills of older workers. Their children, most of whom were born in Tunis, are literate and many of them have completed their primary education. They tend to reach higher levels of employment than their fathers.

Within the lower medina, successive waves of migrants have tended to form geographic affinity groups. The whole or parts of any residential quarter is often inhabited by families coming from the same region or vilage. This process has effected subtle changes in the residential quarters as the house courtyard is often reorganized to provide space for a goat, a sheep or chickens, as rooms are divided and walls are built on balconies to create more habitable space (however limited) for new arrivals from the village.

TABLE 6: AGE-SEX DISTRIBUTION OF THE POPULATION OF THE MEDINA

AGE	MALES	%	FEMALES	%	TOTAL	%
0-4	3200	9.8	2900	9.6	6100	9.7
5-9	3620	11.0	3830	12.6	7450	11.8
10-14	4330	13.2	3890	12.8	9220	13.0
15-19	3650	11.1	3890	12.8	7540	11.9
20-24	4110	12.5	2920	9.6	7030	11.1
25-29	2680	8.2	2280	7.5	4960	7.9
30-34	1680	5.1	1690	5.6	3370	5.3
35-39	1910	5.8	1800	5.9	3710	5.9
40-44	1810	5.5	1560	5.1	3370	5.3
45-49	1310	4.0	1340	4.4	2650	4.2
50-56	1210	3.7	1040	3.4	2250	3.6
55-59	1060	3.2	940	3.1	2000	3.2
60-64	880	2.7	950	3.1	1830	2.9
65 +	1350	4.1	1300	4.3	2650	4.2
TOTAL	32,800	100.0	30,330	100.0	63,130	100.0

Source: INS, Recensement . . ., 1975.

TABLE 7: DWELLING UNITS, BY SIZE OF UNIT

	Medina	%	Tunis	%
1 room	4450	45.5	53,500	25.5
2 rooms	3060	31.3	69,700	33.2
3 rooms	1360	13.9	51,000	24.3
4 or more	920	9.4	35,500	16.9
TOTAL	9790	100.0	209,700	100.0

Source: INS, Enquete Population. . ., 1980. Estimate for Medina.

TABLE 8: DWELLING UNITS, BY TYPE

	MEDINA	%	TUNIS	%
Houses	4,690	47.9	99,190	67.3
Apartments	2,410	24.6	29,380	19.9
Oukala	2,350	24.0	3,830	2.6
Makeshift	110	1.1	4,990	3.4
Other	230	2.3	10,050	6.8
TOTAL	9,790	100.0	147,440	100.0

Sources: Sebag, Les populations de la Medina centrale
INS, Recensement . . ., 1975.

TABLE 9: SIZE OF HOUSEHOLDS IN THE MEDINA

	1 person	2 persons	3-4 persons	5-6 persons	7 or more persons
Number of Households	1,120	1,320	2,260	2,380	2,710
%	11.4	13.5	23.1	24.3	27.7

Source: Sebag, Les populations de la Medina centrale.

The second group, comprising a third of all households, are the descendants of the baldi -- Tunis families that have resided in the medina for generations. This social goup is typically more educated than the migrants, and is employed in higher wage occupations: skilled artisans, shop owners, office workers, and service personnel. The majority of baldi families live in the upper medina where densities range from 250 to 600 inhabitants per hectare. It can be estimated that about a quarter of them own their own house.

The more affluent baldi families have long since moved out of the medina, subdividing the large courtyard houses into apartments. The ones that remain are considerably less affluent; accordingly, they tend to own smaller courtyard houses, often renting part of it to others. Although many of these families are solvent, their modest incomes limit their ability to adequately maintain or upgrade the older structures in which they live.

3.3 Social Indicators

The following interviews, conducted in the fall of 1983, are indicative of the range of conditions found in various parts of the medina.

The Upper Medina -- The Rue du Divan quarter has a population of nearly 6000 people; 40% of household heads are rural migrants and another 20% are recent arrivals from smaller Tunisian cities. The remaining 40% belong to baldi families whose housing is generally well maintained by its owner-occupants. Its density of over 750 persons per hectare is well over the average for the medina. With 43% below the age of fourteen, its population is younger than that of the medina as a whole and large households predominate: 34% have seven or more persons; 25%, five or six persons; and only 17% are composed of one or two persons.

