CAIRO

1001 YEARS OF
THE CITY VICTORIOUS

JANET L. ABU-LUGHOD

PRINCETON UNIVERSITY PRESS
PRINCETON, NEW JERSEY, 1971
Preface

Citus are, to paraphrase, all things to all men. Great symbolic cities such as Cairo, with their extended histories and current vitality, are even more likely than most to evoke diverse and conflicting responses from those who know them. To the contemporary inhabitant who lives out his daily routine along selected and repetitive pathways—to work, home, to visit friends and relations, to pray and to play—his “city” appears so mundane that he scarcely notes its all too familiar and thus invisible aspects. He envisages neither its extent and form nor its links with past and future. The tourist notes all with eager and undulled eyes, finding excitement but also bewildermend in the city’s apparent formlessness and anachronistic contrasts. All modernity is dismissed by the antiquarian, who sees the modern metropolis merely as an inconvenient obstacle to a proper vantage point from which to explore this precious mosque or that priceless wall fragment. He moves selectively from one to the other, ignoring the contemporary form of the city in his effort to reconstruct an earlier life, still temptingly visible at times.

To the student of modern urbanism, however, Cairo presents primarily problems and an enormous challenge. Here admittedly is a city with prehob problems of land use chaos and inefficiencies, of human and vehicular congestion, of social disorder and poverty, striving vigorously to create a utopia. But here also is a complex city, a blend of old and new, of East and West, which must not be allowed to achieve its new order at the expense of its unique and poignant beauty nor its human warmth. The problem is one of balancing conservation and progress.

The challenge, on the other hand, is one of discovery. Can a pattern, a form, a rationale be extracted from what appears to the casual observer to be capricious disorder? For order there must be. Perhaps no creation of man is capable of retaining its underlying organization so obdurately in the face of dramatic shifts in culture and technology as the urban shell-home he has built over history. If order is to be found, however, more than the naked eye must be employed to uncover its hidden framework. Both the telescopic lens of history and the infrared lens of statistics are needed to separate the accidental from the essential and to trace the often obvious chains that bind present with past and that link parts with the whole. If this book has an implicit goal, it is to uncover the orderly patterns and temporal sequences in Cairo’s growth and development that have yielded the present form of the city and have given rise to its particular qualities.

There has been an ancillary objective as well. While every city constitutes a unique Gesell, it also shares with others of its genre certain basic similarities. While explicit comparisons are excluded in this book, it is nevertheless clear that Cairo was, to some extent, merely one example of genus “preindustrial city,” species “Islamic.” As such, an analysis of her experience can throw light on other communities whose growth and development have been conditioned by similar technological and cultural determinants. Furthermore, the modern bifurcation of Cairo into indigenous and “Westernized” quarters parallels the experience of many cities with a colonial heritage. The problems the city now faces in eliminating these divisions and building a unified physical form which reflects her recently regained cultural unity are problems being faced in other modernizing nations as well.

How shall a study of Cairo—a city of such venerable antiquity—cope with the question of historical data? How much should be included; what can be left out or glossed over; how shall the evidence be interpreted? There is no easy nor universally satisfactory solution. As a sociologist I make two assumptions: that historical writing, like every other kind, is always selective and, in ways, personal; second, that one’s view of history is deeply affected by one’s vantage point. The general historian, standing above the incredibly complex and sweeping movements encompassed within the more than one thousand years of Cairo’s life, may be anointed to find emphasis given to certain periods relatively insignificant on the larger canvas, or certain institutional arrangements and patterns treated to the exclusion of others of at least equal import to the larger society. My defense is to plead unabashed myopia. Viewing history not from the heights but from the narrow streets of Cairo yields a peculiarly distorted image. Throughout, my criterion has been to measure each period and development by its impact upon Cairo and its relevance in explaining the conditions and counterimpulses at work in the contemporary city (although some parts of the history are intrinsically so fascinating that I could not resist them.) In this I have operated more in the manner of biographer than of historian, for the ultimate goal has been to understand the city, viewing the formative milieu selectively and in terms of its relation to the object of study.

This book, to which I owe so much of my education, has had a varied and overlong history. I began work on it in 1959 while associated with the Social Research Center of the American University at Cairo, and it is to the Director of the Center, Dr. Laila S. Hamamsy, that I must express my deepest appreciation, not only for her tangible contributions in making available financial support and assisting personnel but also for the faith she...
PREFACE
demonstrated by granting me a free hand to explore the subject and to shift the focus of the study. The project
began originally as a statistical analysis of Cairo by census
tracts. The results of that inquiry have already been
published by the Social Research Center in 1963, under
the title Cairo Fact Book. It began evident, however,
that the ecology of the modern city laid bare by that
analysis was static and still confounded. Further statistical
analysis was to classify the picture, but the reasons for the
ecological pattern could be grasped only within the
longer perspective of the city's evolution. Thus, toward the
end of my sojourn in Egypt I began the research and
writing of this book, a project that in one form or
another has taken a decade.
In this endeavor I have benefited from the generous
support and encouragement of many. To the Radcliffe
Institute for Independent Study I owe the time during
which most of this manuscript was committed to paper.
An appointment as Associate Scholar during 1961-1962
allowed me to devote more time to writing and gave me
access to Harvard University's excellent library. The
rather complex statistical operations required for the
final portion of the book were made possible by a grant
from the Milton Fund of Harvard and by the liberal
amount of computer time granted jointly by Smith
College and the University of Massachusetts. Additional
machine time and skilled secretarial services were made
available by the M.I.T.-Harvard Joint Center for Urban
Studies. I owe Martin Meyerson, its first director, a
special debt of gratitude, for he gave me my earliest train-
ing as an urbanist, was a stimulating guide and colleague
for many years after that, and demonstrated his continued
confidence in me— sponsoring this book with the Radcliffe
Institute. Various other staff members of the Joint Center
gave generously of their time and competence. Mrs.
Johanne Khan, in particular, rendered significant and
intelligent editorial services as she typed much of the
manuscript.
Intellectual acknowledgments are sometimes more
difficult to identify than practical ones, for they tend to
become so deeply incorporated that we lose sight of
their origins. This is not the case here. This book liter-
ally would never have been conceived, much less brought
forth, without my husband, Ibrahim Abo-Lugbood.
Not only did he take me to Cairo, an irresistible stimulus
to an urbanophile, but he generously gave of his vast
scholarly store. He guided me to and through the original
Arabic sources, translating, tracing usages and tradi-
tions, evaluating conflicting evidence. No less important
were his contributions to my psychic stamina. A wise
criticism or an optimistic encouragement at those recur-
rent moments of author's cramp are gifts for which no
adequate recognition can ever be given.
I have not been the first to be charmed into bondage
by the city of Cairo; she has captivated many before,
and to these earlier writers each new student of the city
must defer, recognizing that his endeavor has been
built upon foundations laid by others. If and to the extent
that my effort improves upon theirs, it is only be-
cause I have had the advantage of "standing on their
shoulders," freed by their prior syntheses to pursue ad-
ditional goals. While the number of books on Cairo is
 legion, two in particular have represented the culmina-
tion of their generation's knowledge of the city and
have made these findings available to the western reader.
The first was a small classic, The Story of Cairo (1902),
written by Stanley Lane-Poole, nephew of childless Ed-
ward Lane and heir to his mantle as one of the first
British scholars to study seriously the language, literature,
and culture of Islamic Egypt. If my book does not dupli-
cate his intriguing narrative, it is only because my
ultimate orientation has been social and contemporary
rather than historical and architectural. The revisions
required by later knowledge have been amply supplied by
the architectural histories of Sir K.A.C. Creswell, in
whose debt we all remain. The second book, prepared
one generation later and far broader in scope and tem-
poral coverage, was the two-volume work by Marcel
Clerget, Le Caire; Étude de géographie urbaine et d'histoire économique, published in Cairo in 1924 and
now, unfortunately, out of print and difficult to find.
Since its publication it has served as the standard West-
centr-language source for information on Cairo and, in
orientation and focus, approximates the present work
more closely than does Lane-Poole's. If I appear in the
course of this study to dwell on Clerget on points of
fact or interpretation it is only because his comprehensive
work has alerted me to many of the unsolved issues in
Cairo's growth and development; I can only hope that
my own synthesis will prove equally stimulating to the
next reappraisal. Furthermore, Clerget's analysis ter-
minated with the Egyptian Census of 1927, when Cairo
had only little more than a million inhabitants and
covered only a fraction of its present developed area.
The city's population now exceeds 5 million, suggesting that
a crucial phase still remained unexplored. From this newly
 gained hindsight I cannot help but reinterpret some of
the past factors responsible for the contemporary city's
organization. Not only has the city grown but our
knowledge of societal organization during its earlier
periods has similarly expanded. I have tried to incorporate
these revised views of Islamic urban organization into
the interpretation wherever they seem relevant, while
recognizing that they still fall short of adequacy and
may be significantly changed in the future.
Not only paper-and-ink friends but also more lively
co-workers have aided me in fashioning Cairo. Numerous
colleagues at the American University at Cairo con-
tributed to initiating me into the intricacies of the city.
The late Professor Alphonse Said, who generously shared
his intimate knowledge of the city with me, and Ezz
al-Din Attiya, who acted as my enthusiastic research
assistant for almost two years, must be singled out
especially, although there were many other Cairoiens
who assisted without knowing. From among the govern-
ment officials shaping Cairo's future who were generous
with their time and spirit, I must single out for special
thanks Muhammad Hādi 'Ali, Sa'd al-Najīr, and Maḥ-
di 'Arāfah. The cooperation of the U.A.R. Ministry of
Culture made it possible for 'Abd al-Fattāḥ 'Id to con-
tribute his exciting contemporary photographs as ac-
companying illustrations, and it was the generosity of
Ahmad Bāhā' al-Dīn, chief editor of Al-Musawwar
that made inclusion of older photographs of Cairo, drawn
from the archives of that magazine, possible.
Others have been equally generous in lending parts of
the manuscript and, by their constructive comments, in
protecting me from numerous but not all errors and in-
accuracies. These include Sir K.A.C. Creswell, distinc-
tious scholar and lifelong force behind the preservation
of ancient Cairo, Roger Le Tourneau, Donald Little,
Alan Horton, and Charles Issawi. Among the sociologists
who have considered and commented on the manuscript
itself or upon the statistical techniques utilized for the fi-
nal section are Gideon Sjoberg, Hilds Golden, Thomas
Wilkinson, and Peter Park. To all these I express my
grateful appreciation.
This volume was no simple matter to produce. The
accuracy of its expression and the beauty of its presenta-
tion owe a substantial debt to two members of the
Princeton University Press, Manuscript editing was done
meticulously, graciously, and with interest well beyond
the call of duty by Eve Hanle, and the handsome design
was created by Helen Van Zandt whose taste and judg-
ment are revealed on every page. Their contributions
should be a source of pride to them as they are pleasure
to me. The assistance of the Program of African Studies
of Northwestern University made possible the inclusion
of maps and illustrations, and the edition and judg-
ment of Barbara Kalkas transformed the index into a
true guide.
Perhaps my final acknowledgment must be to the city
of Cairo itself. Had she not been so fascinating the
inseminus for this book could never have been sustained.
JESSY L. ABO-LOUGHOUD
Wilmette, Illinois

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Introduction

In the year A.D. 969 the lines of a small rectangular military capital were staked out by a Fatimid conquering army from North Africa. Set near an existing town founded more than three centuries earlier by another military conqueror imbued with similar religious fervor, the new bastion was named al-Manṣūriyya, from the Arabic root signifying God-granted victory. Within a few years the name—but not its meaning—had been changed to al-Qahirah (The Victorious), to celebrate the triumphal entry of the Fatimid Caliph into a city which was to serve as the seat of his Shi‘ite dynasty for the ensuing 200 years and which was to persist to the present as one of the great cities of Islam.

The blend of religion and the military, characteristic of her origin, was to impart unique elements to the city’s development; the meaning of her name was to augur accurately for the future. Despite wide oscillations in the fate and vigor of Cairo (the Western corruption of al-Qahirah), she not only survived but developed into the present metropolis—home to more than six million Cairenes, symbol and center for more than one hundred million Arabs.

The colossus of Cairo today dominates the two continents Egypt bridges. Even as Africa and Asia Minor find their cultural and geographic nexus in the heartland of Egypt, so also do both continents turn inevitably toward its core, Cairo. One must go as far north as Berlin to find a competitor in size, as far east as Bombay and as far west as the Americas to find its equal, and one may travel to the southern Pole without ever meeting its peer. Within Egypt, the city’s dominance is even more striking. One out of every seven Egyptians resides within her official boundaries; one in six lives in her metropolitan web.

And, just as Egypt herself stands astride two continents, so Cairo stands astride Egypt, linking as well as dominating the two subregions—Upper Egypt to her south and Lower Egypt to her north. Her dominance is challenged only by the Nile, the river that bisects both Cairo and the nation but paradoxically unifies as it divides.

The geographic site of the city is strategic. Historically, the flow of things, peoples, and ideas in the Nile’s narrow valley has always funneled eventually into the north-south, south-north axis. South to north is the natural flow of the country. Ancient and contemporary Egyptians alike describe south as “up” and north as “down,” and by no capricious reasoning. South is the source of the river, the source of the very soil, and the power of the river’s flow has dragged the country with it. It has even dragged Cairo herself downstream, as will be seen later.

Viewed from the south, Cairo is a prism through which the single stream of the Nile is refracted into the myriad channels which vein the Delta. Only ten miles north of Cairo is the barrage that regulates water flow into the two branches of the lower Nile, one leading to Damietta, the other to Rosetta (Rashid). Thus, Cairo guards the gateway to the wide Delta and controls its destiny.

North, on the other hand, has been the soft underbelly which attackers, coming one after the other in dizzying succession, have invaded from three directions to reap the fruits of the black soil and the browened people. Here Egypt is virtually defenseless. Nowhere in the diffuse Delta can an enemy be repelled in force. But just as all streams lead out from Cairo, so all roads from the north converge inevitably upon her, and though her narrow bounds must pass any force intent on controlling the
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2. Lane in walled Babylon today

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Gardens and monasteries were scattered on the plains between the fortress and the port on the north and between the fortress and the mountains to the east. The garden was an integral part of the city, and the residents of Babylon may have taken pride in the idea that their city was a garden, as in the Old Testament.

Byzantine stronghold of Babylon gave refuge to some of the inhabitants who found themselves displaced by the conflict. The city continued to thrive, and its importance increased with the rise of the new world order. The city was still a center of learning and culture, and its influence extended far beyond its borders.

The fall of Babylon marked the end of an era, but the legacy of the city lived on. The ruins of the ancient city served as a reminder of its辉煌 past, and the modern city was built on top of the ancient ruins. The city's rich history and cultural heritage continue to attract visitors from around the world. Today, Babylon is a symbol of the enduring power and beauty of human civilization.
The Cairo area showing the location of major settlements and the land added through shifts in the channel of the Nile since A.D. 600

I. The Cairo area showing the location of major settlements and the land added through shifts in the channel of the Nile since A.D. 600

II. Contour map of southern and central Cairo superimposed on historic landmarks

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II. Contour map of southern and central Cairo superimposed on historic landmarks
PART I: THE ISLAMIC CITY
During the seven months that the Arab invaders under 'Amr besieged the Byzantine fortresses at Babylon, they pitched their tents on the high daisy plain above riverine Babylon. Once capitulation was achieved, the troops were arranged somewhat more formally, Northeast of the fortress (renamed Qasr al-Sham) by the Arabs) at the firm bank of the Nile, 'Amr erected the first mosque in Africa. With the mosque at its core, flanked by the commercial markets which usually accompanied the central mosque in Islamic cities, a quasi-permanent army camp was established. It formed an elongated semicircle stretching as far north as the mouth of the Red Sea Canal and as far south as the inland lake, the Birkat al-Habash.  

This was hardly a unique Arab settlement. Indeed, throughout the conquered territories, Arabs set up similar encampments, to which they gave the name Fustat (from the Latin fustitum, or the Byzantine Greek ψύστη, meaning simply entrenched).  

Always located at the edge of the desert, each had a similar plan of widely scattered nuclei. The raison d'être of this physical design can only be understood in terms of the social characteristics of the founders. The Arab army consisted of diverse and often incompatible tribes and ethnic groups, was accompanied by a straggling retinue of women, children, and slaves, and was composed of men whose past nomadic life made close quarters repellant. Such an army was not likely to set up a permanent city of the Hellenic or Roman bastide type. The city of Fustat, established by 'Amr around the Babylon fortress, was originally, as  

1 A. R. Guest has done a remarkable job of scholarship in reconstructing this early settlement. See his "The Foundation of Fustat and the Rise of that Town," Journal of the Royal Asiatic Society (January 1907), pp. 40-84. The article includes a valuable map, which has been reproduced in Carl Becker, "Cairo: Encyclopaedia of Islam" (1913). Guest points to the basic similarities among Fustat, Buraq, and Kufah, each "a long straggling colony of mean houses and hovels, ... arranged irregularly in groups of loose order . . . ." p. 82. Each was also a  

major.  

2 See K.A.C. Creswell, Early Muslim Architecture (The Clarendon Press, Oxford: 1952), 1, 29, particularly note 7 on etymology. This derivation is also noted by Philip K. Hitti, History of the Arabs (The Macmillan Company, New York: 5th edn, 1951), p. 195, note 2; and by Xavier de Planhol, The World of Islam (Cornell University Press, Ithaca: 1959), p. 3. Historians of Cairo, such as Lane-Poole and Marcel Clerget, have translated Fustat as "tennis," without recognizing the military implications of the term. In this they have undoubtedly followed Marsh's interpretation, as explained in Khitat (Bibliq Press, Cairo: 1853), t. 298.  

3 As we have seen, Fustat was a generic term referring to any army encampment. While eventually the name replaced Babylon Clerget has aptly described it, a "centre mi-sédentaire, mi-nomade, grand campement à proximité du désert . . . . Une sorte de ville en formation."  