Migration into this neighborhood has followed predictable patterns. New comers, ususally young men, stay with relatives who are already settled in the quarter. After finding employment, they marry a wife from their native region and try to continue to live near their relative. The Dar Kastalli block, for example, is entirely settled by migrants from the village of Tamzret, in southern Tunisia, except for part of the Kastalli mansion which is still occupied by members of the family.

Educational levels are age and sex specific. Among children in the six to fourteen age group, 84% attend school; among young people between the ages of fifteen and twenty, 57% of males and 42% of females have attended school. These proportions fall drastically for both males and females above the age of twenty. Occupational patterns are clearly related to the lack of education of the labor force, 36% of which are manual laborers and day workers and another 35% employed as trade and handicrafts workers and in low-level services (drivers, houseworkers). The better positions of managers and owners of commerces and workshops (9%), and of employees in the public and private sectors (18%) are occupied mainly by members of the baldi class. The following vignette is representative of the upward mobility experienced by some of the early migrants to the medina.

Haj Mansouri is a retired mason and construction foreman who lives in the Rue du Divan quarter with his wife. When he was a young man, he migrated to the Medina from his native village near Bizerte, in Northern Tunisia. For several years he and his family rented a small house with a courtyard which was originally the servants quarters of a historic Turkish Palace. When he was able to save enough, he bought the house and renovated it. The courtyard well was put back in service and an underground water storage tank was installed, as well as new plumbing; interior and exterior walls were repaired and replastered. The renovation costs were minimal since the Haj worked in construction and could rely on fellow workers to help. With a pre-retirement income of TD 120 per month, the Haj was relatively well-off.

All his children are married and he has five grand children. His oldest son is a well-paid engineer in Saudi Arabia. The son's foreign remittances have been used by the Haj to finance the construction of a house on the outskirts of Tunis for his second son and paid for the television set, stereo, and new kitchen appliances in the reception room of the Haj's house.

The Haj is very proud of his renovation project, stating that he prefers a traditional courtyard house to the modern dwellings in the Ville Neuve. He is knowledgeable about the history of the house, displaying a four hundred year old title to the property. His decision to invest in housing in the Medina is somewhat unusual; most residents with the Haj's resources would choose instead to build a new house in one of the expanding informal settlements on the outskirts of the city.

The Dar Hussein and Bab Djedid neighborhoods form the remnants of the Andalusian quarter of the Medina. Many of the original Tunis families remaining are direct descendents of the Spanish Muslim refugees who fled the Reconquista five centuries ago. It is not unusual for residents in this neighborhood to still feel a strong affinity with their ethnic roots. Some of the oldest and finest courtyard houses and palaces are in this part of the Medina.

The traditional extended patriarchal family is still common in this neighborhood: older parents and their married sons' families live collectively in a courtyard house. Many of these houses are owner-occupied and are well maintained in comparison to those in other neighborhoods. However, rising maintenance costs make it difficult for households to keep up with constant building deterioration and exterior building decay is commonplace even though interiors are well kept.

The El Zarrouk family is of Andalusian origin. Its 20 members share a relatively large courtyard house in the Bab Djedid neighborhood. Each brother has taken several rooms off the courtyard. Some rooms on the upper floors are shared jointly by the members of this extended family. More distantly related members of the family live across the street.

The family has undertaken extensive remodelling, installing bathrooms and plumbing throughout the structure. The kitchen has been equipped with modern appliances and a second kitchen was recently built upstairs. Each of the four nuclear families owns a television and quality stereo equipment.