At first, segregation was rigid, with each ethnic group or tribe assigned its own isolated quarter. However, during the sixty years following the conquest, as the temporary camp was transformed into a permanent commercial as well as military settlement, there was both a retraction toward the central nucleus at the Mosque of 'Amr and its radiating markets, and a filling in of the spaces purposely left open by the original plan. The ultimate result was a fairly compact town of a permanent nature, having little relation except in name to the army camp which had been its progenitor. An economic depression had also contributed to the physical retraction but, with the restoration of prosperity in the eighth century, Fustat embarked on a new expansion in all directions toward the higher land southward to the new land left by an even-then receding Nile, southward to the banks of Birkat al-Habash—deserted during the period of retraction but newly rebuilt—and, less markedly, northward to the vicinity of the more and more neglected canal. By mid-century, the time of its first major dynastic shift marked by the 'Abbásid victory over the Umayyads, Fustat was a somewhat provincial or Arabian, the distinction was retained in the papal until the end of the seventh century. Becker suggests that the early distinction was probably more administrative than geographic. The name "Babylon" fell out of use among the Arabs soon afterward, but was retained throughout the Middle Ages by the Copts who sometimes used it with reference to all the settlements stretching between the fortress and Helwan. The term "Babylon" was also used in Latin manuscripts, in trade agreements with Europe, and in European literature by, among others, Mandeville and Boccaccio. See Becker, "Babylon," in the new Encyclopedia of Islam (London: 1918), 1, 844-845. European travel documents throughout the Middle Ages continue to refer to Babylon, which, after the establishment of al-Qahirah in the late tenth century, was used as the ordinary term for Mitr al-Qurashih, i.e., Old Fustat. Some of these usages are supported by documents translated and incorporated into an article by P. Hermann Dopp, "Le Caire: Vu par les voyageurs occidentaux du Moyen Age," Bulletin de la Société Royale de Géographie d'Égypte, xxii (June 1906), 177-199, which deals with travelers to Cairo before the fifteenth century. In a fifteenth-century manuscript by a Venetian trader, a similar distinction is made between Babylon and Cairo. See P. Hermann Dopp, ed., L'Egypte au commencement du quinzième siècle après le traité d'Édimbourg Pilat de Corté (Inscript 1429) (Fond 1st University, Cairo: 1956), pp. 11, 20, 26, 31, 38, for examples of this usage.  

4 Clerget, Le Caire, 3, 106. See pp. 107-113 for the later evolution of this commuinity.  

5 Potters' quarter on buried ruins of Fustat. Minaret is Mosque of 'Amr  

6 Rooftop view inside Babylon-Fustat
but nevertheless important city serving both administrative and commercial functions. It continued in these functions until much later, even after the founding of new suburban communities by the succeeding 'Abbāsid, Tālūnīd, and Fāṭimid dynasties.

The new towns of Islam have been classified into two main types: army camps which eventually developed into permanent cities; and princely towns founded to "mark the birth of dynasties and to affirm their authority." The city of Fustat, which evolved from a coalescence of the army camp of 'Amr with the preexisting nucleus of Babylon, is an excellent example of the first type. Al-'Aqṣar, founded by the triumphant 'Abbāsids in 759, al-Qaṣrāyīn, founded by the overambitious Ahmad ibn Tūlūn in 870, and finally, al-Qihārah (Cairo) herself, founded by the new Fāṭimid dynasty in 969, are all examples of the second type. While the former tend to be relatively unplanned, meager in public amenities and unembellished aesthetically, the latter, intended as symbols of status and display, are both well planned and handsomely constructed. By definition, however, a princely city remains somewhat outside the mainstream of economic vitality of a region, being a center of conspicuous consumption rather than one of trade and production. It was this very characteristic that permitted Fustat to remain the commercial capital of Egypt, despite the series of princely cities developed on her northern border.

An internal struggle between the Umayyads and the 'Abbāsids for supremacy within the Islamic empire led to the first major discontinuity in the structure of Fustat since 'Amr had given her life. The final scene of 'Abbāsid victory, in fact, was played out on the site of Fustat, to which the Umayyad Caliph, Marwān II, had fled in hopes of eluding his pursuers. In the struggle, a large portion of Fustat was burned, but this scorched-earth tactic did not prevent Marwān from being apprehended and beheaded. For the Islamic world outside of Spain this marked the end of Umayyad power and meant the removal of the seat of the Caliphate from Syria to Iraq where it later flowered in the new capital of Baghdad. For the smaller world of Egypt it meant the displacement of the governmental functions of the region to a newly built suburb just north of Fustat, called al-'Aqṣar (the Cantonment).8

8 De Plantol, The World of Islam, p. 4.

A prototype of a princely town, al-'Aqṣar was planned as a permanent settlement whose core was the official residence, the Dīr al-Intrāb, together with the central mosque around which the markets were concentrated. Surrounding this typical nucleus were the luxurious residences of members of the court and the various regiments whose double responsibility it was to defend the administrative suburb from popular uprisings and to repel any attack on Fustat from the ridges above it. During the century or more which followed, the two communities fused so that the combined settlements of Fustat and al-'Aqṣar stretched in attenuated fashion along the axis of the Nile, occupying both the low riverine plain and the crest of foothills to its east and north. The century which witnessed growing conurbation in the Fustat region, however, also witnessed a growing decadence in the 'Abbāsid empire, a succession of governors of Egypt who remained for brief albeit profitable stays, and—the factor which led ultimately to the building of one of the grandest princely towns—a growing independence of parts of the far-flung and only loosely controlled empire. It was during this period of increased provincial autonomy and proliferation of feudalistic principalities within the empire that Ahmad ibn Tūlūn, of Turkish descent but raised in the Mesopotamian princely city of Sīmarrā, came to al-'Aqṣar as deputy for the governor of Egypt. Inspired perhaps by the luxurious court from which he had come, and aided immeasurably by the temporary autonomy bequeathed him by a fragmenting empire, he founded his own princely city in 870, two years after his arrival. Located on the higher land east and slightly north of al-'Aqṣar, this community was called al-Qaṣrāyīn (the Ward), reflecting its feudal base.

The pleasure city of al-Qaṣrāyīn was, to that date, both the finest planned addition to Fustat and yet the addition most isolated from the region's economic life which still centered in Fustat. Set on the dry hills of Yashkur, overlooking not the Nile but the Birkat al-Šīl in the flood plain due north of the settlement, al-Qaṣrāyīn represented a final thrust away from the promise and punishment of the river. In fact, so independent of that stream was it that fresh water was supplied from across the southern desert by an aqueduct which carried it from its intake tower at the Birkat al-Ḥabash all the way to the suburb, predominant and where a fire, moreover, had destroyed a part of the buildings, preferred the neighborhood of Yashkur. ... (Translation from 2, 115.)]. Simon, in his article on "Fustat," Encyclopaedia of Islam, 3, is more accurate in dating the flight of Marwān II and the fire in 759, and in dating the construction of al-'Aqṣar after 751. Additional information on the town is found in Marqūz, Khatā, t. 286; Becker, "Cairo," p. 187; Lane-Poole, The Story of Cairo, p. 65.
The four successors of Ibn Tulun further embellished the family crown jewel of al-Qārīṭ. The splinter state founded only a third of a century earlier reverted to ‘Abbāsid control. To avenge the indignity which the Ṭūlūnids’ abortive independence had inflicted, the ‘Abbāsid troops destroyed al-Qārīṭ in 905. Only that vast square courtyard surrounded by gracefully arched portico—the Mosque of Ibn Tulun—still survives to mark the site of the dead city. Once again, the ‘Abbāsid resumed their role from the Dār al-Imāra in al-‘Aṣkara which by this time had so merged with Fustat that even the name had been dropped, the entire city again being identified simply as Fustat.

At the same time the ‘Abbāsids were reasserting their hold over Egypt and her principal city, Fustat, the movement that was destined eventually to overthrow them in that region and to establish Cairo not merely as the largest city in Egypt but as one of the great cities of Islam had already begun. By 910–911 in Tunisia, Sa’d ibn ibn Hūayyūn (Ubayyūd al-Mahtā) had established the Shī‘ite Fāṭimid Caliphate that was to reach its fullest expression on Egyptian soil. Abortive attempts were made in 914 and again in 921 to press eastward to Egypt, but it was not until 969 that the movement gathered sufficient momentum to permit the conquest of Egypt. By then, the Ikhshīdīs were in power at Fustat which had become a bustling commercial metropolis. At the head of the city, Kitāb, 1, 286.

It may have been at this time that the term “Mīr” began to be applied to the settlement of Fustat together with its offshore island of Rawdah. Although Clerget suggests that this usage dates from the time of Ibn Tulun (Le Caire, 1313), we have no evidence that the term “Mīr” was used as a substitute for Fustat before the end of the ninth century, and its usual application to Fustat may date even later. My argument rests on the following evidence. In 893, Yaqūbī wrote his Kitāb of the Countries, a detailed geographic account of the regions of the Arab domain. He notes that “the district of Egypt bear[s] the name of their chief towns” and that one of the chief towns is Fustat sometimes called Babyloun ... [which is also known by the name of Quraysh]. This translation is from Qāsim, Kitāb al-Ṭūlūn, Law of the Law (Cairo: 1205), pp. 154, 155. If Fustat had also been called Mīr at this time, presumably Yaqūbī would have included this among the alternate names provided. However, in another work by the same author, his Tarīkh, the term “Mīr” appears in infrequent contexts to mean the metropolitana area of Fustat, rather than the country. See, for example, Yaqūbī, History, ed. T. H. H ida (Leiden, 1821), 117, 180, 306, 310. We have already seen that a contemporary of Yaqūbī, al-Baladhuri, writing in the late ninth century, equated ‘Aylūn with Fustat but used the term “Mīr” to refer to the larger region. See his Fustat al-Baladhuri (Cairo, 1901). This also tends to be the usage employed by a somewhat later writer, Marwān, who described the Egypt he knew during his visit. In Marwān’s epic work, Les voyages d’al-Aziz (Arabic text edited and translated into French by C. Barbier de Meynard and Pavet de Courteille, published by the Société Asiatique, Imprimerie Nationale, Paris: 1861–1874), “Mīr” is occasionally used as a possible substitute for the Fustat region. In this work the confusion between Mīr the name of a country and Mīr as the name of a district or city, which plagued even contemporary usage, remains unfulfilled. In most contexts, when Marwān uses the term “Mīr,” he refers to the country of Egypt (see for example, n. 1, 10, 11, 12, 13, 14, 15, where Fustat as a city is used in contradiction to the country of Mīr). However, there are at least three contexts in which the term “Mīr” seems to refer to a city which included both Fustat and the island of Rawdah (Jarīf al-Sīnāb). For example, in n. 1, 10, 11, 12, he describes the devastations on the night of the plagues, using alternately the terms “Fustat” and Jarīf al-Sīnāb, and “Mīr,” and observing that none of the gates of the dawrāf are closed during that night. Gates were found only in cities. This, however, is far from conclusive proof that Mīr was the common term for Fustat. Another context appears in n. 1, 10, when the name Mīr is coupled with other towns, Homs, Marāz, and Antioch, as an equal. A third use of Mīr as a city rather than a district or a country is found in n. 1, 10, where he says “Marwān led his Zayjīyye soldiers from Syria to Mīr which he besieged and around which he dug trenches in the area adjacent to the cemetery; over them was Ibn Zayjīy Ibn Ḥadīm, and the leader and the master of Fustat was Al-Buṭūn . . . . al-Sābbih.” (Translated from the Arabic version.) Presumably only a city could be besieged. The conclusion from the above is that, as early as Yaqūbī and certainly by the time of Marwān, the term “Mīr” was in occasional use for the area of Fustat; in application, however, was still fragmentary and without uniform meaning. Less than half a century after Marwān, the term “Mīr” was a complete substitute for Fustat, and it was used by all later writers describing the community, as will be seen below. Between the time of Marwān (whose use of Mīr is fragmentary) and 893, when al-Muqaddasi wrote his Ahār al-Fustatī fī Marāz al-Kalma, which included a geographic description of Egypt and its cities, the term “Mīr” had evolved into a popular substitute for the term “Fustat,” which evidence was falling out of use although still mentioned. It is in this work that a specific identity between the two terms appears. Note the following quotations translated from the Arabic text edited by de Goeje (E. J. Bell, Leiden: 2nd edn, 1906/1909). “The Mīr region [i.e., Egypt] is divided into seven provinces, six of which are inhabited and have extensive developments (cities) and a beautiful countryside (p. 193). . . . among the provinces he lists] Marwān, whose central town [Qal‘ah al-Qal‘ah] is Fustat which is al-Mīr, and whose cities include al-Akhdariyyah [Mamluk], al-Mihrayn and ‘Ain Shams [Helwa]” (p. 194). Elsewhere he says: “Al-Fustat is Mīr according to every authority because it includes the central ministries and the Ḥanīf al-Maṣṭaniyyah [the Caliph]. . . . the region flourished and its name became famous and esteemed and therefore it had become Mīr Mīr, that which surpassed Baghdad, the pride of Islam, the market of mankind” (p. 195). It would not be unreasonable to connect this new usage with the founding in 969 of the new city of al-Qāhirah which had to be distinguished from the true metropolis, Fustat—hence the term “Mīr.”

The position 1 have taken here is in contradiction to that subscribed to by, among others, A. J. Wensink, in his article “Mīr,” Encyclopaedia of Islam (1933), m. Wensink claims that “in the period between the Arab conquest and the foundation of Cairo the name of Mīr is regularly applied to the city just mentioned [southwest of later Cairo]. . . . After the conquest of Egypt by the Muslims there were two settlements only on the right bank of the Nile . . . viz. Babyloun and Fustat. The papyrus
of the Fıtimid dynasty was its fourth Caliph, Muizz ad-Din, who had selected to lead his forces for the Egyptian campaign. He had an efficient general and administrator, one Jarjb the name of either of these settlements. Yet in the latter part of the seventh century A.D. the application of the name of the two cities to one or to the other or to both must have been, as stated by Joan of Niki, fairly well established. As demonstrated above, the application of the term "Mir" to pre-Qhirah settlements was not regular at all. Only the document of John of Niki, however, can be cited in evidence of this position, and I have already discussed the dubious reliability of this document (Chapter 7, note 12).

A brief outline of the history of this dynasty and its designs on Egypt may be found in Carl Becker's "History of the Islamic Nations" (1950), especially pp. 155-156. The origins and identity of Jarjb have been shrouded in mystery and subject to continuing controversy. Although it was formerly believed that he was a converted Christian slave from either Syria or Sicily (his name is Jarjb, the Sicilian), the most current opinion is that he was of Slavic origin, the freed son of a converted slave. This recent research has been incorporated in H. Mendes, "Djubara," "Encyclopedia of Islam," n.s., pp. 434-445.

Cléger, Le Caire, n. 131, is Cléger's contention that Murz himself had designed the proposed city. While it is impossible either to confirm or to disprove these plans as reconstructed by Rassam (reproduced as Figure 28 opposite p. 198 in Volume 1 of Cléger, and as Plate in Hanwell, "Cairo," Oxford, 1914, and as Plate 5 in the general concensus of the city of Fustat at that time have been estimated from the numerous verbal descriptions of site development that have served as general sources.

The usual story associated with the change in Cairo's name is a mythical one, about a new channel dug in the string which the archeologists had devised to signal the most promising moments for breaking ground. The change in nomenclature to al-Qahirah was supposed to have been made immediately afterward for the reason given above. This myth has been accepted and repeated by practically all writers who have discussed the founding of al-Qahirah, including Meishefi. However, K.A.C. Creswell, in his "The Muslim Architecture of Egypt: (Architecture and Islamism, AD 950-1250)" (The Clarendon Press, Oxford: 1953), has raised a legitimate objection to the authenticity of this account by pointing out that "an almost identical story is related by 13th-century authors" (p. 134), that the building of Alexandria by Alexander the Great. Thus the story that is told by Mr. Plassma seems to have been in circulation twenty-six years before the establishment of Cairo" (1913).

Cléger (Le Caire, n. 132) and other scholars have raised the question of whether Fustat was located further south near the Birkat al-Fil, where it could have been in more proximity relationship to Jarjb. While this might have been a more logical choice, it is not consistent with the urban development of his diorama. The construction of the city required several years, during which the army had to be camped temporarily and near enough to Fustat to retain control over her. To have camped outside the walls at Cairo may have represented an attempt to reoccupy a newly captured section of the city. The river border in the Fustat period was described from Figure 27 opposite p. 139 in Cléger, Le Caire, n. 131.

The new city of al-Qahirah in a few sentences, noting merely that one cannot enter Fustat from Damascas without passing through one of the city's gates. All available descriptions of developments around Fustat, remarking that the city of Jarjb had a mosque and a larger population than the island of Rawdah, that Helipus ("Ain Shams) was primarily an agricultural area, and that Memphis (then called "Al-Asiyah" which used to be al-Mir in old times)" had completely disintegrated by his time.

During the next 6 years al-Qahirah grew in importance and could no longer be dismissed as curiously in travel accounts. The Persian, Nizârî Khurram, visited his army north of the planned city would have meant a sacrifice of this proximity and a danger that the new city under continu- ously expanding population, sometime during the thirteenth century. Therefore, the army was placed on the southern portion of the plain, while the new city was located to its north. At this time the common people of Fustat could enter the royal enclosure only by special permit. Note the parallel between this and the later case of the royal city of Fustat (Jalil), which had a similar relationship in the fourteenth century to Old Fez, called al-Madinah, as reported by Roger Le Tourneux, Fez in the Age of the Marinids, trans. by B. Clemens (University of Oklahoma Press, Norman: 1961), pp. 12-25.


Nizârî Khurram, a Persian from Qahirah, whose southernmost limit lay almost a mile north of the Mosque of Ibn Tulun.

In order to visualize the paucity of alternatives open toJarjb in executing this plan, one must reconstruct the economic and social capital of that time. Map III shows the riverine lands which had been ceded by the Nile between the beginning of the ninth century and the end of the tenth, the probable land uses of the oases, and the presence of the major agricultural lands along the vacant land near Fustat.42 If indeed Jarjb had to impose on the fragmented region his preexisting rigid plan with predetermined dimensions, he located his new city in the only space available to him.

Almost immediately after his arrival, Jarjb began to stake out the walls which were to enclose the new rectangular palace city, al-Mansurîyât. Four years later the city was renamed al-Qahirah (The Victorious) al-Muizzîyâ, to commemorate and celebrate the arrival of Muizz and, some say, to propitiate Mars, whose planet had been in the ascendant when the signal for groundbreaking was erroneously given.43 Construction for the new city was completed by 971, with blocks allocated to various categories of mercenaries, i.e., Greeks, Armenians, Berbers, Kurds, Turks, and Blacks, and the army was quartered from its temporary encampment near the Birkat al-Fil to permanent quarters within the new city. The remainder of the royal city was not ready until October 974, when Muizz made his triumphal entry to be in- terred in the Cairo royal cemetery.44

Despite the beauty, lavishness, and intellectual vitality of the Fıtimid princely city, it remained simply a royal refuge within whose secure enclosure an alien Caliph and his entourage could pursue their lives.45 Already known by the alternative name of Mir, remained the dominant transport, productive, and commercial metropolis of Egypt, as was attested by several travelers with only an eyewitness accounts of Egypt between the founding of al-Qahirah and the middle of the eleventh century.

According to the description written by al-Maqdisi sometime before 985, the city of Fustat (Mire) was about two miles in length and built in tiers up the slope from the river. The buildings of the city impressed him by their height of five to seven stories, "like minarets," and the population was "thick as kutsah." The most densely settled section of the city was in the neighborhood of the Mosque of 'Aqr near the Dîr al-Shîr and the warehouse. While he devotes much space to describing the city of Fustat, calling it superior to Baghdad and larger than Nasiapur, Barak, and Damascus, he dismisses the new city of al-Qahirah in a few sentences, noting merely that one cannot enter Fustat from Damascus without passing through one of the city's gates. All available descriptions of developments around Fustat, remarking that the city of Jarjb had a mosque and a larger population than the island of Rawdah, that Helipus ("Ain Shams) was primarily an agricultural area, and that Memphis (then called "Al-Asiyah" which used to be al-Mir in old times)" had completely disintegrated by his time.


While some have questioned the veracity of this report, it receives considerable support from the recent archaeological excavations at the site of Fustat. In his "Preliminary Report: Excavations at Fustat, 1966," George Scallon suggests that the capacity and elaborate inclination of the (probably) tenth-century sewerage system uncovered by the excavations would have been adequate to accommodate an extremely dense settlement of fair high density. The city's buildings are described from the Journal of the American Research Center in Egypt, iv (1965), 729-730 plus plates. See especially p. 27.

Safar Namek (Arabic translation), p. 59. There is another hint concerning the application of the term "Mir" which appears in this year. It indicates that the Possibility of transferring the capital of the land of Rawdah and the development at Jarjb on the opposite side of the river (p. 64).
Mosque of ‘Amr was swallowed up by the encroaching Ḫurāb. To the present, with the exception of two post-1952 public housing projects on Titlī Zaynīm and ‘Ain al-Ṣūrah, these areas have remained absolutely closed to habitation, serving variously as a squatters’ preserve, a municipal rubbish dump, and, most recently, as a site for archaeological excavations, although a major highway now traverses the zone.

Another third of Cairo’s southern zone is made unfit for development by the extensive cemetery which occupies a wide swath of precious land. This cemetery is modern Cairo’s other heritage from the pre-medieval period. Bounded by the Ḫurāb on the west and the sharp incline of the Musqṭām range on the east, the Khālibī Khāṣṣ City of the Dead stretches in an elongated U from its gateway, the Bīb al-Qārīfah between the Mosque of Ibn Ṭūlīn and the Citadel, to its southernmost tip almost three-quarters of a mile away. This cemetery contains the tombs of religious and political dignitaries of the ‘Abbāsid and later periods, including the sacred mausoleums of Imām Shāfī‘ī and Sayyidah Naṣīfah which are, today as in the days of Ibn Ḥubayr, among the important meccas for pilgrims. The extension of this cemetery northward paralleled the extension of the city of Fustat,\(^\text{93}\)

\[\text{93 See }\text{ The Travels of Ibn Ḥubayr (Broadway translation), pp. 37-42, for an eyewitness account of the tomb city in 1815, and Chergé, Le Caire, 1, 136, for a discussion of the early growth and divisions within this cemetery.}\]

but it is significant that while the city of the living—Fustat—has long since disappeared, its city of the dead—much expanded—continues to house thousands of residents of the contemporary city.

The only land available for a southern extension of the city was the narrow strip abutting the Nile. This is the zone now called Miṣr al-Qāḍīmāth, practically all of which was built on land that came into existence after the ninth century and was not fully ready for construction until the shifting of the shore had been completed in the fourteenth century. Abandonment of the land between central Fustat and the new city of al-Qāhirah resulted in the gradual isolation of greatly deteriorated Fustat which became merely an industrial port suburb of the new metropolis. By the time of the Napoléon Expedition in 1798, al-Qāhirah had a population of more than a quarter of a million, while Miṣr al-Qāḍīmāth had declined to an outlying town of no more than ten thousand inhabitants. The present structure of Cairo, then, reveals a strangely stagnant development in the entire southern third of the city, indicating a complete breakdown of the usual processes whereby new land uses and developments supplant older ones to create an ever-renewing city. This breakdown, which has resulted in the disuse of large segments of southern Cairo, is one of the most striking elements in the pattern of the present city.

The Ayyūb id period ushered in a lengthy era during which much of the central segment of Cairo was developed. During the thirteenth, fourteenth, and fifteenth centuries, the city of al-Qāhirah expanded to almost five times the size of its original walled nucleus. And, perhaps of even greater significance, the area it encompassed by the end of the fifteenth century remained almost constant until the latter half of the nineteenth century. This much-expanded city, however, was shaped in part by the physical and social characteristics of its predecessor, the Fustat princely city. Even today the physical pattern of that area shows elements that cannot be understood without an examination of their tenth and eleventh-century roots. The city of the Fustatīs had a social system and a physical shell—partly imposed but partly the inevitable counterpart of its system of social organization—that influenced the form the medieval city was to take.

One of the most striking elements of that social system was its internal organization according to occupation. During late Roman and Byzantine times, the various trades and crafts in urban centers throughout the empire had been organized into corporations or “guilds,” in which membership was compulsory and through which commercial activities were closely regulated by the state. The Arab conquerors of Egypt left those inherited occupational corporations relatively intact, and they persisted through the end of the ninth century, chiefly as a means for maintaining public regulation over merchants, tradesmen, and artisans.\(^\text{94}\) That this social organization was translated into a physical order was already evident in early Fustat. Specialized markets were distributed within the city, each market being associated with its own quarter in which production and distribution were combined with residences for tradesmen and inns for transient merchants. Thus, even disorderly and crowded Fustat represented an accretion of occupational cells, although some quarters, chiefly peripheral, appear to have been almost exclusively residential.

During the ensuing centuries this form of organization continued to play a role in structuring groups within the urban environment, thereby influencing the physical pattern of that environment. Unfortunately we still lack detailed knowledge of the institutional character of such occupational organizations and of the changes which these institutions appear to have undergone during their many centuries of evolution. Indeed, contemporary scholars specializing in the investigation of Islamic guilds (or occupational corporations) now vigorously deny that, prior to the Turkish period, anything analogous to the highly structured guilds that developed in medieval Europe ever existed in Middle Eastern cities.\(^\text{95}\) However, I feel that it was necessary to bring to light the phenomenon of the guild for the sake of the argument that I am about to develop.

\[\text{\textsuperscript{93} On these earlier precursors, see A.E.B. Boul, }\text{ "Guilds, Late Roman and Byzantine," Encyclopedia of the Social Sciences }\text{ (The Macmillan Company, New York: 1952), vol. 206-208. Given the common conditions, it is not surprising to find guild-like} \text{ prototypes in even earlier societies, for they appear to have been} \text{ known, in one form or another, in barbaric, semi-barbaric, and other cultures of the area. It is irrelevant for our purposes whether the} \text{ existence of preceding "accounts" for the emergence of occupational} \text{ corporations in Islamic cities or even whether exact parallelisms exist.}\]

\[\text{\textsuperscript{94} In few other areas have the guilds of Islamic history been so involved in basic controversy as on the question of guilds. The present consensus is essentially negative, rejecting or at least} \text{ calling into question previously accepted views. Earlier scholars, in} \text{ refreshing if misleading contrast, offered rather firm positions. Foremost among the early scholars of the Islamic guilds was} \text{ Louis Montagnon, whose position can be found in his "Les corps} \text{ de métiers et le civil Islamique," }\text{ Revue Internationale de Sociologie, Volume 38 (1990), pp. 473-489 and in his summaries: "Still"}\]
The Islamic City

even if occupational groupings were only loosely and informally constructed, no doubt that these affiliations were reinforced by functional affinities of interest and were consolidated—in the space-determined social world of the Middle Ages—by geographic proximities.

Significance of significance to us in this study of Cairo's evolution is the fact that throughout her early history the organization of urban life was, at least in part, occupation-linked, and that this persistent linkage left definite traces in the physical form of the city.

Before demonstrating this linkage, however, we might pause for a moment to mention the mukhtasib, an agent through whom supervision of the activities of the corporations and the morality of the market place, filled certain functions generally assigned to administrators of the contemporary municipality. While the office of the mukhtasib evolved further in the ensuing centuries—and indeed continued into the nineteenth century until it was abolished by Muhammad Ali—and will be treated in greater detail in a later chapter—it is important to stress at this point that it, too, was part of Cairo's pre-'Ayyubid heritage. Here, again, the precedents went back to the pre-Islamic period, for the Roman and Byzantine inspector of the markets was a prototype for the mukhtasib whose role was formalized at the time of the 'Akkābids. What Islam seems to have added was the religious sanction and sanctity, by classifying offenses against hizāb as morally reprehensible as well as legally insublement.\footnote{Encyclopedia of Islam (1913), VII, 456-457; and "Guilin, Islamic," Encyclopedia of the Social Sciences (1930), VIII, 214-215. It was Monsignor who suggested that the term mukhāshib introduced a new fervor of religious and even "secret society" internal ex-}losion to the professional, craft, and commercial corporations which had traditionally been unsanctioned or agencies for state regulation, and drew a connection between the secret societies of the Qarmatsians and the guilds of Fatimid Egypt. Detailed statements confirming this view of Fatimid corporate organization appeared in Bernard Lewis, "The Islamic Guilds," The Economic History Review, III, (November 1950), 20-37, and in Clerget, Le Caire, n. 130-131. For many years this position was widely accepted, and is echoed in entries in the Shorter Encyclopedia of Islam edited by H.R. Gibb and I.H. Kracmer (Cambridge University Press, Islaea: 1956) under the "Karmatsians," pp. 258-259, and under "Taba," pp. 573-578. The connection between the heretical Qarmatsians and the 11th/12th Fatimids is currently rejected, and even Bernard Lewis has recently dis-}avowed his 1937 article, suggesting that it will require critical revisions.

A brief reference to the role of the mukhtasib in Fatimid Cairo can be found in al-Ghallabâni, a contemporary of Maghrib, who described the administrative structure of the government under the Fatimids. The relevant section of his many-volume work has been translated and published by Maria Caneva under the title Al-Ghallabâni: Les institutions des gouvernements en Egypte (La Maison des Livres, Alger: 1983). According to this description, in Fatimid times the mukhtasib was the third-high-
3 Ascent to Medieval Capital 1170-1340

The medieval cycle of Cairo’s growth and decline begins essentially with the accession of Salih al-Din to the leadership of Sunni Islam. It rises sharply within the next century and three quarters, reaching an apogee during the reign of the Bahri Mamluk Sultan al-Nasir ibn Qalawun before the middle of the fourteenth century. The city’s fortunes closely reflect those of the empire, for as internal strife and external threats multiply, the expansion of the city comes to a halt. This decline, already perceptible in the early Circassian Mamluk period but masked by a temporary revival in the fifteenth century, is transformed into a precipitous descent during the centuries of Ottoman rule. The arrival in 1798 of the Napoleonic Expedition to Egypt brings the cycle to a close, the intrusion forming a bridge between a medieval Cairo much decayed and a modern Cairo yet to be.

The entire cycle was played out within the central section of contemporary Cairo (see Map V). Note that the boundaries of the city in 1860 are merely extensions of those perceptible at the time of Salih al-Din. Expansion occurred predominantly in two directions: southward, pulled by the concentration of political and military power in the Citadel, and westward, conditioned by a recession of the river. These centuries, during which political and economic changes of enormous magnitude took place, were those during which the course of the Nile underwent its most rapid and dramatic transposition. The marked shift of the river bed westward yielded contiguous land which doubled the width of the previous settlement, left the former port of al-Maqs (now occupied by the major railroad station of modern Cairo) completely landlocked, and exerted an irresistible westward pull on the city’s center. Whereas at the time of Salih al-Din, the Khali Ji Miri (abative residuum of the former Red Sea Canal) constituted the occidental limit of the city, by the end of the Mamluk period its channel bisected the city, dividing the eastern from the western halves of settlement. Thus, political, economic, and physical developments combined to transform Cairo completely during the medieval epoch.

When Salih al-Din first came to power as governor of Egypt, however, there was nothing to indicate that he planned a total transformation of its capital. Little in fact was done immediately, except to refortify the city by a new set of walls to replace the former enclosures of Jawhar and Badr al-Jamali.8 Shunning the Fatimid palaces, which were turned over to lesser lords, Salih al-Din set up residence in the Dir al-Waiz, just north of the Great Eastern Palace.9 It was not until after the death of Naur al-Din in 1174 that Salih al-Din showed the independence of his hand and proceeded to conquer Syria. So successful were his rapid campaigns that only one year later he was invested with dominion over not only Egypt but the North African lands, Nubia, western Arabia, Palestine, and central Syria.

It was probably after his triumphant return from these campaigns that Salih al-Din first conceived the plan for his Citadel and for the gigantic walls designed to encircle the two cities of Mīr and al-Qhīrah. The key...

8The site of the Dir al-Waiz has been fixed exactly by E.A.C. Creswell, but was evidently unknown at the time of Clerget’s writing, since the latter erroneously places it north of the city’s walls. See Clerget, Le Caire, pp. 144.

9See Becker, “Cairo,” Encyclopedia of Islam4 (1931), s.v., 825, where he discusses the position taken by Gasnov in this point.

![Map V: Expansion of al-Qhīrah during the medieval epoch](https://example.com/map_v扩张图.png)
Ibn Jabiyr visited the capital in 1183 and reported that Crusader prisoners in "numbers beyond computation" were being used to construct an "impregnable fortress." Salih al-Din was never to occupy the Citadel, however, for his numerous campaigns against Mesopotamia and then against the Crusaders kept him far from Egypt. Even before his death in 1193, construction ceased on the Citadel (by then substantially completed) and work on the ring of defensive walls was interrupted. Only portions of the walls6 he envisaged were actually in place when he died. Attributed to Salih al-Din are: the wall which ran due west from Babil al-Futuh across the Khaliqi Minur to the tower on the Nile (Qalat al-Maqṣ) to enclose the port of al-Maqṣ; the eastern wall in two sections, the first of which stretched from the Rib al-Wazir to Darb al-Mahṣūs and the second extending it northward to Burj al-Zafar; a portion of the western wall parallel to the Khaliqi Minur and only a narrow distance away from an earlier one, which gave rise to the name "Bayt al-Sīrayy" (between the two walls), still a street in today's Cairo. Planned but only partially built were the walls to connect the Citadel with the eastern borders of Fustat and an extension of the western wall along the water's edge.7 Although the interior of the Citadel remained unfinished until Salih al-Din's successor oversaw its completion in 1207-1208 and work on the walls was still going on some 45 years after Salih al-Din's death,8 other

7 Yaqūtī, ibid., clearly dates its inception in the year 572 H. (1175-1176) when he states in his geographical dictionary that "in the year 572 [613] Salih al-Din came from Syria ... and ordered the construction of a wall around Fustat and al-Qīnān and the citadel which is on the top of the Maqṣūrāt." iv, 266. This is the same year given by Maqrīzī, Khita, ii, 205. However, Lane-Poole dates it from 1176-1177, see The Story of Cairo, p. 171; D. Margoliouth, in Cairo, Journalism and Domains (Dodd, Mound & Co, New York, 1907), p. 51, places its commencement some time after 1175; Hillis, History of the Arabs, p. 653, gives
8 The Travels of Ibn Jabiyr, p. 45.
9 Yaqūtī, Mu'jam al-Buldān, iv, 266, gives the extent of the walls completed by the time of Salih al-Din's death as 2.5 jarādāk. On flat terrain, a jarādāk is roughly equivalent to three miles, but since the measure is based on the distance as can traverse within a given time period, a jarādāk on hilly terrain would be considerably less than three miles.
10 For a detailed architectural description of both the walls and the Citadel of Salih al-Din, see K.A.C. Creswell, The Muslim Architecture of Egypt, Ayyubids and Early Bahri Mamluks, A.D. 1250-1358 (The Chirondon Press, Oxford, 1927), pp. 679. For the walls, see pp. 41-59. At an earlier time it was believed that the southern wall designed to connect the Citadel and Fustat was never built. See Lane-Poole, The Story of Cairo, p. 175, for this view. However, Yaqūtī, writing in the early thirteenth century, noted that Fustat and al-Qīnān were "both surrounded by a wall" (Mu'jam al-Buldān, iv, 313). Maqrīzī also described a wall near the southern cemetery which appears to be the abortive beginning of the wall planned to surround Mard. Excavations in the twentieth century have uncovered parts of this wall, conclusive proof that at least a part of the Fustat wall was constructed, even though perhaps not during Salih al-Din's lifetime. The final wall along the Nile bank was probably never begun.
11 Lane-Poole, The Story of Cairo, p. 175, suggests that the Citadel was completed in 1208 by al-Salih, although Creswell, The Muslim Architecture of Egypt (1927), p. 9, states categorically that the supposed "completion" was merely the addition of defense towers at the original wall. On the subsequent construction of the walls, see ibid., p. 99.

VI. Changes in the river's course during the twelfth, thirteenth, and early fourteenth centuries
changes of note were made in Cairo during his lifetime. It will be recalled that the burning of Miṣr had crowded the Fātimid city with excess residents, only some of whom were given permission to remain in the city. Having little interest in preserving al-Qahira as a sacrosanct refuge for the court and contemplating his own private domain in the Citadel, Ṣaḥḥī al-Dīn opened the city to the masses who, in their need for space, constructed everywhere within the larger streets and ma‘ādans, gradually effacing the basic outlines of the original symmetrical plan. The major palaces were torn down and replaced by schools and mosques, and former Fātimid villas were converted into commercial structures as the economic life of the area revived after its transplanta
tion from Miṣr to al-Qahira.

The extension of the northern wall from the Khallet Miṣrī to the Nile at al-Maṣqī had important repercussions for the city's expansion to the west. Now relatively secure from invasion, the port area on the opposite side of the canal offered an attractive building site for a fast-growing and overcrowded city. Nor was the area adjacent to Miṣr neglected during the early Ayyūbid period. Prior to the completion of the Citadel, the largest contingent of the army was quartered on the island of Rawdah where Ṣaḥḥī al-Dīn had constructed a fortress. Even after the Citadel had become the true seat of govern-
ment during the Ayyūbid period, the fortress continued to be concentrated on the island.4 This tended to pull the city toward the southwest, but the lack of flood-free land in the intervening space meant that only gardens and winter residences could be laid out in that section. Only later, after a change had taken place in the Nile's course, were more permanent forms of land use possible there.

But, by far, the greatest transformations took place in the area south of the Fātimid city. Beyond the southern wall, outside the Bib Zuwāylah, had been the quarter of the Sudanese militia of the Fātimids. To sub-
due an insurrection, its barricades bordering the Shāri‘ al-‘Aqām, the Bib Zuwāylah, and the Sīn Naftāsh tomb and redeveloped the area with

4 Clenger, Le Caire, i, 145; 146. 147; Ḥāthib, 386; ibid., “Caire,” p. 83, notes that from 1210 on, all the rulers of Egypt resided in the spacious buildings that had been his brothers (see also Ayyūbid Sultan before the transition to Mamluk rule, 1240-1249), which built a fortress and a royal residence on Rawdah. Margu’lān dates the quartering of Mamluk troops on Rawdah from the reign of Kāmil (1218-1238), see Cairo, Jerusalem and Damas-
cus: A study in history and geography, p. 60. The quartering on Rawdah of Rawdah was significant, because it was from their location that the first Mamluk dynasty derived its name, the Bahri, or water (Nīlī) Mamlūk. The bahriyya, or power of the later Circassian Mamluks whose power was concentrated in the Citadel, from there they held, but not as a capital or under a leadership, a predominant role in history. For it was at the time of Qalibīn that the first barracks for slave troops were constructed within the Citadel.

parks and gardens.5 This laid the base for future develop-
ments and, during the reign of his successors, this
trend grew to be one of the most populated districts of the city. As more activities concentrated in the Citadel south of it, the impetus for growth increased.