Since the death of their father, the eldest daughter, Mounira (age 29) has taken over many of the responsibilities of household head. She is completing her residency in medical school, still an uncommon profession for a woman. Ahmed, the eldest son (26) is an officer in the Army. Rahdia, the second daughter, is married and lives with her husband in the same neighborhood. The youngest child is completing secondary school. All the children, except for Rahdia, live at home with their mother. Cooking and cleaning is taken care of by servants. As they become established in their professions, the young people will have a significant discretionary income. When asked what their future plans are, the younger members are ambivalent about leaving the medina because of its strong social ties. Their choice will depend on how well the traditional housing and urban environment fits the lifestyle they aspire for. All members of the familty would like to eventually purchase an automobile and they realize that parking in their neighborhood is next to impossible.

The Romdane Bey neighborhood at the top of the medina, next to the Kasbah, served for three centuries as the residential district for the Turkish elite, senior government employees, and local merchants and artisans. While many historic Turkish mansions exist in this area, most courtyard houses are modest in both size and architecture. This is

perhaps the most stable and well maintained neighborhood of the medina and new construction and building improvements are evident on many streets. Yet, the exterior of the oldest houses need more than superficial repair. While most of the smaller houses are owner-occupied, some of the mansions have been converted into oukalas by absentee landlords. As a result, these structures, often of architectural importance, suffer the most from building decay and neglect.

Ali Ben Brahim, his brother and their families share a modest courtyard house which has been in the family for generations. Although the house is structurally sound, minor repairs are necessary and there are few modern amenities. There is only one water tap for both families and the old well in the courtyard is still in use.

Ali and his brother own a small workshop where they manufacture shashiyas, the traditional Tunisian headcap made of red felt. Business is slow as only the more traditional older men still wear them, and while there is a strong tourist demand for many artisanal items, shashiyas are not popular among tourists. Ali supports his family on the monthly earnings from his shop which average around TD 120. He has two teenage daughters who are not in school and tend to the housekeeping. His oldest son attends law school at the University of Tunis and his second son, who did not complete secondary school, is currently unemployed. The youngest son is in secondary school.

The Lower Medina. Before the Protectorate, Kherba was inhabited by Europeans as well as Tunisians, a desirable location, close to the port, for Italian and Maltese merchants. Today, it is part of a transitional zone between the Ville Neuve and the medina, containing warehouses and numerous service establishments as well as dilapidated housing. Substantial vacant areas in Kherba, cleared remnants of a World War II bombing, provides parking for trucks and serves as a transfer point for goods moving in and out of the medina. The interior of the neighborhood contains varied retail activity, three cheap hotels, and workshops furnishing the merchants of the Rue Djamaa Zitouna with artisanal products.

Most of the nearly 1700 inhabitants of the neighborhood are low-income migrants. Wage earners are unskilled and work mainly as day laborers; the average monthly household income is TD 60 for a family of 6 persons. Seventy-five percent of households are tenants residing in overcrowded quarters. The housing stock is in a serious state of disrepair. Residential structures consist of mainly two and three story tenements (with handicraft and commercial activities on the ground level) in the fringe areas near the boulevard ringing the medina, and of modest traditional courtyard houses in the interior. There are also several former mansions which have been converted into oukalas. The median rent in the area is only TD 8 per month.

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Latifa, a widow for the last 12 years, lives with her four grown-up children in a crowded oukala in Kherba, once the home of a wealthy family, several members of which now live in the affluent suburb of La Marsa, to the north of Tunis. The thirty-six rooms of the house have been divided into 24 dwelling units, fifteen of which consist of only one room; eight, such as Latifa's, have two rooms. The remaining five rooms are part of a large unit on the third floor terrace. Most of these rooms, with an average floor space of 15 m^2, were the original bedrooms of the mansion.

Latifa came to the medina from her village in 1957 to join her husband who had found work in Tunis one year earlier. For two years she and her husband worked as servants and housekeepers for the owners of the house where she currently lives. Part of their compensation was three rent-free rooms. The situation changed dramatically for them in 1959 when the family moved out of the medina and subdivided their mansion into rental units. As migration steadily increased during the 1960's, the house was further subdivided to accommodate more tenants, leaving Latifa with only two rooms. Because of their earlier relationship with the owners, Latifa and her family were allowed to keep the first room rent-free and pay TD 12 for the second. Other household expenses, including cooking fuel amount to another TD 10-12 and the food budget is around TD 30 per month.