Thus, during the reign of Ṣaḥḥī al-Dīn, most of the forces which were to shape the pattern of future growth had been set in motion. It was during his time also that the Nile began to give up its gifts, at first only periodically during the dry seasons between floods, and then permanently as more and more high land was left behind following each inundation. By then the Elephant Island (Jazrat al-Fīr in present-day Shubra) had already made its appearance, but its location considerably to the north of the existing settlement and its isolation from the firm bank of the Nile prevented its exploitation until much later. In the four decades following Ṣaḥḥī al-
Dīn’s meteoric rise, perhaps twice as much land was ceded along the borders of the Nile as had materialized in the preceding four centuries. Map VII shows the changes in the land which took place during the Ayyū-
bid and later periods. Note the rather minor changes in the coastline that occurred between 800 and 1170 in contrast to the radical changes which had become evident by the end of the Ayyūbid epoch. Here apparently was one of those fortunate coincidences of history. At every time an expansion of human life activity in commercial activity made the enlargement of the city mandatory, the stock of Cairo’s habitable land was expanding commensurately. While neither the politico-
economic nor the physical development was to follow a simple pattern of advance, the set result was a tremen-
dous gain in both.

The reunification of Egypt with the larger Sunni community, the continued vitality of the East-West trade route now chosen by a more secure and conti-
subdued Yemen and a thriving Fustāh, and the existence of a comparatively well-administered state all contributed to Cairo’s prosperity and expansion during the later years of Ṣaḥḥī al-Dīn’s rule and the reign of the first dynasty following his death in 1153. How-
ever, by the fourth decade of the next century, the family solidarity that had held the various provinces of the Ayyūbid empire together began to dissolve into a number of distinct territorial units, each with more and more upon military subordinates of the Sultan

5 Ḥāthib, 111. See also Clenger, Le Caire, i, 145-
147; Schemiell, Le Caire, p. 144. The destruction of the So-
ｄｕｎｅｓｅ miltia had more than mere topographic implications: Ṣaḥḥī al-Dīn abolished the Fātimid army of black slaves and substituted a special force of Kurds and Turks, thus laying the ground for the Mamluk dynasty which dominated the next half millennium. See the discussion in Reuben Levy, The Social Structure of Islam (Cambridge University Press, Cambridge, 1957), p. 447.

in Cairo, al-Mālik al-Kāmil. When he died in 1238, distinguishing itself with a battle for suc-
cession among his descendants and those of his brother. One of the latter, al-Sālim, was eventually invested as Sultan in 1240, but the days of the Ayyūbids were already numbered, foretold it was he who shifted military priority dependence from Kurdish mercenaries to the Mamluks, who were to assume lordship over Egypt for the ensuing several centuries. When al-Sālim died in 1249, his widow, Shajarat al-Durr, in an unprecedented move, mounted the throne for eighty days, finding a temporary ally in her chief Mamluk minister, Aybak, whom she married and with whom she briefly shared her shabby sovereignty. Displacing him, Aybak and his patron saint as-
sumed command and continued to rule, despite the temporarily reinstated puppet Ayyūbid heirs. The years between 1250 and 1260, when the Mamluk general Bay-
bars finally consolidated the new dynasty, were ones of recurring chaos and violence, perhaps symptomatic of the fluid social state of the country.6

The shift to Mamluk rule was much more than a simple change in dynasty; it represented, rather, a social revolution of deep significage which, while facilitating a flowering of medieval Cairo, contained within it the seeds of its own eventual decline. Although from one point of view Egypt had rarely been ruled by indigenous elements, earlier conquerors had eventually been absorbed into or at least coalesced with the popula-
tion through demographic and cultural means. On the other hand, they remained a military caste, each generation recruited anew from abroad. Although intermarriage and offspring created some roots through kinship, and conversion to and assimilation in the Islamic faith strengthened the bonds to the native population through a religious community, the peculiar institutions of the Mamluks (in particular, the special variation of feudalism they evolved) tended to insulate rulers from the ruled to an unprecedented degree. Not since the first days of the Arab conquest, when Muslims governed a predominantly Christian pop-
ulace, had so great a cleavage existed. But whereas the former cleavage had eventually been bridged by the gradual conversion of most Egyptians to the religion of their conquerors, such assimilation was impossible dur-
ing the later era when the ranks of the Mamluks were, by definition, closed to local recruits. Even feudalism, which in the absence of ethnic assimila-
tion might have acted as a bridge by involving the Mamlu-

AASCE TO MEDIEVAL CIVILIZATION

interests. At the time of the Arab conquest, all lands taken by force, in theory at least, to the Caliph who did not claim the inheritance of his brother, passed to the descendants of the Prophet and permitted the re-
mainder, as residual crown lands, to be farmed by their former proprietors in return for the head tax upon non-
Muslims, and political administration became more and more coordinated, as conversions made deep inroads on the formerly lucrative head tax. Some fields became hereditary, and land-
lords began to assume political and administrat-
ive responsibilities in addition to their financial role. During Fātimid rule, fiscal responsibilities rendered as taxes sufficed, but more and more the Ayyūbids used the fidā‘ī (fai‘) system to administer the state while making the enjoyment of feudal rights more dependent upon centralized dispensation. By the late Ayyūbid period the seeds of the feudalism hybrid that was to prevail under the Mamluks had already been planted, for fiefs were already being assigned as sources of rev-
eue rather than units of administration. Under the Mamluks this was carried to its ultimate form, with the rights to the produce of given areas being assigned to the manumitted slaves who constituted the aristocracy of the system (the amirs, of whom more will be said later), in return for their obligation to maintain a mili-
tary force, and for paying the expenses of public and national areas and even commercial enterprises yielding profits were assigned and often quickly reassigned, dependent upon the whims of those or the exigencies of poli-
tical infighting. This insured the consolidation of a military caste system without deep or lasting roots in the countryside, a situation which prevailed until and even beyond the Ottoman conquest of 1517.

Just as degeneration in feudal proprietorship was divor
ced from heredity, so also succession to the Sultanate con-
formed less and less to this principle. While the Bahri Mamluks did not abandon it completely—fictive kinship in many cases being substituted for biological—the Cir-
cassian Mamluks who ascended to the throne in the last quarter of the thirteenth century owed the recurrent intercunev con-
volutions which beset them to their almost total renunciation of hereditary succession, in practice if not in theory.

6 I have simplified here a complex set of institutions and their changes. More detailed treatment can be found in Paul Wansle, “La féodalité maillante,” Revue de l’Institut de So-
ies, Sociétés, Civilisations, 4 (January-March 1952), 1-25. On the Mamluk system itself, see particularly the work of David Ayalon, especially his articles on “The System of Payment in Mamluk Military Society,” Journal of the Economic and Social
Despite occasional threats from the last Crusaders still entrenched on the coast of the Fertile Crescent and more serious incursions by invading armies, the Mamluk elite viewed the crusaders as a threat rather than a danger, and despite the periodic plagues and other natural disasters which from time to time took unbelievable tolls in the urban population, the city of Cairo not only survived but reached the pinnacle of her development.

It was General Baybars’ victory over the Mongols, who had succeeded in destroying the seat of the Caliphate at Baghdad and had even taken the famous Lion’s Bridge from the Crusaders, which led to the Mongol retreat, that set the stage for Baybars’ victory. During the Mongol retreat, the Mamluk elite had a unique opportunity to assert their dominance, and they did so with a vengeance, establishing a powerful new dynasty in Egypt.

The expansion of the empire and the greater economy, and even during the era of the Fatimids important trade routes linked Egypt with the Far East. Under the Ayyubids, this commerce flowered, particularly through the Red Sea ports of the Hijaz and Qal‘at (Suez). Under the Mamluks, despite the trade of control over the Red Sea by the Ayyubids, the wealth of the empire was still centered on the trade with the Mediterranean and the Black Sea, and slaving remained an important source of revenue for the emirates. The Mamluks also established a powerful navy, which controlled the Red Sea and the Gulf of Aqaba, and became a major source of revenue for the empire.

The Mamluk empire reached its peak in the 13th century, when it controlled a vast territory stretching from the Near East to North Africa and parts of the Arabian Peninsula. The Mamluk sultans were known for their military prowess, administrative efficiency, and patronage of the arts. They established a powerful navy, which controlled the Red Sea and the Gulf of Aqaba, and became a major source of revenue for the empire.

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16. Aeriel view of the qalawun showing hospital and mausoleum of Qalawun and college mosque of Ibn Qalawun
17. Tomb city (probably Bab al-Nasr cemetery) ca. 1800

The northern wall and the agricultural suburb of Mataria (near Heliopolis) was empty desert. During the Fatimid era some soldiers were quartered in the western half of this area while the eastern section served as a stopping place for caravans. It was not until the middle of the eleventh century, at the death of Badr al-Jamali, that part of the eastern section was converted into a cemetery (the Bib al-Nasr cemetery containing the tomb of Badr al-Jamali, which can still be seen from the north wall). The area, however, received its strongest impetus to growth during the period of Barbars, when it became "one of the greatest sections of Misr and al-Qahirah." By al-Nasir's time, the entire area between Bib al-Nasr and the troop assembly grounds at al-Raydina was completely covered by buildings, interspersed with tombs.

Developments in the north, however, were quite overshadowed by those occurring outside the southern wall of the city. This had become, by the end of al-Nasir's reign, the most populous district of Zahir al-Qahirah. It will be recalled that this area had once housed the Sudanese soldier-slaves of the Fatimids, whose harab was destroyed by Salih al-Din. In the late Ayyubid period, the amirs constructed palaces and luxurious villas along the shores of Birkat al-Fil (midway between the southern wall and the Citadel), but it was not until the third reign of al-Nasir that systematic and vigorous construction in this district began. The result was an intensive development stretching from Bib Zuwaylah to the Citadel - Mosque of Ibn Tulun - Sitt Nafisah tomb limits on the south, and from the Moqattam mountains to the shore of the Nile on the west. Even the Great Qarafah (the Khallal City of the Dead parallel to Fustat) became a popular residential zone all the way from the Bib al-Qarafah southward to the Tomb of the Imam Shafi'i.

Maghiri tells us that before the third reign of Sultan

18. Bib al-Nasr cemetery today

al-Nasir there were no buildings at all in the hilly area east of the city which today contains the Mamlik City of the Dead (including the masterpiece mausoleums of Barquq, Inal, Qayt Bay, and other Circassian Mamlik rulers). It was not until 1320, when al-Nasir abandoned the use of a maydan which formerly stretched between the Bib al-Nasr cemetery and the mountain, that buildings began to be constructed in this area. However, developments during his reign were minimal in comparison to the growth that was to take place during the following centuries.

Whereas the growth in the northern and southern suburbs was but a more vigorous continuation of previous developments, the western section truly owed its transformation to the public works of al-Nasir. Most of the buildings in that section were constructed after 1313; before that time the area had been occupied by seasonal gardens or submerged under water. Beginning at the time of Salih al-Din, the Nile's recession exposed the Jazirat al-Fil and later stranded the port of al-Mas'ul. In this process, many islands and sand bars were formed, more in each successive year, until some of the higher points in the drying riverbed were flooded only a few days each year. The Mamliks used the newly vegetating lands for hunting, archery practice, and other sports. In 1315, al-Nasir proclaimed the area open for settlement, and all the high lands along the new river edge at Bulaq and the Jazirat al-Fil, from al-Mas'ul to the village of Muytal al-Sirji, began to be filled with orchards, farms, and palatial residences.

The chief factor that encouraged the growth of the western suburb was the canal which al-Nasir ordered to be dug there. Sultan al-Nasir was justly famous for his public works, but none had as much impact on the

38 For the eastern cemetery zone, see ibid., 5, 360; 6, 665.
39 Ibid., 1, 361; 11, 355. To illustrate the extent of these developments, Maghiri cites the case of the Jazirat al-Fil (present-day Shubra); on that tremendous island in 1312 there were only 20 barids (orchards or gardens) whereas in Maghiri's day about a century later, the area contained more than 150.
40 See Mair, The Mameluke or Slave Dynasty of Egypt, pp. 79-81, for a partial enumeration.
growth of the city as this canal which, from its mouth at the Nile, followed a course parallel to and due west of the older Khalkü Mişr, which it later joined north of the walled city. Al-Nāṣir had build a palace at Siryūkis for which he wanted access from the Nile. The engineers selected the lowest land (the center of the old bed of the Nile) and, with the forced labor of innumerable peasants, the digging of a new canal was completed within two months of its commencement in 1232. Its course was specially designed to pass just north of the Birkat al-Raḥl in order to supply this pond with water. Originally the new canal was known as the Khalkū Mişr, although later it came to be referred to more simply as the Western Canal (Khalkū Mişrī). Once the canal was completed, al- Nāṣir issued proclamations inviting the people to construct in the vicinity and, within a short time, the competition for space resulted in a profusion of building on both sides of the canal "so that all the land between al-Maqsūd and the shore of the Nile in Būliq was built upon." Orchards, elaborate villas, mosques, dwellings for ordinary persons, markets, and other urban features filled the area from the high dikes at Birkat al-Raḥl in the north to the al-Lūq zone in the south.83 South of al-Lūq, urban development was also encouraged by another of al-Nāṣir's public works. The area in the vicinity of Birkat Qirātīn had been relatively deserted since the Arab conquest, but, to rectify this situation, al-Nāṣir ordered the residents to be resettled there and the region was named al-Muṣrūq. The original kanūn of 20 acres of land was increased to 100 in the 1240s. The result was a new town that became a major center of commerce and industry.

82 Map VII summarizes the major developments which resulted, by the end of Sultan al-Nāṣir Ibo Qalāwūn's lengthy reign, in a Cairo which had attained almost the same dimensions she had by the time of the French Expedition at the turn of the nineteenth century. A community of vast extent and enormous population, sustained by international commerce, nurtured by a rich agricul-
tural hinterland, and protected by an era of peace, she had become the foremost capital of the East. This was the city which the Baedeker of the time, Ibn Battūṭah, called "Mother of cities ... mistress of broad provoices and fruitful lands, boundless in multitudes of buildings, peerless in beauty and splendor ... she surged as the sea with her thorough of folk and can scarcely contain them for all the capacity of her situation and sustaining power." This glowing description of Cairo, written at the pinnacle of her development, may perhaps serve also as her epitaph, for only a short time later she was to begin her long descent.

83 South of al-Lūq, urban development was also encouraged by another of al-Nāṣir's public works. The area in the vicinity of Birkat Qirātīn had been relatively deserted since the Arab conquest, but, to rectify this situation, al-Nāṣir ordered the residents to be resettled there and the region was named al-Muṣrūq. The original kanūn of 20 acres of land was increased to 100 in the 1240s. The result was a new town that became a major center of commerce and industry.

84 Decline and Fall

Alas, it is all gone, except for very little ... deteriorated ... ruined ... deserted ... What remains of it pains me to see.

Terra are the lamentations which appear as dismal changes in the voluminous Khādīr of Maqrīzī, who described the city he knew in the second and third decades of the fifteenth century.1 Less than a century had passed since the panegyric of Ibn Battūṭah.

The decline of Cairo had, in fact, taken much less than a century. Only sixty years of political disintegration at home, of plague and famine throughout the empire, and of renewed Mongol invasions had been sufficient to undo much of the progress that had been achieved by 1250. Just as the zenith had been reached during the era of Sultan al-Nāṣir Ibo Qalāwūn, so the penultimate nadir at the turn of the fifteenth century coincided with the reign of Sultan al-Nāṣir Faraj ibn Barqīq. The intervening events read as an unrelieved chronicle of doom.

Political instability was certainly a chief factor in the decline. After al-Nāṣir's death in 1241, one after another of his very young sons was elevated to the Sultanate, each a pawn of powerful but disunited amirs, each speedily and bloodily deposed as the factions gained and lost. So disorganized a state was in no position to resist when natural disasters struck. Disaster, worldwide in extent, came stealthily, cloaked as the Black Death. While the history of Egypt is rife with plagues and epidemics, this was a plague "the likes of which had never been known before in Islam." Arriving in autumn of 1348 from China by way of Asia Minor, Syria, and the Mediterranean region, the bubonic plague spread from the coast through the Delta until it reached Cairo. While by the first month of the Arab year it had contaminated all of Egypt, it did not reach its peak in the city until between the sixth and ninth months. By spring, Cairo's "streets and market places were piled high with unburied corpses." A few weeks later, "Cairo had become so desolate ... [that] a person might walk all the way from the Bilb Zuwaylah to Bilb al-Nāṣir [i.e., the busiest street of the city] without even being jostled." Whole streets and quarters were deserted and all the cemeteries were filled to overflowing, burial trenches and communal graves an unavoidable expedient. That the bubonic plague, which returned twice more within the decade, took an incredible toll in lives is unquestionable. While Maqrīzī's estimates are ludicrous exaggerations,2 the mortality in Cairo alone must have reached 200,000, a not insubstantial figure for a city which at its height had a population of perhaps half a million. When to this is added the flight of many residents into the countryside and the deaths from the famine that followed, one can well believe that Cairo, at least temporarily, was reduced to a ghost city.

The crisis brought about by the plague seems to have done little to assuage the political difficulties. Four more ineffective successors of the house of Ibn Qalāwūn followed one another, compounding pestilence and famine with rebellion and miracle. And then, as if these burdens were still too light, in 1360 the Mongols under Tamerlane again commenced their small forays, presaging a future threat to the empire. It was at this point that the amirs turned in desperation to the talented general, Barqīq, who became in 1373 the first Circassian Sultan and the founder of the Burjī (Citadel) Mamluk dynasty that was to rule Egypt until the Ottoman conquest in 1517.3


4 According to his account, 10,000 to 20,000 persons died daily in al-Qīrāh and Mīr (ibid., p. 772), and within the two most disastrous months, 500,000 funerals were held in the two cities, not including the suburbs (ibid., p. 763).

5 These are very rough estimates. The population of Cairo at the time of the French Expedition was between 250,000 and 260,000. During the reign of al-Nāṣir Ibo Qalāwūn, it undoubt-
tedly exceeded this number, but not by more than double. Statistics on deaths were not kept during this plague in Cairo. However, statistics which are reported for the city of London which experienced the last of its bubonic plagues in 1665 indicate that, for a city of that size taking minimum health precau-
tions, mortality ranged from several thousand to 6,000 deaths each week during the height of the plague. Even doubling these figures yields a total which does not exceed 300,000. See the semi-fictional account of Daniel Defoe, A Journal of the Plague Year (A Signer Classic, The New American Library of World Literature, New York: 1960), which also conveys an emotional understanding of a plague's impact.