There is only one communal toilet and three water taps that are shared with the twenty-four other families who live in the building. Latifa complains that the toilet often backs up and water is occasionally shut off. Despite these problems, the women keep all common space -- the courtyard, toilets, and hallways -- remarkably clean.

The building is in an advanced state of deterioration. Plaster is crumbling off the walls and much of the beautiful tile work has cracked and fallen off. Yusef, Latifa's eldest son, complains that the owners have replaced much of the marble floor slabs of the courtyard with cheap cement paving blocks. Water seepage stains are evident at the base of the crumbling stone walls. Yusef is sensitive to the beauty of the old mansion and concerned with its condition. He points out the remaining intricate tile work in the wall which has been plastered over in some areas in an incompetent attempt to patch the crumbling wall. If he had the money, Yusef claims, he would repair the plasterwork and paint his family's two rooms. He explains that the absentee landlords have no genuine interest in the building as they no longer live there. Rental payments are collected by a hired manager who oversees several properties in the neighborhood and has made only superficial repairs in the building.

The larger room of Latifa's two-room unit has a window opening onto the courtyard; it is used as a reception room where Latifa's sons and their guests take their meals. This room is also used by the sons as a bedroom. The reception room is furnished with a handmade carpet from their village, two long couches without backing and a large wooden

chest. The walls are adorned with photographs cut out from magazines, small painted plaques inscribed with verses from the Koran and a few family photographs with their deceased father. Latifa and her daughters sleep in the second room where they also store food and cooking utensils. The corridor which separates the two rooms is used as a cooking space, with food prepared on a small propane gas burner. To economize on propane gas, which is expensive, the family will occasionally cook over charcoal placed in a clay pot. Their diet consists of bread, carrots, tomatoes, chick peas, peppers and potatoes cooked in oil with the main staple of North Africa, couscous. The family, like many others, drink a lot of mint tea and Coca Cola. Meat is expensive: only once a week Latifa will cook a small cut of lamb with vegetables. The washing of clothes and dishes is done in the courtyard, in large plastic buckets. The courtyard is the center of social life, for Latifa and her daughters, and for the building's other women. Although only one other family is related to Latifa, almost all others come from one of several villages in the northern mountains where she was born.

Latifa's sons, Yusef (age 23) and Mongi (20) each earn about TD 40 per month as dock workers at La Goulette, about forty minutes away by public transportation. Yusef went to school until age 16. Mongi was much younger when he left school and he is barely literate. Yusef is optimistic about getting a job through a relative who works in Paris, despite a more stringent immigrant worker policy in France. This would be a great opportunity for Yusef and the family as money from overseas would provide some financial security. The daughters, Mounida (15) and Fatiha (16) attend a secondary school run by French nuns in the medina. Both girls are already more educated than daughters of the same age from other migrant families in this quarter of the Medina. Fatiha hopes to eventually work as a typist and Mounida would like to be a nurse. With education and skills, both girls will be able to contribute significantly to the family income, until they marry. As a widow responsible for raising four children, Latifa is anxious that her daughters have education and a profession. Despite her rural background, she is more progressive as to the role of women in society than many of her neighbors.

Even if they had the money to buy property in a fringe settlement, the family is ambivalent about moving out of the neighborhood and are apprehensive about leaving their friends and relatives. They would prefer to stay if they could afford a better house with more space. The stable social network of other migrants from northern Tunisia has sustained Latifa and her family for the past 26 years. Over the years, they have learned where to purchase goods most economically, and the children have been able to take advantage of school and amenities which are only available in the medina and Ville Neuve.