6 Maqrīzī, The Mamelukes or Slave Dynasty of Egypt, pp. 100-101, 105-116. An indispensable source on the Circassian Mamluk period is the Annals of Ahib al-Malikīn ibn Taghīrī Bilāl, which have been translated by William Popper under the title History of
with only one brief interruption), reconstruction went on at an even faster rate. Most of the rebuilding, however, was concentrated in the central portion of the walled city, with the areas outside the walls still abandoned or severely depopulated. In 1384 work began on the Barqūq college mosque in Bayn al-Qalān. Several of the awqaf of central Cairo were rebuilt by Barqūq, and a new commercial area, known as al-ṭūs for all tourists of modern Cairo as the Khān al-Khalīlī, was developed at this time. The condition of both al-Qīrirah and Miṣr-Fusṭāt at the time of recovery under Barqūq has been described in detail by Ibn Daqiq al-ʿArabī, the teacher of Maqrīzī, who wrote his series on the cities of Islam some thirty years before his pupil.  


9 See Maqrīzī, Khutbat, ii, 95-106, for the reconstructions of Barqūq. Maqrīzī tells us that the Khān al-Khalīlī was established under the reign of Barqūq by the Amīr Jābabūs al-Khalīlī, who removed the bones from the old Fīṭrīd cemetery to gain the site for Cairo's still thriving burial area (ibid., ii, 18).  

10 Ibn Daqiq al-ʿArabī (d. 1400) wrote an encyclopedic work on ten cities of Islam, the Kitāb al-ṭūs al-ṭawīl (Kitāb al-ṭūs, de  

21. The Khān al-Khalīlī (14th century) still frequented by tourists.

The revival under Barqūq, however, proved to be a respite rather than a reversal of Cairo’s fortunes. The plague returned in 1386-1388, and an insurrection in the latter year, in which Barqūq was temporarily overthrown, turned the city again into a battlefield. Barqūq was restored to power in 1390, but disarray and economic difficulties continued to harass him, as they did his successors for years to come. Furthermore, the Mongols were approaching. By 1393 they held Baghdad, poised for their invasion of Syria in 1400. Thus, an empire on the verge of disaster was the bequest which Barqūq left to his thirty-year-old son, al-Nāṣir Faraj, when he died in 1399. Maqrīzī’s verdict on al-Nāṣir Faraj is harsh indeed, and from what we have seen above, somewhat unjust. In his words:  

An-Nāṣir was the most ill-suited of all the rulers of Islam, for by his mismanagement he brought ruin upon all the land of Egypt and all of Syria from the source of the Nile to the outposts of the Euphrates. And the tyrant Tamerlane invaded Syria in 1403 (1405) and reduced to ruins Aleppo. . . . Famine struck Egypt from 1406 (1405) on. . . . More than half of Cairo, its estates and environs, were ruined; two-thirds of the population of Misr died of famine and plague; and  

voting one volume to each city. While much of his work was lost, the volumes describing Cairo (including Misr) and Alexandria are preserved. The Cairo manuscript has been edited by Karl Volter and published under the title, Description de l’Egypte (Imprimerie Nationale, Cairo: 1853).


13 Faraj’s reign is covered in Part II of Popper, History of Egypt (1956).
The Islamic City

...famous conqueror, Cairo had diminished in extent and population because of the severe civil strife that had erupted in the aftermath of Fatimid rule. The Muslim community had been further weakened by the influx of Christians and Jews, who had fled the crusader states in the south. This was the time when the Mamluks, a powerful military caste, emerged as the dominant power in Egypt.

The Mamluks were a loose band of mercenaries who had been recruited from the Christian and Jewish communities. They were trained in the arts of war and were loyal to the Mamluk sultan. The Mamluks were able to maintain their control over Egypt for several centuries, and they were able to resist the efforts of the Mongols and the Ottoman Turks to conquer the country.

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### Key to the Abbātīb Enumerated by Maqātīl and Located on Map IX

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* Source: Khitāt, II, 223.

### IX. The Āḥārīt of al-Qāhirah ca. 1420 (Based upon Maqāṭīl)

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### DECLINE AND FALL

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Map X shows one reconstruction of the physical extent of Cairo at the middle of the fifteenth century. It is taken from the work of William Popper, editor and translator of the chronicles of Ibn Taghi Birdi, to whom we have had occasion to refer earlier. As can be seen from this reconstruction, by mid-century practically all of the southwest quadrant of the city had been redeveloped. The lengthy belt between al-Hasayniah and the Citadel was intensively settled and, in fact, beginning to deteriorate with age. The least developed quadrant of the rectangular city was the northwest section, but this was to be soon to be built up.

It was during the latter half of this final century of independent Mamluk rule that two developments of lasting significance transformed Cairo. These were the port development at Būlāq, already noted above, and the setting of the district called Azbakiyyah, in the northwestern section of the city. It is also of utmost significance that these were the very last additions to the medieval city. The periurban city which evolved into its final form after these developments remained virtually constant in extent and size for the ensuing 300 years. For all purposes, the city found by the French Expedition in 1789 and mapped by them with such detailed precision was almost identical in shape to the medieval city of the late 16th century. A comparison of Map X, which reconstructs the city circa 1560, with Map XI, prepared by the French Expedition at the turn of the nineteenth century, gives dramatic proof of this remarkable fact.

Būlāq (see Map V for location) first emerged as an island in the Nile during the opening decades of the fourteenth century. Under the encouragement of al-Nāṣir Ibrāhīm Qalawwūn’s development policies it became an upper-class suburban area where princes and wealthy government officials built winter palaces amid the orchards of their agricultural estates. Gradually, these expansive uses gave way to more intensive developments, including year-round residences and auxiliary commercial services. But Būlāq was not yet a port, even after the eastern arm of the Nile had dried completely, although sailing vessels often anchored along it. At the time of Maqrīzī’s Kitāb al-ṣihr al-dawri (the semi-detached mainland of Būlāq was well populated, primarily by the well-to-do, but the topographer assigns neither industrial nor transport functions to it.

We first learn of its port functions in conjunction with the launching of a newly built navy dispatched by Barquq...

**NOTE:**

One can trace this transition clearly, although the historians and chroniclers are unaccountably vague on the details of the port development at Būlāq. During the time of Pilati, i.e., ca. 1420-1424, the main port was still at Mīṣr (or Babilon, as he calls it). Goods coming by caravan across the desert from Mecca came first to Cairo and then passed on to Mīṣr for the levying of customs and for transshipping. See L’Égypte au moment des premiers siècles, pp. 45-47. When Pero Tafur came to Egypt in 1459-1460, he disembarked at Mīṣr, spent the night in that city, and then proceeded by donkey to present his credentials at the Cīnastl. See Pero Tafur, Travel and Adventures, pp. 72-73. It is significant that none of the later European visitors to Cairo mentions a port at “Old Mīṣr” or Babilon. By the second half of the fifteenth century, overland caravans crossed directly to Būlāq from north of the city, and all goods and passengers from or to Europe passed through the port at Būlāq. These travelers who specifically mention disembarking at Būlāq are: Friar Felix Fabri (1483), see H. Preteceille, Once to Sinai, p. 137; Berruyer (1487-1490), see Adler, Jewish Travelers, p. 263; and Domenico Treschini (1512), see Jean Théand,...
XI. The built-up area of Cairo ca. 1800.
bay in 1455 to conquer Cyprus; after 1458, when control over the trade at Jildah became absolute, it is increasingly mentioned as a port and as a discharging point for the navy. By the middle of the fifteenth century, the former island, by then joined to the mainland even in flood season by two raised causeways, had become the major port serving the city of Cairo and had begun to develop the wholesale and industrial character which the area retains to this day. This transition continued despite, or perhaps even facilitated by, a fire in 1459 which virtually destroyed the town, permitting it to rebuild in a form more suited to its changing function.

It would not be unreasonable to link the expansion of this port to the alteration in the main route of the spice trade, for with the decline in the previous Nile route downstream from Qâqû, the port at Mïr was no longer conveniently located; a more northerly location was called for, accessible to the eastern desert caravan route that terminated north of Cairo at the Pilgrims’ Lake (Bîrkat al-Ḥuṣûl). When this change first occurred at the time of Barsbay, Mïr al-Qadîmah still remained the commercial port of the city, but by the end of the century all boats carrying wares between Cairo and Alexandria (and beyond, to Europe) docked at the new port facilities at Bîlîlq, a mile-long donkey ride through farmland to the built-up part of al-Qâhirah. In Bîlîlq also were constructed the warehouses, inns, and other facilities for the great caravans that carried goods overland between Cairo and the Red Sea ports. Thus Bîlîlq became the key link and hence the principal port for the East-West spice trade which in large measure underlay the comparative prosperity of the fifteenth century. Despite a decline in trade during the centuries that followed, Bîlîlq continued to serve this function. When the French arrived at the end of the eighteenth century, they found this port town still intact and still separated from the city of Cairo by agricultural lands.

The settling of Azbîkâyah, now part of the central business district of the “Westernized” city and the geographic heart of the metropolis, also occurred toward the end of this last century of growth. Its site, midway between the abandoned industrial port of al-Mâqsû on the Nile, between the Nile’s former shore and the Khâlî Mûrî, had been occupied by a large plantation called the Bazistan al-Mâqsû. In 1379 the trees of this orchard were cleared to make room for a large pond (bîrkah) which was excavated there. However, during the difficult times of Mustaﬁrwardi toward the end of that century, the deserted banks of the pond became a thieves’ quarter and the area was otherwise abandoned. Over the centuries, yearly silt deposits gradually filled in more and more of the pond until, by the time of Maqrîzî, the zone (Kâma l-Jâli) had become almost entirely sand dunes. Only a tiny remnant of the pond still survived. A few decades later, when Ibn Tâhîl Birdi was writing, evidently even that last remnant of the pond had disappeared.

So the area remained until 1470 when Azbêkh, an amir of the Sultan Qurt Bay, built a stable and then a residence in the zone which today still bears his name. He had the sand heaps removed and the land excavated anew for the Bîrkat Azbîkâyah which was flooded by waters from al-Najîr’s Western Canal. Along the way building of this beautiful pond many of Cairo’s merchants and princes built luxurious dwellings, and the area—whose growth must have been stimulated by its proximity to the new port and to the Bîrkat al-Abbîl in prestige. By the end of the fifteenth century, Azbîkâyah had become one of the most fashionable districts of suburban Cairo, a veritable "city in itself," serving as the center of the nobility of that period.

These developments were, perhaps, the last burst of energy before final stagnation. Certainly the two factors that were to bring the medieval cycle to a close were already at work, as with the rise and fall of trade routes which undermined irrevocably the last economic base of the community; the other was the rise of the Ottoman Turks whose conquest of Egypt deprived Cairo of her political hegemony. The sixteenth, seventeenth, and eighteenth centuries, when Azbêkh became a provincial capital of declining importance, and until the nineteenth century would Cairo be revitalized.

We have seen that the element which had sustained Cairo even up through the fifteenth century—despite political disorders, declining agricultural production, current unemployment, and the plague—was the Oriental spice trade with Europe, still virtually monopolized by Venetian traders who routed their commercial exchanges through Egypt. This concentration of the East-West spice trade in Mamluk Cairo even provided only brought income directly to the Mamluks, who charged high customs fees at each of the several ports through which goods passed, but exerted a multiplier effect on the economy by stimulating the demand for ancillary goods and services. However, the profits gathered so greedily into the purses of the Mamluk lords weighed heavily upon the foreign merchants who found the route growing costlier and more perilous each year. Complaints about the high duties charged in Egyptian ports and of the dangers of transporting goods through poorly policed territories became more and more frequent.

The prosperity of Cairo hung on a narrow thread, a monopoly that was soon to be broken by that rival to the Italian city-states, Portugal. Vasco da Gama’s successful circumnavigation of Africa and his triumphant arrival in India in 1498, more than any other discovery of the closing years of the fifteenth century, snapped this thread, stranding Cairo in a backwater of the rapidly changing world. The effects of this discovery were immediate and irremediable. Within only a decade the Portuguese had taken much of the East-West trade out of the hands of the Venetians. By 1507 commerce through Egypt had decreased perceptibly; in the following year practically the only goods entering the Mamluk empire were those intended for local consumption. The discriminatory policies imposed by the Portuguese in India established a virtual monopoly for their traders. The latter also gained control of the access to the Persian Gulf and the Red Sea, and when one of the last Mamluk Sultans, al-Jâhâd, was unable to avoid here any detailed coverage of routes and their shifts back and forth, this would involve us in the complex history of an area far wider than Cairo. Among the sources which can be consulted are Archibald Lewis, Naval Power and Trade in the Mediterranean, A.D. 1000-1500 (Princeton University Press, Princeton: 1951) and George Hourani, Arab Shipping in the Indian Ocean (Princeton University Press, Princeton: 1951) for the earlier period; Allert H. Lybyer, “The Ottoman Turks and the Routes of Oriental Trade,” Englisch Geschichte, Volume 30 (October 1949), pp. 577-588 (who dates the shift to the northern route through Egypt earlier than Darrag); and George W. Stripling, The Ottoman Turks and The Arabs, 1517-1669 (The University of Illinois Press, Urbana: 1955), who gives excellent evidence in support of the contention that customs fees were excessive, see especially pp. 17-28. Pilot, in L’Egypte au commencement du quinzième siècle, p. 52, complains bitterly about the exorbitant tariffs imposed by Bâybars and about the piracy of the undisciplined bandsmen who ruled the routes between cities, two problems which became even greater in the years that followed.

24. Bîrkat al-Azbîkâyah still flooded ca. 1800

25. Azbîkâyah environs ca. 1857

26. Thoroughfare now bisects Azbîkâyah Gardens
concentrated in and glorified Cairo. Furthermore, as Turkish supplanted Arabic as the language of intellectual exchange, the suburbs were more and more included more and more from the stimulation of the capital.

There is no doubt that Cairo deteriorated gradually but greatly during the period between the Turkish conquest and the Napoleonic occupation. Enduring a steady decline in population and economic viability, the greater older and shoddier. While the built-up surface of the city neither expanded nor appreciably contracted (see Maps X and XI), over the years more and more individual houses and shops became deserted. Crumbling buildings, instead of being repaired or replaced, were left to the ravages of the elements. Top stories of dwellings tumbled one by one, leaving the lower floors still inhabited but exposing the walls of abandoned upper sections. A kind of creeping blight set in (quite different from that known in Western cities of the industrial era) which, over the years, reflected the diminution of Cairo's population.

While we lack accurate population statistics for the country as a whole, estimates based on the head tax suggest that Egypt had a population of perhaps 4 million when the Arab conquerors first arrived in the seventh century. During times of greater prosperity, when irrigation canals were well maintained and being extended, periods of the country's prosperity, the population approached 10 million or even more. Such a populous country might well have supported a capital city of half a million persons, particularly when that city served not only local commerce but was the financial and commercial center of the world.

During the era of Turkish domination, however, there was a dramatic drop in the carrying capacity of the city. As public works and public services began to fail, the walls of the city were left to the ravages of time and in the end were abandoned. Thus the people of the city were left to the ravages of the elements.

Whether the deterioration so noticeable in the city of Cairo can be blamed entirely on the "evil" administration of the Turks, as has been charged by the detractors, is an open question. First, as we have seen, the reorganization of world trade was beginning to exclude Cairo as an important commercial center even before the Turkish conquest. And second, although the Turks and their fairly autonomous Mamluk dependencies could be held responsible for the neglect of public works and therefore indirectly for the population decline, they were themselves victims of a decline in vigor and prosperity which set in soon after the conquest and was certainly well established by the end of the sixteenth century. Not only Cairo, not only Egypt, but indeed the entire Turkish empire was left behind as the world moved forward. Both absolutely and in relation to the tremendous strides taken by an awakening Europe during the sixteenth, seventeenth, and eighteenth centuries, the Mediterranean world was dying.

The decline of Cairo was but a reflection of this more general and pervasive decay.

While the boundaries of the city did not change significantly during the several centuries of Turkish rule, there was a shift in the direction of development of the urban community over the years as the center of the city continued to move westward toward the new sections. The qasba, formerly the unrivaled site of the entire city, became somewhat less important as specialized markets on the western side of the Khali Muri began to compete for business. And as an area of elite residence, the zone of Azabkyah gradually usurped prime position in the ecological hierarchy from its nearest competitor, the quarter around the Birkat al-Fil. In the opening years of the sixteenth century, the preferred residential area of the Mamluk aristocracy was in the vicinity of the Citadel, that is, the southeastern quadrant of the city beyond the walls of the al-Qahirah nucleus; only a minor fraction of the aristocracy had built homes in the Azabkyah area, which was then chiefly a zone of merchant and bourgeoisie elements. Gradually, the twentieth century the Azabkyah area declined; at the center of the city, the quarter around the Birkat al-Fil, which, by the late sixteenth century, contained almost half of the identified homes of important Mamluk families. Descended by its aristocratic clientele, the

—Theodore N. Galinsky

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While in retrospect we can reconstruct that Cairo
was probably, because of its size and its
location on the Nile, the largest city in the
world in the eighth century AD, its growth
was not unhampered. The city was still
largely confined to the Old Cairo area.

The old Islamic city of Cairo was built
primarily of mud and brick, with few if any
interior streets. Its layout was essentially
rectangular, with the streets running
north-south and east-west. The city was
surrounded by walls, and the only access
was through gates, which were protected
by towers.

The city was divided into four
quarters, each governed by a sheik. These
quarters were: al-Asfar, al-Bahr, al-Khalili,
and al-Bahri. Each quarter had its own
market, or souk, and its own mosques.

The city was home to a large
population of Christians, who were
protected by a Christian sheik. The
Christian community was small in
comparison to the Muslim majority, but
they played an important role in the
city's life.

The old city of Cairo was
surrounded by a wall, which was
constructed in the eleventh century.

The wall was strengthened in
the twelfth century, and at this time
the city was enclosed by a double
wall, with a moat between them.

The wall was further
strengthened in the fourteenth
century, and at this time it was
completed with a series of towers
and battlements.

The old city of Cairo was
surrounded by a moat, which was
filled with water and provided a
defense against attackers.

The old city of Cairo was
also home to a large number of
fortifications, including a
system of gates, towers, and
bastions.

The old city of Cairo was
home to a large number of
monasteries and convents, which
provided religious and
educational services to the
population.

The old city of Cairo was
also home to a large number of
marketplaces, or souks, which
provided goods and services to the
 population.

The old city of Cairo was
home to a large number of
mosques, which were
important religious and cultural
centers.

The old city of Cairo was
home to a large number of
public buildings, including
hospitals, libraries, and
museums.

The old city of Cairo was
home to a large number of
private homes and
residences, which were
constructed in a variety of styles
and materials.

The old city of Cairo was
home to a large number of
institutions, including
government offices, schools,
and religious institutions.

The old city of Cairo was
home to a large number of
districts, each with its
own unique character and
features.

The old city of Cairo was
home to a large number of
neighborhoods, each with its
own distinct character and
features.

The old city of Cairo was
also home to a large number of
artifacts, including
architectural pieces, which
capture the
character and
features of the old city.

The old city of Cairo was
also home to a large number of
intangible cultural
elements, which
capture the
cultural
capital of the old city.

The old city of Cairo was
also home to a large number of
oral traditions, which
capture the
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capital of the old city.

The old city of Cairo was
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ful and high, yet the Turks make no Reparations, but suffer all to run to decay. ... Concerning the street plan of the city, Theveton notes that "all the streets of Cairo are very short and narrow, except the street of the Bazar and the Khalis, which is dry but three months of the year; ... there is not a fair street in all Cairo, but a great many little ones that go turning and winding." Again, it is from the account of Theveton that we derive a picture of the changing role of Europeans in the city of Cairo. Before the days of the Turks, few foreigners lived in the city except for the Venetian merchants active at 1712, a time when an English observer noted that "the Government of Egypt ... is in the Hands of a Bashaw [Pasha] ... sent to Cairo from Constantinople, who having in reality but very little power, his Business seems chiefly to consist in communicating the Orders of the Grand Signor to his Divan of Boys," and whose continuance in office was contingent upon their "interests." By 1776 the Danse, Nibuille, reported that the Turkish Pasha was completely dependent upon the Mamluk Bays for his power, a fact described less politely but with infinitely greater élan by the excitable Eliza Fay in a letter from Egypt dated 1779. This situation was similarly remarked on by both Savary and Volney, who complained that the Pasha was a virtual prisoner of the Bays.

By this time the French had definitely come to dominate the foreign presence in the Wadi, the Venetians and English, in furnishing European goods. However, the insecurity of the foreign traders were also increasing. Whereas in 1560 Pornel reported that European merchants were "very well satisfied of the Oтомans and hospitality on the part of the inhabitants were constantly to throw the odium of every disagreeable occurrence on his shoulders, under pretence of Orders from the Port." See also Visscher, "Letters from Egypt, in three volumes (Oxford, Paris: 1796-1798), ii, 141; and M. Volney (pseud. for Constantin-Франсуа Chambaud), Traites sur l‘Egypte and l‘Egypte en l‘Anne 1793, 1794, and 1795 ... in two volumes, the first of which refers to Egypt (trans. from the French, G. & J. Robin, London: 1797).


Volney, Travels through Syria and Egypt, t. p. 244 for quo-}
The Heritage from the Medieval City

In contrast with the meagre and essentially negative evaluation modern Cairo received from her pre-Islamic and early Arab past, her inheritance from the medieval period has proven both rich and vital. The earliest developments, which were concentrated in the southern third of the modern metropolitan region, left their mark chiefly in the form of ruins and "dead" land uses which have prevented expansion without shaping or contributing to the functional order of the contemporary city. On the contrary, with certain modifications, medieval Cairo has been incorporated into the modern metropolis as a living and still vigorous entity.

At present several square miles of the east-central section of Cairo constitute a relatively self-contained community of essentially medieval character, standing in bewildering contrast to the newer city against which it is juxtaposed. Strange anachronisms there are: cheap manufactured goods heaped high on the backs of donkeys or the heads of men; patent leather pumps flashing beneath the long black gowns of veiled women; cacato sounds of typewriters issuing from ancient mashrabiyah windows. But without the extensive and all-pervading reminders of the medieval past, these would scarcely attract attention.

The reminders are all about one. Remnants of Salih al-Din's walls still stand sentinel at Bib al-Futuj, Bib al-Nasr, and Bib Zuwaylah. His Citadel, much embellished, still dominates the skyline from above. Street names, such as Bib al-Bahri, Mrifiz El-Din Allbi, the Maras and the Coppersmiths, the Bricksellers, and the Armor Makers, Between The Two Castles (Bayn al-Qasrayn), Between The Two Walls (Bayn al-Surayn), all have their origin in the history recounted here. Sections of the walls are known by their early landmarks: Birka El-Fal and Birka al-Rati (both dry and densely developed now), Bib al-Wazir, Bib al-Halid (Cairo's present rail terminal), al-Qusayryab, al-Habnanyab, al-Darb al-Ahmar, Khana al-Khalili, al-Jamiliyah. Studying the area are mosques built by Barqin, Quilawin, Mrayyay, al-Ghouri, al-Nasir, and other sultans whose turbulent careers were enmeshed in the city's development.

But the heritage from medieval Cairo is much more than the monuments which lure tourists. They are the superficial elements, mere symptoms and signs that attract the eye. Underlying them is a pattern of social and physical organization which persists from the medieval period and, even today, exerts a powerful if declining influence on the city. And underlying not only the older sections but the entire city of Cairo are principles of organization derived from the medieval progenitors.

Born in the nineteenth century, adolescent in the twentieth, modern Cairo has as its birthright four distinct elements: (1) the basic framework of its regional pattern—three centers which were to coalesce but never quite blend; (2) the basic framework of its social and ecological organization—diverse ethnic, religious, and class divisions which were to subdivide the modem city in much the same way they had fragmented the medieval one; (3) the basic determinants of its physical structure—streets ill-adapted to modern transport requirements and chaotic mixtures in land use which were to plague the planners of its modern destiny; and (4) a form of municipal administration which, perhaps more than any other heritage, obstructed the way to reform.

Each of these has given way gradually to change. The regional pattern, encouraged by the creation of new nuclei of attraction, has now spread far beyond the original triad. The social system based on regional, national, and religious differences is slowly giving way before the nonethic cash nexus. Radical surgery has opened up the narrow streets of medieval Cairo, and modern principles of land use segregation now govern the location of new industries. Municipal reform, the achievement of home rule, and the beginnings of city planning have made Cairo somewhat more the master of its own house. However, most of these changes are fairly recent; the Ten Streets, the Al-Shubak, the city life, and, above all, the medieval heritage had left its deep imprint on the face of the metropolis.

When the scholars attached to the Napoleon Expedition began their monumental study of Cairo at the turn of the nineteenth century (and incidentally prepared the first accurately scaled map of the city), the metropolitan area of Cairo consisted of three separate but functionally related communities: al-Qahirah, plus her two port suburbs of Bislig and Mgr al-Qudimah. (See Map XII, based on the French Expedition Regional Map.)

The largest and dominant member of the triunvirate was the city of al-Qahirah itself, whose name had been distorted in Italian to Kayro and in French to Le Caire. On the north, the urbanized portion of the city terminated abruptly at the wall of Salih al-Din which extended from the edge of the eastern desert to the Bib al-Halid at the former port of al-Maqas. One thick arm of urban development stretched northward beyond the Bib al-Futuj to form the district of al-Usaynaynah, remnant of the earliest suburban quarter of post-Fatimid Cairo. The eastern border of the city was not as well defined since, while desert and blight had encroached within the walls, beyond these ruins lay the Mamlik funeral cemeteries and the city's smaller richer population. Thus the city was limited by yet another cemetery beneath the Citadel and by the rim of ruins which had formed south of the Mosque of Ibn TUlün. On the west, urban farms were widespread as the seasonally flood plain was approached.

This main complex comprised a little less than five square miles of land in the form of an irregular rectangle, roughly three miles long and a mile and a half wide. Within this area, which had once contained perhaps half a million persons, the French academicians estimated a population of only 250,000 to 265,000. Thus, even then Cairo had an average density of over 50,000 persons per square mile, moderately high for a preindustrial city where most houses were only two or three stories high and where the general outline contained very large pockets of uninhabited land. It will be recalled that in

1 Master Plan of Cairo (Government Printing Office, Cairo: 1957), p. 22. Detailed measurements also appear in E.Jomard, "Description abrégée de la ville et du caiselle du Kaire," in Description de l'Egypte: Etude moderne (L'Imprimerie Royale, Paris, 1821), Tome 11, Part 11, pp. 579-587; Panorama gives the area of al-Qahirah as 793 hectares and her circumference as 24,000 meters, the latter extremely large because of the irregularity of the borders. See p. 579.

2 Two methods of estimating Cairo's population were used by the French. First, for purposes of taxation the French made a house count of the city. Then, multiplying the number of houses by estimated average size of household (3600 dwellings by 1807), they arrived at an estimated total of 265,000. The second method was somewhat more sophisticated. The French introduced a system of recording births and deaths to the city which formerly had kept no vital statistics. The total number of deaths during 1827 was recorded. Later, when a former population base was established, the death rate of later years was applied to 1798 to estimate the population base during the earlier year. This retrospective method yielded an estimated population of 265,000 in 1798. See Jomard, "Description abrégée . . . du Kaire," pp. 585-586. Somewhat different figures, however, appear in the same volume. V. de Chabot, in his "Études sur les mœurs des habitants modernes de l'Egypte," in Description de l'Egypte: Etudes modernes, Tome 11, Part 11, says that "in 1798 Cairo had 190,000 to 261,000 persons, including the Mamlik and foreign traders. According to another computation made prior to the expedition, there were 300,000 persons . . . (my translation), p. 364. One must marvel at the precarious (or sheer luck) which led W.G. Browne in the last decade of the eighteenth century to estimate Cairo's population at over 300,000 and the country's at 3.5 million. See his Travels in Africa, Egypt and Syria from the Year 1794 to 1798 (Printed for T. Cadell and W. Davies by T. N. Longman and J. Rees, London: 1799), p. 71.

sect dating back to the era of Diocletian, while another large minority were Jews. One subgroup of the population was concentrated near the shores of the Qasr al-Sham, the rest farther north in the port area. This port, through which the trade of a vast empire formerly passed, had been reduced to a mere landing for sailboats arriving from and departing to Upper Egypt. History had dealt most cruelly with this city which, some eight centuries earlier, had been described in such glowing terms by Nasir-i Khusrav and al-Munquaddas. The populated city, like the Delta, had edged inexorably downstream.

During the ensuing century of growth, these three communities—al-Qshira, Biliis, and Miṣr al-Qal'ima—served as the trangulation points of the regional pattern. Throughout the nineteenth century, expansion was almost entirely confined to filling in the connective tissue between the three nuclei. By the end of that century the city still retained its rectangular shape, but by then the rectangular stretch westward from the northern tip of al-Ḫusayniah to the Nile shore at Biliis, southward along the river from Biliis to Miṣr al-Qal'ima, northeastward to the Citadel, and then due north again to complete the form. It took only one century to transform these three functionally interdependent but physically separated communities into a contiguous whole.

Perhaps one of the most significant differences between cities of the industrial era and those of the feudal or pre-industrial order is the critical role which subgroup identification plays in sorting and segregating the inhabitants of the latter type. In the preindustrial city, not income but "ethnic" division according to the dual criteria of religion and place of origin to the basis for social class, occupation, and place of residence within the community. The ecological organization of pre-modern Cairo conformed well to this hypothesis. The distribution of population within the city was governed by the principle of social rather than economic segregation, although economic distribution was often a function of this social identity.

What were the major groups in the city and how were they distributed? From the researches conducted by the French scholars there emerges a fairly clear picture of the social composition of Cairo as the city neared the end of its pre-industrial phase of development. Of


2 The following figures have been derived from the tables appearing in Jamard, "Description algerge ... du Caire," p. 744.

3. Street in the Coptic quarter in the 19th century
menian merchants whose wealth, great as it may have been, was still insufficient to allow them to escape the limits imposed by a deviant religion. They formed a transitional group, as well as occupied the transitional zone, between the native Copts and the primarily mercantile Europeans who inhabited the Miski (Frankish) quarter between the Birkat Ashbaklyah and the Khuli Miqta. Thus, in 810, the northwest corner of Cairo housed most of the "minorities" of the city, who were excluded by and in turn excluded the majority, and who were held in loose alliance by similar or rival religions.

Two of the oldest ethnic minorities, however, remained within the walled city in approximately the same locations which they had been assigned in the early plans of the city. These were the Greeks and the Jews. Hārāt Zuwaylah (later renamed, more descriptively, Hārāt al-Yahūd) remained the chief Jewish quarter up to 1967. Its location, near the Futūmi Great Western Palace on land formerly occupied by the Gardens of Kāfūr, was not an unusual one in Islamic cities. Since the Jewish community tended to grow up in the service and under the protection of the ruler, the Jewish quarter was often located within the walled city far out from the palace. Not only in Cairo, but in the Islamic cities of North Africa, such as Fez, Rabat, and Casablanca, as well as those in the Fertile Crescent, such as Damascus and Aleppo, this coincidence of location prevailed. Traditionally, also, the markets for money changing and goldsmithing were located within the Jewish quarter. The only unusual feature in the case of Cairo was the persistence of the original location, even after the religious-sectarian authority had removed itself from the walled Futūmi city to the Citadel. Instead of being relocated with it, the Jewish community remained where it had been.

The two Greek settlements had an even longer and certainly more complex history in the city. Maqriti's description (see Map IX above, Hārāt Nos. 15 and 8) leaves little doubt concerning either their locations or early origins. Dating from earliest settlement was the Hārāt al-Rūm, located just northeast of the Futūmi Eastern Palace. Some time before the eleventh century, a second Greek quarter began to develop south of Jawhar's Bih Zuwaylah along the southern wall of the city, and thus became necessary to distinguish between the two Greek quarters. The former became known as the "Inner Greek Quarter" (Hārāt al-Rūm al-Juwalānāyā) while the latter was referred to as the "Outer Greek Quarter" (Hārāt al-Rūm al-Barriānāyā), a distinction that soon lost its relevance when Jawhar al-Jamālī enlarged the walls to include the latter within the city's circumference. By the time of Maqriti, Hārāt al-Rūm al-Barriānāyā had become the chief quarter of Greek residence, a supremacy it still retained at the coming of the French almost four centuries later. However, by this time another colony of Greeks had begun to form nearer to the foreign and native Christian communities in the northeastern quadrant.

The remainder of the city was occupied by the Muslim community which dominated it both numerically and socially. The Mamluks were concentrated, as before, within the southern portion of the city which contained not only the Citadel but also the assembly grounds and the markets catering to the military needs of the group. The great mansions of the elite were located around the Birkat al-Fil or on the borders of the Birkat Ashbaklyah which, together, constituted the most desirable residential zones of the city. During the time of Maqriti, the main Turkish quarters of the city had been in the vicinity of al-Azhar Mosque, primarily to the south and west of that religious center. However, with the increase in the Turkish population after Salām's conquest, the Turkish community spread out to encompass areas previously the exclusive domain of the Mamluk elite. Many of the Turks, however, were itinerant merchants who came and went without establishing permanent headquarters in Cairo.

Within the heart of the Futūmi city, throughout the qašabah and its surrounding fringes, were the Egyptian merchants, master craftsmen, journeymen, and artisans who made up the bulk of what might be termed the upper-class class, for middle class there was little. These were the groups upon whose life the industry of the city depended, and these were the groups most involved in the vicinal, occupational, and religious fraternities of the city. The northern and eastern fringes of the Futūmi city had been declining in importance and prestige since before the fourteenth century, and to these sections were relegated the Muslim masses—the new migrants, the destitute, the unskilled laborers. These classes also occupied the semi-rural peripheral areas, such as al-Dyūsáyriyyah north of the wall and a squatters' preserve on the east. Further south, at the foot of the Citadel, was another

31. Along the qašabah in the early 19th century

32. Along the qašabah today: the Spice Market

33. Along the qašabah today: clothing

"popular" quarter of similar composition. The southwestern quadrant contained a population drawn from both extremes of the class distribution. "Landed" gentry of Circassian and Turkish origin were settled amid a native Egyptian peasant population in this area of semi-agrarian character. In this peripheral section also lived the volatile gangs of the demimonde who preyed upon the city dwellers, and the poorer workmen who, while occupied in the city each day, were attracted by the lower rents at the fringe.

This was the ecological organization of Cairo at the turn of the nineteenth century. In a fashion almost uncanny to observe, the ordering of these subcommunities in the preindustrial city has determined the distribution of religious and ethnic groups in contemporary Cairo, despite the fact that the city's area has increased more than tenfold in the past 150 years. Although the details of this distribution are reserved for the final section of this book, it should be pointed out here that the functions of many older areas have changed little in the interim, while the newer areas owe much of their current character to the particular old quarter from which they radiated. Thus Shubra, a relatively new area just north of the old Coptic quarter, became the chief area of Egyptian Christian resi-
When one states that preindustrial Cairo had little or no segregation of these uses, the standard of comparison is the modern industrial city. Segregation, though minimal, was not entirely lacking. On the contrary, certain uses were even more rigidly segregated in eighteenth-century Cairo than would be deemed necessary or desirable in a modern city. Uses were hardly distributed at random, nor do I want to imply that there was no area specialization. Indeed, nothing could be farther from the truth. The medieval city of Cairo demonstrated concentrations and specializations which continue to influence land use patterns down to the present. By exploring some of these in greater detail here it is possible to show in which ways use-segregation was present and which ways absent in preindustrial Cairo.

Among the uses as rigidly segregated in medieval Cairo as in a modern city were the open recreational uses, the governmental administrative uses, and the cemeteries. The recreational areas, primarily those used by the Mamluks, were located outside the city in the semi-marshlands west and north of the city. Governmental offices were concentrated in the Citadel, with the notable exception of those dealing with the regulation of commerce, which were located on site. (For example, the official weights and measures administration was, and still is, located within the qa‘ah.) Segregation of cemeteries was even more marked than in a modern Western city. While there were a few small cemeteries scattered within the city, the major installations were, and still are, located east and south of the urban complex. It is difficult to give a reader who has not seen them some idea of their extent. In 1800, for example, these two major funereal quarters occupied land equivalent to one-fourth of the area of Cairo.

One should not imagine, however, that these cemeteries were (or are) used exclusively as burial sites. Although physically segregated, they were never functionally segregated. From early times, among the shrines were found monasteries and schools for various religious and mystic orders. Some of these served as free hostels for itinerant scholars or travelers. In addition, guarding each family tomb was a resident retainer and his dependents. To this population must be added a few temporary and permanent squatters who found the rear-free stone and wooden structures of the “tomb city” more spacious and substantial than the mudbrick huts available to them within the city proper. With such a resident population, it was perhaps inevitable that some artisans and shopkeepers should gravitate to the area to fulfill the demand for daily goods and services. Nor were these the only functions of this unique land use. Just as the marshlands provided open recreational space for the mamlukic sports pursued by the Mamluks, the Cities of the Dead provided recreational facilities for the bulk of the population who required them weekly and, in even greater numbers, on the major festival occasions. While this custom originated as a means of paying respect to the tombs of saints and relatives, it attained a momentum of its own, with festivities rather than solemnity usually accompanying the exodus.