4. DEVELOPMENT OF THE URBAN FRINGE

Spontaneous development is not a new phenomenon. Before the Second World War, rural migrants preempted a number of vacant peripheral sites to build their own housing. These squatter settlements, constituted of discarded materials and rammed earth, which had located near a source of drinking water and with access to either jobs or public transportation, amounted to nearly 15% of the housing stock and 20% of the urban population of the Greater Tunis Region in the early 1970s. In spite of the age of some of the settlements, few improvements took place over the years: an insecurity of land tenure discouraged improvements while their haphazard layout made the provision of any public infrastructure expensive and technically difficult. As a result, they remained as pockets of poverty within an expanding urban environment. Over the last ten years, the government has implemented a vigorous policy of demolishing gourbivilles that could not be upgraded and relocating their inhabitants in public housing projects. Over 7,000 of these dwellings were demolished in Tunis between 1975 and 1980 and it is expected that all gourbis will be eliminated in the capital by the end of the decade.

The development of the urban fringe has recently taken an unprecedented importance. No longer the result of the individual actions of rural migrants, squatters whose fear of displacement prevents any substantial improvement of their dwelling even as incomes rise, current development is occurring on land sold by its owners to families seeking to improve their housing condition. Typically, these so-called informal settlements are built on agricultural land as farmers take advantage of rising land costs. Sold either as individual lots or to a small-scale developer who subdivides and resells it as building lots, the land is developed in single-family structures, at least half of which are originally one-room dwellings.

This type of housing is generally incremental: initially, a single room is built and the plot fenced in. At an estimated cost of TD 860, this minimum development is still on the order of 1.3 times the average annual income of the households settling on the fringe. As resources become available building materials are stockpiled in the courtyard. Finally, a permanent compound wall is built and the dwelling enlarged. Since additional investment can be undertaken only after more savings have been accumulated or the money borrowed from family or friends to purchase the lot repaid, the second room is normally added only three to five years after the initial improvement to the lot. The construction work is undertaken by small builders, employing less than six workers, who often provide short-term financing for up to half of the construction cost. This method of construction is 40% cheaper than that of contracting firms as the builder only carries a minimal overhead and relies extensively on salvaged materials.

The level of activity of the informal sector is impressive: between 1975 and 1980, nearly 19,000 units or 40% of dwellings constructed in the Tunis region were built in this manner and another 8,000 units were enlarged. Although its activities are illegal insofar as property transfers are seldom registered, subdivision of land and building construction occur without obtaining the necessary permits, and zoning and building code standards are seldom adhered to, this sector is highly organized. It develops large residential areas of good quality structures that are well-maintained by their owners and usually expanded and improved. Even though these de facto residential zones are developed at high densities and without infrastaructure or community facilities, they are quite different from the shanty towns and gourbivilles that were being built up to the early 1970s. Between 1975 and 1980, some 775 hectares of land in the Tunis region were developed in informal settlements, almost half of the total land consumed by residential construction. Between 1980 and 1986, it is estimated that between 12,000 and 27,000 additional units will be built in this manner, consuming another 500 to 1,100 hectares.

The physical structure of these settlements reflect their socio-economic characteristics. At the edge closest to public transportation, a concentration of commercial activities radiating along a few main streets signal the principal entry point. Smaller commercial clusters, scattered within the settlement, reflect its successive expansion phases. Since owners live behind or above their shops, in traditional fashion, these main streets represent relative concentrations of wealth and two-and three-story buildings are not uncommon. The interior contains a broad spectrum of building types whose degree of completion varies according to when the area was settled and the income of each household. It is common to find a two-story villa, its yard carefully fenced in and its windows protected by decorative grill-work, next to a one-room dwelling temporarily roofed with canvas, corrugated tin, or earth mortar spread over a latice of wood and rushes. Generally, the far edges of the development contain the more rudimentary structures although elaborate villas on larger lots are also found as owners choose to buy more land in a distant location where land prices are lower.

With the exception of the main streets (former rural pathways providing access to the fields) the shape and size of blocks varies widely, depending upon the original configuration of the agricultural plots, their ownership pattern and the process of successive sales that transformed them into residential use. The streets are relatively straight and surprisingly wide. They are unsurfaced, with the possible exception of short spurs into the settlement when they have grown large enough to warrant servicing by public buses. Lot size also vary in size and shape. Few lots are smaller than 80 square meters or larger than 200; the most common size in the Tunis Region is in the 100-120 square meter range.