Similarly, nosiéous industrial uses, transportation terminals, and wholesale uses were assigned to specialized sections of the urban complex. For example, the pottery kilns, the slaughteringhouses, and the tanneries were segregated near Mîr al-Qâdîmah where, indeed, they still remain. Transport terminals had specialized locations, although the technology of the times required extensive

THE ISLAMIC CITY

installations only for maritime transport. Traffic to and from the city went overland on animal carriers or went by water in wind-driven craft. Terminal facilities for caravans were located north of the city at Birkat al-Hujjāj and also in Būlāq where connections could be made with the waterborne network. Storehouses, wholesale firms, and inns for itinerant traders were also to be found near the port. Within the city itself, no specialized facilities were required, since legs and donkeys were the major means of internal circulation, but combined storehouses and inns dotted the qasabah.

Commercial functions also were scarcely distributed at random in the city. The pulsing heart, or rather artery, of medieval Cairo was the market zone, the linear strip of qasabah which extended from the Bāb al-Futūḥ to beyond Būb Zaynāyāh, supplemented by horizontal outposts both east and west of the thoroughfare. Within this central business district, specialization was even more extreme than in the business zone of an industrial city. Each trade, each product, had its own area within the market complex.18 The ordering of the various trades followed functional necessity, with items related by raw material or associated use grouped in close proximity. Books, religious articles, and candles were associated with the most important mosque, al-Azhar. Yard goods, sewing findings, and tailoring establishments formed another subsystem. Armor, metal items, accounts for war horses, and unlabeled slaves, and mensuals. Within the same unit were shops and dwellings for small tradesmen catering to daily needs of residents, at least one coffee shop for recreation, and in the larger units a pub and in small mosque with an associated atiyān (Koran school), possibly a meeting hall, and warehouses and inns for the convenience of visiting merchants. Even outside the commercial hub of the city similar adventures of the same kind took place near the mosques (Jāmāʾ-iyāh) were the markets for beast of burden, saddles, and other travel accessories. European imported goods were sold in the Miskūn.

Thus, when scholars note that the preindustrial city had "no real specialization of land use," they must refer to a different matter. The modern city which segregates place of residence from place of work and production from point of sale (and then squanders time and money refining the fragments) is the anathema of the preindustrial city. The latter, dependent upon autonomous energy sources and on the walking radius, combined these functions the modern city seems intent on pushing farther and farther apart. It is in this sense only that preindustrial cities had little land use specialization. To degree inconceivable to the resident of a modern industrial city, homes, workshops, and retail outlets were combined in medieval Cairo, if not within the same structure then within the same small hārak (quarter) or darb (alley).19

It was this intermediation which made rigid segregation by income impossible in the city. At the time of the French Expedition, the city of Cairo was divided into 53 hārāts,20 each of which in turn consisted of several darāb (sing. darb), i.e., perhaps 30 dwellings grouped around common access alleles which were barricaded nightly. In the more commercialized sections of the city, each darb or group of darāb was devoted to a particular craft or product. Not only were goods produced and sold there, but, in addition, residing there were some of the individuals involved in production and distribution. Hence, the same unit might contain the luxurious home of a prosperous merchant, the humbler but still substantial dwelling of the master craftsman, and poorer quarters for apprentices and relaxed laborers, and menials. Within the same unit were shops and dwellings for small tradesmen catering to daily needs of residents, at least one coffee shop for recreation, and in the larger units a pub and in a small mosque with an associated atiyān (Koran school), possibly a meeting hall, and warehouses and inns for the convenience of visiting merchants. Even outside the commercial hub of the city similar adventures of the same kind took place near the mosques (Jāmāʾ-iyāh) were the markets for beast of burden, saddles, and other travel accessories. European imported goods were sold in the Miskūn.

18 The following is based chiefly upon Maqrīzī’s topography of the qasabah at Cairo, as given in the Khīṣāt, i. 561. While his description deals exclusively with Cairo, it could easily be used to describe most Islamic cities and a good number of medieval European and Far Eastern towns as well. The works of G. von Grunebaum, in the “Structure of the Muslim Town,” of Georges Marçin, and of Roger Le Tourneau, all cited earlier, permit a comparison with the presentation here, with Sjoberg, especially “The Preindustrial City,” p. 439 and his The Preindustrial City, Chapter 19, pp. 86-107, suggest a parallel with preindustrial cities elsewhere.

19 The latter point supplied by Jonasson, “Description abrégée . . . du Kaïr,” pp. 792 et seq., enumerated the major hārāts of the city.

20 Jonasson, “Description abrégée . . . du Kaïr,” pp. 850 et seq. enumerated the major hārāts of the city.

38. Coffee shop in the early 19th century.
city, to the bare minimum of access, and access on foot or animal at most. These were elements which medieval Cairo had in common with other communities of similar technical advancement. However, the three particular elements which helped shape her street pattern are in many ways more interesting, and in the final analysis, crucial. In order of increasing specificity, they are climate, social structure, and political organization.

The direct overhead sun of Cairo, the lengthy eight-month summer, the lack of clouds or rugged terrain to cast natural shadows, all lead to a similar imperative: create artificial shade. In Islamic cities, this goal was achieved by narrow streets covered by either rush mats or wooden roofs, or protected by overhanging balconies. Placing buildings close together insulated against unwanted sunlight for all but a short period each day. The same effect was achieved by building the second stories wider than the first. This was one of the most striking architectural forms employed in preindustrial Cairo, often so extreme as to make opposing balconies almost touch. While this form also appeared in the populous districts of Tudor London and other cities of northern latitude, the impulse to open the streets, felt by most of the latter, was absent in cities of the Middle East to whose climate they were eminently suited. (In fact, during periods of intense heat, the architecturally protected amāqā of the older city are far more comfortable than the air-conditioned shops of the modern quarter.) Where narrow streets and building overhangs were insufficient to create the needed coolness, mat coverings and later wooden roofs were erected, particularly in the market districts. Thus the narrow street was not only a natural concomitant of the limited functions it was called upon to serve but was also a highly functional adaptation to climatic requirements.

The street system reflected not only geographic climate but the social climate as well, and in this respect was equally functional. The division of the city into durāb was not dictated solely by technology or temperature. The darb was a social unit as much as it was a physical and industrial unit. True, economic function unified the inhabitants but, given the relationship between trade and ethnic identity, it was also inevitable that religious and regional ties should strengthen the cohesiveness of the area. Nor was it accidental that the essence of the darb was its capacity for defense. The barricades between durāb reflected not only the lack of a reliable municipal police force but an entire society in which diverse groups existed perpetually in uneasy symbiosis and uncertain security. There was constant danger of explosion, particularly during the later periods of Mamluk and Ottoman rule when contending factions of soldiers rampaged through the city and when undisciplined gangs from among the populace fought each other over “truf.” Limited access, a solid wall of peripheral buildings, and a narrow defensible point of penetration were the strategies of protection.

All these considerations, however, still do not answer the question originally posed, namely: by what process was the finely planned, right-angled palace city of Fāṭimid al-Qīrah transformed into the maze-like combina-

41. Street scene in medieval quarter ca. 1857

42. Covered sūq in al-Darb al-Āhmūr, 1960

39 A discussion of these gangs, the so-called mārū, during Mamluk times can be found in the study by Ira Lapides, Modern Cities in the Later Middle Ages (Harvard University Press, Cambridge: 1967), particularly Chapter vi. Parallel institutions in more eastern situated parts of the Arab empire are discussed by Claude Cahen in his Monuments populaires et autonomisme nëlal dans l’Ére Mondaine du Moyen Age (reprinted from his article in Arabia by E. J. Brill, Leiden: 1955). Whether these were exactly comparable is not clear. What is clear, however, is that the commercial classes in Cairo, especially during times of civic disorder, found it necessary to solicit or to succumb to the “protection” of these local “toughs,” regardless of their exact origin and organization.
difficult to reconstruct the process whereby Cairo was allowed to develop her complex pattern. Whenever the city experienced a rapid rise in population, probably beginning from the time of the massive influx that followed the burning of Fustat, unpermitted open spaces—whether maqulab, interior courts, or wide public roads—were gradually encroached upon. Slabs added temporary extensions onto the street which were transformed, step by step, into more permanent structures. In front of these, benches may have been placed for temporary use. Again, these were later transformed into the maqulab (stone benches) which permanently obstructed passage until Muhammad 'Ali, in the best tradition of former rulers, summarily ordered their removal. A man might set up a vending stand in the middle of a street, later building a sleeping room for his family, then adding a wing or second floor, until the building choked the thoroughfare entirely. Single actions, multiplied by the hundreds, gradually sealed off one after another straight path, causing traffic to be deflected around the new building or creating yet another of the numerous dead-end alleys which abound in the "old" city.

That inadvertently the city transformed itself is not noteworthy. What does appear remarkable to the modern reader is that there does not seem to have been much concerted or sustained effort on the part of the political authorities to prevent or punish these actions. Rather, when they did, they blacklisted the traffic (and this was a matter for ex post facto legal opinion, not of prior legal specification) and so long as their exercise did not infringe on the equally valid rights of other owners along the street, the violation of the urban law sought to prohibit all encroachments upon the public way except where specifically exempted, the law in Islamic cities tended to permit encroachments, except when these were judged to interfere with the rights of others. Therefore, while a watchful neighborhood and a zealous government might guard the public way by requiring the demolition of obstructing constructions, neither could prevent the existence a priori. And third, once an obstruction had been in existence for a lengthy period of time and been uncontested, the right to its continuance was assured. Thus, the results of a period of public neglect could not later be reversed; constant vigilance was required.

With these as the governing legal principles, it is not difficult to understand why the city planners who have attempted to reconstruct the process whereby Cairo was allowed to develop her complex pattern. Whenever the city experienced a rapid rise in population, probably beginning from the time of the massive influx that followed the burning of Fustat, unpermitted open spaces—whether maqulab, interior courts, or wide public roads—were gradually encroached upon. Slabs added temporary extensions onto the street which were transformed, step by step, into more permanent structures. In front of these, benches may have been placed for temporary use. Again, these were later transformed into the maqulab (stone benches) which permanently obstructed passage until Muhammad 'Ali, in the best tradition of former rulers, summarily ordered their removal. A man might set up a vending stand in the middle of a street, later building a sleeping room for his family, then adding a wing or second floor, until the building choked the thoroughfare entirely. Single actions, multiplied by the hundreds, gradually sealed off one after another straight path, causing traffic to be deflected around the new building or creating yet another of the numerous dead-end alleys which abound in the "old" city.

The failure to preserve an orderly street system was not necessarily, then, the result of incapacity or inefficiency. It was due rather to a failure to value such orderliness, reinforced by the complacency that, should access ever be needed, it could be achieved immediately, merely by using randomly concocted labor. History, however, has proven this complacency unfulfilled. On the contrary, with the passing of despotic regimes it has become more and more difficult to alter the street pattern which is modern Cairo's most crippling heritage from the medieval epoch. As any city planner is aware, a basic reorganiza-

zation of a circulation system is the most difficult problem faced in replanning, since, of all the elements which make up a city, the street network is the least amenable to change.26 Proof of this is easy to find. In the past 150 years, only three major thoroughfares have ever been cut through the maze of medieval Cairo, and each was achieved by flat and unpretentious means—felling in terms of the priceless monuments which were razed to make room for the mechanical transport that came with modernism.

To recapitulate, those basic ecological characteristics of preindustrial Cairo have been found, each of which has had a lasting effect on the city. First, the distribution of population within the city was determined by the principle of ethnic and religious segregation. This in turn prevented pure segregation according to income or economic class and, in addition, encouraged the development of a second basic characteristic of the preindustrial city, i.e., land use mixture. This intermixing of residential, industrial, and commercial uses in each cellular unit of the city was not only a concomitant of congruity between ethnic and occupational status but also a natural consequence of the technology which dictated small-scale enterprises and minimal transport distances. The primitive level of technology tended to reduce the function of most streets to mere access, a tendency encouraged both by the climatic situation and the narrow nature of the streets and by the utter lack of interest in preserving the public right of way. Out of these factors grew the third ecological characteristic of preindustrial Cairo, its tortuous and intricate street pattern. Nor was this final characteristic independent of the first. The sharp cleavage between subgroups organized by locality, which led each to barricade itself against potential threats by limiting and controlling entrance to the darb, reinforced the existing anxiety to fragment and individualize the circulation pattern. The net result was a city form probably quite well adapted to life in the Middle Ages but eminently unsuited to the industrial era.

These three physical characteristics were not only linked one to the other but were, in turn, products of the socio-political order which modern Cairo inherited also with the more tangible aspects of city form. While this political order has been hinted at throughout, a somewhat fuller explanation now seems necessary.

It is in political form that the medieval Islamic city diverged most radically from the European model, thus necessitating a somewhat more detailed discussion than

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would otherwise be required. Rather than attempt the ambitious project of summarizing municipal administrations in a general contribution to the history of leadership and alterations in the precarious power balance between sacred and secular hierarchies, this discussion will be confined merely to certain salient elements which have had permanent effects on the growth and development of Cairo.

One of the most significant elements of the political system was the existence of the Mamluk elite. The vast and originally unbridgeable ethnic, economic, and social cleavage between this alien ruling class on the one hand and the masses and bourgeoisie on the other hand negated the possibility of a municipal "corporation" which placed the well-being of the community above the vested interests of an unrelated ruling class.27 Since the middle of the thirteenth century, Cairo had been ruled by a proto-

26 Lane, The Manners and Customs of the Modern Egyptians (3rd ed.), p. 332.

27 I apologize without guilt to the Orientalist scholars who will find their special areas of concern ignored or grossly oversimpli-

fied in this account. Out of a highly complex field in which the specialists themselves are in doubt and disagreement, a very few items have been selected, for treatment here, from the misguided criterion of their relevance to Cairo's present difficulties.28

28 Von Grunebaum, "The Structure of the Muslim Town," in Cities of the Middle East, pp. 124-127.
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lation was minimal—and, insofar as they were concerned, the more minimal, the better.48

During the Ottoman period the great distance between rulers and ruled narrowed somewhat, due to the enhanced status accorded sons of Mamluk-Egyptian marriages, who had formerly been excluded from any rights of succession. Before, these so-called awlad al-nasr (children of good descent) who had been spared the indignities suffered by the inferior foot soldiers; under the Ottomans, however, they were accepted more fully into the chain of descent, were no longer given discriminatory names (formerly, Mamluks had Turkish names, their children Arabic names; later all were to share in Arabic names), were eligible to join the privileged Janissary corps and even to inherit their fathers’ positions in Mamluk society. The strengthened kinship link, by sustaining ties throughout several generations and involving Mamluks in a more widely ramified set of blood connections with the indigenous population, must have helped to bridge the wide and formerly absolute break between the alien elite and the remainder of society, although it could not eliminate it.

In Europe, however, it was the development of an urban bourgeoisie that played so important a role in the growth of municipal government. Such a bourgeoisie did indeed make its appearance in Cairo during the early centuries of Islam, but its ascendency (which coincided interestingly enough with the advent of the Mamluks) never led it to be able to assert its power to obtain political power.49 It is difficult to explain why this should have been the case, but I might suggest the following partial explanation. While in European cities were founded and grew chiefly on favorable trade and the urbanized feudal aristocracy, in Egypt the Mamluks concentrated in preexisting Cairo, rarely leaving the city except for campaigns. Although the agricultural estates of Egypt were nominally in their ownership, in practice they were farmed out to administrators, while their products were exploited commercially by the urban amirs. Thus, rather than serving as a refuge from the feudal lords, the city was their chief province or domain; rather than a rival to feudal power, the city was the kings’ in the

Two elements may be distilled from these brief remarks. First, the Mamluks had the opportunity to develop municipal self-consciousness or a system of self-government because a foreign elite ruled without distinction both the city and the countryside. Home rule and self-government, considered to be two essential elements in modern municipal administration, were both aborted before they began. The shift during the nineteenth and early twentieth centuries to a different type of elite, composed chiefly of Europeans, tended to perpetuate rather than remedy these lacks. Second, the bourgeoisie and masses, proscribed from assuming either loyalty or responsibility for the city as a whole, re- mained withdrawn in their own more primary units of identification—the religious community (subdivided in the case of Muslims into brotherhoods that at their height evidently embraced almost all urban males), the extended family, the town-of-origin group, the ethnic class, the occupational group, the neighborhood unit. There they remained, and in large measure still remain, cooperating with one another on the achievement of some small measure of local autonomy, often on the basis of hostile, system, and reacting to the “public good” with suspicion and subterfuge, since it so often implied a confiscation of their money (in taxation, tribute, and special levies), their time and labor (in the corvée, or their prerogatives (dress, customs, religious observances, and the like).

These were hardly ideal conditions under which the “delicate blossom” of good city government could even sprout, much less flower. The wonder is that a municipal administration dedicated to the protection of public rather than private interests failed to materialize, but that so fragmented a set of private ones ever managed the number of political necessities for the barest survival of the city. Part of the answer lies in the fact that very few of what we would now consider “public facilities,” except for the great mosques and associated schools, were actually provided on a city-wide basis in the medieval Islamic city.49 Instead, each quarter of the city tended to provide for and look after its own. Another part of the answer lies in the peculiar system upon which the Turk- ish state was founded and more in its later years, i.e., the system of “farming.” Tax farming in rural areas had been practiced for many centuries as a means whereby feudal “owners” could administer their holdings in absensee. During Mamluk rule and even more during the Ottoman era, in Cairo this system was extended to more and more municipal services. Thus, the “farming” of the custom offices in Cairo and Bilbq offered a lucrative opportunity to the highest bidder. What might elsewhere have been considered “public services” or govern- mental functions were, in this late period of Cairo’s development, treated as “private enterprise”; the “entre- preneur” paid a fixed sum to the imperial treasury for his right to perform the service and received in return all the net profit the traffic would bear.49 Still another part of the answer lay in the paradoxical fact that coordination was impossible even on the level of the “block at a complex, all-embracing political organization.” Little coordination was required because the elite lived in an entirely differ- ent world from the bourgeoisie and the masses, each group being individually organized for continuing and having fairly superficial and formal relations with the other. This minimal contact was channeled through a

The landowners have noted the conspicuous absence of public municipal buildings (such as forums, arenas, etc.) in the medieval Islamic cities of North Africa, explaining their absence by the cellular nature of those cities in which public facilities were provided separately within each square. See his Les villes maures du Maghreb et de l’Afrique du Nord (La Maison des Livres, Al- giéres: 1973), pp. 102-21. Sauvaget reached the same conclusion somewhat earlier; see his Fouilles de Fou, and in its central position had not even a periodic one, each Khalif being almost a miniature town with its own religious and civic facilities.


48 Actually, the underlying and prime "building block" was the religious community, governing both communal life and granted for greater internal autonomy than a modern state could tolerate. Even within the three major religious communi- ties, however, smaller units of organization were the effective means of cohesion and control. Among Muslims, the religious brotherhoods seem to have served the function of social role avatars, but there is no evidence that these were exploited by the governing class in the way that professional corporations were. I shall return to these from the discussion above.

49 The functions outlined to this official and the means by which he was selected seem to have varied over the centuries, reflecting his shifting identification with the central political class, or with "his constituents." At the end of the Turkish era, he not only played a political role but a crucial economic one as well, that of supervising and exercising in virtue of his intimate knowledge of his quarter. Later, in the ninetieth century on, the shadow of birth and death had become mandatory, the shaykh al-harâk was made responsible for the collection of vital statistics in his quarter. This office con- tinued to exist beyond the medieval period, although police sub- chiefs generally assumed more and more of the duties formerly exercised by the shaykh al-harâk, until the rule was reduced to that of a social welfare agent, which was the role it still plays today. In which the office had fallen and in protest against quite unsavory practices. Again, the professional classes enjoyed local exemptions or privileges to which the inhabitants had turned for financial support, the Nagai régime finally did away with the office in 1926.

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few significant institutions which had been evolved to link the central elite with the masses, not as individuals but as numbers of politically "sanitized groups" in the system were the hârâk, which grouped persons on the basis of place of residence, and the jinâf (trade), which grouped persons on the basis of occupation.48 Although the reader is, by now, familiar with these institu- tions, it must still be demonstrated how these groupings were utilized in municipal administration.

By the time the French arrived, Cairo was divided for administrative purposes into 53 hârâks. Each of these was represented by a shaykh al-harâk, who was primarily responsible for the police functions in his district and who acted as an intermediary between the quarter’s resi- dents and the chief of police.49 During Mamluk times, the chief of police was actually the military governor of the city, responsible directly to the Sultan for the main- tenance of order. Under the Turks, the chief of police was responsible only to the Sultan for the public order, and for the protection of the King’s person. The latter, in turn, was theoretically superior but in ac- tual fact accountable not only to the 24 Bays who...
Each profession or trade in the city had its own organization, and the leaders of these organizations were influential in the local government. The most notable of these were the guilds, which were associations of artisans and merchants. The guilds had a significant role in controlling the economy and regulating the professions. They were also important in maintaining social order and providing social benefits to their members.

Despite the fact that the guilds were organized into local chapters, they were also part of a larger national network. This network was known as the "Commercial Guilds," which was composed of representatives from all of the guilds in the country. The Commercial Guilds were responsible for promoting trade and commerce, and they also acted as a sort of insurance for the guild members.

In addition to the guilds, there were also the "Craft Guilds," which were more localized organizations. These guilds were responsible for regulating the craft and trade within the city, and they were also responsible for maintaining the quality of the goods produced by their members.

The guilds played a crucial role in the economic development of the city, and they were also important in maintaining social order. They were able to maintain this balance because they were able to negotiate with the authorities and to ensure that their interests were protected.

The guilds also had a significant role in the political life of the city. They were able to influence the local government by providing financial support and by exerting pressure through their members.
of kibbutz in the towns and provinces of the Delta, while a third kibbutz was responsible for the autonomous municipalities of the interior.

Quite early, however, the enormous scope of the muktabah's potential functions came to be somewhat more narrowly defined. Rather than total morality, his chief concern became the protection of society as a whole in the economic sphere of life, i.e., the market place. (That this was not strictly correct is seen by the fact that the muktabah in Cairo was the overseer of the public baths, of the shops of the Vintners' Guild as well as of the "normal" trades and industries.) It was he who set the "just price," enforced accurate weights and measures, checked the scales of the "house of money," punished the adulteration of products and otherwise controlled their quality, adjudicated in economic disputes between one trade and another, oversaw the cleanliness of the market places and even, at one time, the upkeep of the mosques, the walls, the water system, and other public facilities. In Cairo he apparently also supervised roads and construction and could even order the demolition of dangerous structures. Furthermore, he was sometimes charged with collecting the professional taxes and with encouraging the attendance at the Friday prayers of workers in the awqaf.

In fulfilling these responsibilities he was assisted by various subordinates. It is true that individuals selected from each of the corporations themselves whose task it was to report to the muktabah on the state of affairs in the profession and on any problems being encountered by the corporation. Furthermore, judgment was sometimes obtained through his own quasi-police agents but also, especially in later Mamluk times, through the alhurtaf (municipal police) under the authority of the Haram of Cairo. During the Mamluk era, there was a marked tendency for the offices of the muktabah and the municipal authorities to merge to be tightly merged—if not in the hands of the same person then at least administratively. But by this time the office had become quite venal and was often a "tax farm" of a forced assessment to a person lacking the prerequisite religious qualities.

In Cairo this gradual subordination of the muktabah—originally a revered "man of the pen"—to the Mamluk "man of the treasurer" resulted in a steady decline in the muktabah's authority and the scope of his powers, in addition to a reduction in his prestige and importance. The growing size of the city, the increasing complexity of its economic operations, and the perhaps inevitable "specialization" which resulted from that growth in scale and complexity, operated to undermine the general jurisdiction of the muktabah and to force him to share his prerogatives with other "economic administrators." Additional inspection officers were added one by one, quite without logic or plan.

This process seems to have been speeded up under Ottoman rule, as the offices of the muktabah as well as the other inspectors were "farmed out" to Janissaries who, in return for a fixed fee to the treasury, collected what revenues they could through licensing, fines, and sales by various subordinates. Although such revenues were substantial, although still conspicuous by his dress and entourage and still a major ceremonial participant, had been disinvested of most of his powers and jurisdiction. He was responsible only for supervising the merchants of edible goods. Other officials, such as the shaykh of the baths (who supervised 24 trades, including the tentmakers and the street muggers), the shaykh of public spectacles (who supervised a variety of activities, from those of the tarawin, the makers of sugar and sweets, tobaccoconists, camel sellers and saddlers, etc.) had equal if not superior status to the muktabah.44

44 See Yossi, Histoire de l'organisation... in pays d'Islam, pp. 680-682, in this issue. In Byzantium includes, among the functions of the muktabah, the cleaning of streets, the protection of the public way against bullfights, incursions of the water supply, maintaining the sanitation of the walls and even, on occasion, regulating the mutual responsibilities of tenants and landlords—many of which were responsibilities of the qadi himself in Cairo. See his idem: Essays in the Growth of the Cultural Traditions. While these functions may have been performed by the city officials and in the very small towns and cities, there is no evidence that the muktabah of Mamluk Cairo had an office so broadly defined.

This fragmentation of the muktabah's coordinative role and the gradual devestment of his authority over municipal and governmental services led to the system which was never completely filled, if the widespread deterioration of these facilities can be taken as an indirect proof of ineffectiveness. Any "farming out" of municipal and government services led to the deterioration of facilities, due to the tendency of "farmers" to avoid reinvestment of capital in plant and maintenance, unless specifically required by law. This impetus to deterioration operated unchecked under Ottoman administration. Nevertheless, the system remained nominally in existence up to the middle of the nineteenth century. It was not until after the reign of Muhammad Ali that the position of muktabah in Cairo was abolished and his responsibilities assigned directly to the municipal police.

Two other city-wide offices might have filled the vacuum created by the muktabah's failure, one in the "secular" hierarchy, the other in the religious, but, as we shall see, these were also victims of the general disregard of overall welfare goals. The governor of the city of Cairo was the first, the chief qadi the second. To the Western scholar bound by his ethnocentric tendency to "read into" the past and into another culture the assumptions of his own world view, the official obviously in the right hand of the master of the castle, who took care of a whole was the Governor of Cairo. The temptation is to project upon this office the role and functions of a municipal mayor—but no inference could be far from reality. Despite his elegant title and his apparent city-wide responsibilities, in practice this official was a military figure whose chief responsibility was that of military governors everywhere, namely to ensure discipline in the garrison. He represented the coercive power of the ruler's vis-a-vis the residents, rather than the executive arm of an organized community.

There was, then, only one city-wide office which continued to exercise significant power over municipal affairs throughout Cairo's history, and this was the office of the chief qadi, later called the mufta in Ottoman administered Cairo. The judicial system supervised by the chief qadi (and since the time of al-Nasir ibn Qalawun shared jointly but not equally by the heads of the four schools of Islamic jurisprudence) and administered by his district subordinates45 tended to overlap remarkably with both the military and the principal religious authorities in the city. He was an important figure in the administration of the awqaf (pl. awqaf, mortmain) properties, i.e., literally all the public facilities of the city and much of its real estate. Ideally, then, the qadi should have been a key figure in municipal administration,46 had the judiciary system been above corruption, which it notoriously was not, this municipal institution might have been able to guard the community in a way that the more specialized agencies could not. In Cairo, at least, this proved not to be the case. In actual fact, the very power vested in the judiciary made it a highly attractive office to those with financial ambitions. Since the income of the qadi amounted to a sizeable sum of money, was imitated, supplemented of course by any sums profited to tithe the scales of justice, many individuals were willing to offer heavy bribes to gain an appointment. When the religious communities fell into disarray, the chief qadi became the arbitrator of disputes and was often removed to keep him away from the law. Under these conditions the city was in danger of losing its authority through fragmentation and venality, the qadi seems to have become by default the only official still charged with guarding the general public interest. Not that the chief qadi was without faults himself, quite the contrary. He was an important figure in the administration of the awqaf (pl. awqaf, mortmain) properties, i.e., literally all the public facilities of the city and much of its real estate. Ideally, then, the qadi should have been a key figure in municipal administration, had the judiciary system been above corruption, which it notoriously was not, this municipal institution might have been able to guard the community in a way that the more specialized agencies could not. In Cairo, at least, this proved not to be the case. In actual fact, the very power vested in the judiciary made it a highly attractive office to those with financial ambitions. Since the income of the qadi amounted to a sizeable sum of money, was imitated, supplemented of course by any sums profited to tithe the scales of justice, many individuals were willing to offer heavy bribes to gain an appointment. When the religious

45 Since this section was originally written, Roger LeTourneau published a book on Fez lucidly describing the municipal administration of Fez in Morocco under the Ottoman and later French administration. In his analysis he makes a number of points which parallel arguments developed here, particularly connecting the economy of the administrative apparatus with the life of the entire society. Although the narrative in this case is not as comprehensive as it is in Cairo, the general conclusions are the same. See G. Foucault, Histoire de l'administration municipale à Tunis, 1900-1911. The lesson is the same, but with less drama, and more subtly. See also Yossi, Histoire de l'organisation... in pays d'Islam, pp. 87-114, and Yossi, Histoire de l'organisation... in pays d'Islam, pp. 680-682, in this issue. In Byzantium includes, among the functions of the muktabah, the cleaning of streets, the protection of the public way against bullfights, incursions of the water supply, maintaining the sanitation of the walls and even, on occasion, regulating the mutual responsibilities of tenants and landlords—many of which were responsibilities of the qadi himself in Cairo. See his idem: Essays in the Growth of the Cultural Traditions. While these functions may have been performed by the city officials and in the very small towns and cities, there is no evidence that the muktabah of Mamluk Cairo had an office so broadly defined.

46 The place of the qadi in the administration of Islamic law has been dealt with extensively in the literature. The basic sources are: Sh. Shu'ayb, Mu'tamar. A.D. 1802; idem: An Introduction to Islamic Law. See also the remarks of Claude Cohen in his

The Thames...
The Islamic city hierarchy was strong, this potential threat could be repulsed, but sooner or later the institution succumbed to the influence of the urban core. The eventual sale of the position to the highest bidder could not escape notice, and thus the prestige of this religious office, which touched the life of the people perhaps more intimately than any other, was greatly reduced in their eyes by its crass exploitation.

Matters seem to have deteriorated during the centuries of Ottoman supremacy. By the end of the sixteenth century the chief qādis of Cairo had been stripped of his last residual power over the wawf, this lucrative administration being assigned to the Chief Eunuch of the Porte. Wherever parts of this control were wrested back they went to the powerful Mamluks rather than reverting to the qādis. As the Mamluks regained their former privileges, the qādis became more and more of a figurehead, a powerless representative of the Porte. Toward the end of the premodern epoch the Turks sent out a new one from Constantinople each year; his sole aim became the rapid accumulation of wealth, while the courts were administered by local civil servants.46

Thus we have the second political heritage from the medieval Ottoman city—if not municipal anarchy at least a low level of corporate organization. There was no single administrative structure which combined police force, religious authority, and the judiciary into a single municipal government, and thus these three elements tended to remain fragmented and uncoordinated in Cairo. Even if there had existed a concept of the public good, it was regarded by the government as a means to an end which served the interests of the provincial government. The government was busy with other matters and had no time to worry about the administration of local affairs. Thus, it was not until the eighteenth century that a succession of tyrannical governors—each seeking to accumulate wealth and power for himself—restored order and settled the power struggle between the various elements of society. The qādis, however, remained a figurehead, a powerless representative of the Porte, and his administration was left to the hands of the local administrators. The qādis was no longer a powerful figure, but a mere figurehead, a symbolic figure, with no real power over the city's administration.

The Muslim city was governed by a police force that was divided into two main groups: the regular police, which was responsible for maintaining order and enforcing the law, and the ad hoc police, which was responsible for dealing with specific problems as they arose. The regular police were paid by the government, while the ad hoc police were paid by the individuals who hired them. The qādis was responsible for appointing the heads of the police force, but he had little control over their actions. He was simply a symbol of the government's authority, and his power was limited to the extent of the government's power.

The qādis was also responsible for the maintenance of the city's public buildings, such as the mosques and the baths. He was responsible for the repair of these buildings and for the collection of taxes to pay for their maintenance. He was also responsible for the enforcement of the law, and he was able to collect fines from those who violated the law.

The qādis was also responsible for the distribution of the city's wealth, and he was able to collect taxes from the wealthy to support the poor. He was also responsible for the maintenance of the city's public works, such as the water system and the roads. He was able to collect taxes from the wealthy to pay for these works.

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THE ISLAMIC CITY

and buildings was in the hands of a religious foundation. Management services were performed by an administrator who, if he were one of the beneficiaries of the property, tended to withdraw maximum returns from the property without transmitting all the profits to the beneficiaries. In either case, the administrator was tempted to mulct the property. The original requirement, that maintenance and reinvestment take priority over the distribution of profits, was virtually impossible to enforce. Therefore, "dead hand" ownership could not be depended upon to supply the reinvestment necessary for property upkeep or improvement.

Nor could the tenant be expected to provide what the owner did not. Originally waqf property could be rented only for one to three years at a time. Any improvements the tenant added to his leased premises became part of the original waqf. Here certainly was no incentive for investment! It was not until the sixteenth century that, in an effort to arouse the interest of tenants in the maintenance and improvement of waqf property, it became possible to obtain a lease in perpetuity. Since these leases could be bought and sold, this reform tended in practice to return dead land to the market place where it was once again sensitive to economic incentives for development and change.

We have noted above some of the factors that encouraged the creation of waqf and some of the unanticipated failures of this system, but we can have no idea of how pervasive this institution was without recourse to some actual statistics on land and property ownership in Egypt. Maqrizi tells us that in 1339 some 13,000 feddans (a feddan is approximately an acre) of land were held in public waqf, the proceeds of which were to be used for the upkeep of mosques and other religious institutions. These were directly supervised by the Sultan's personal secretary (the davuldar al-Sul tan). In addition, there were the towns lands in Mṣr and al-Qahirah, the proceeds from which were devoted to the upkeep of Mecca and Madinah as well as for charitable purposes within the city itself. These were controlled by the qadi and supervised by special divans in each section of the city. Finally, there were the innumerable family endowments. Combined, they accounted for the overwhelming majority of the real estate of Mṣr and al-Qahirah. Maqrizi, even then, noted with alarm the corruption and mismanagement which led to a deteriora-

tion in all forms of waqf property. Even as late as the early twelfth century in Egypt, despite confiscations of unclearly titled agricultural lands by Muhammad AlI, about one quarter of the cultivable land of Egypt was held as waqf, and much of the property in the older portion of Cairo (untouched by Muhammad AlI's reforms) came under the administration of the Ministry of Waqf.

What were the implications of this inheritance from the medieval period, whereby a large proportion of all real property in Cairo was either government-owned or held by religious foundations of various kinds? The major unanticipated consequence has already been indicated: the accelerated rate of property depreciation which, despite reforms, persisted in causing blight in the city. Every visitor to Cairo during the late medieval period commented on the large sections of that community which showed signs of former dense occupancy but which were by then relatively deserted, the tumble-down structures being occupied by occasional squatters. It will be recalled that this was particularly true in the northeastern section just within the walls, although the phenomenon was by no means confined to that section. We are now in a better position to understand this condition and must ascribe a major responsibility for it to the institution of waqf.

Let us take an hypothetical example to trace the operation of the process. A tenement dwelling was made into waqf, either public or family. A tenant or group of tenants leased and occupied the building, but neither "owner," administrator, nor tenant felt responsible for the condition of the structure. Finally, the building, typically constructed of unstabilized mudbrick (the universal Egyptian building material), was unable to withstand further abuse and toppled. The tenant was free to move elsewhere. The administrator of the property had of course failed to set aside a sum for depreciation and could not be expected to supply out of his own pocket the money necessary to recreate the value of the property. It was simpler for him to seek a new niece. In times of prosperity, when demand for city land was high and the population expanding, this land might revert to private ownership (since its value had dissipated) and be redeveloped. However, in times of depression or a static or declining population base, the property might simply remain deserted until a squatter established his rights by moving into the debris.

Thus a system which could, with later reforms, cope with the problem of urban renewal during prosperous days, was totally incapable of sustaining property conditions during eras of contraction, i.e., during the Turkish era. The institution of waqf, which had begun so auspiciously and which promised so reliable a means for supporting municipal facilities and services, had deteriorated by the late medieval and Turkish periods into a self-defeating agency which merely accelerated the deterioration of the city.

These, then, were the three chief handicaps of the political order which Cairo, about to enter the modern era, inherited together with her physical ecology and social organization. The discrete and alien elite was to remain with her far into the modern era. While the composition of the elite changed periodically, it remained through the twentieth century a pressing problem which prevented the emergence of a broad-based and responsible form of municipal government. It served to fragment the city and the society and to act as a focus of hostility for growing nationalistic sentiments. Anarchy in municipal administration, another heritage, was attacked earliest and most successfully. And yet, even in this area, despite an increasing indigenization of the process of administration, home rule proved virtually unobtainable. It was not until 1956 that the government of Cairo was truly separated from national administration, and even today, it lacks many of the attributes and powers normally considered part of "home rule."

The diffuse control of lands officially part of the waqf of Cairo, the widespread corruption and inadequate regulation of the activities of waqf administrators, and the disastrous effects such a system had on the maintenance of urban property were early recognized as evils needing correction. Reforms, however, came late and gradually. Attempts were made to deal, piece-meal, with specific abuses and inefficiencies, but it was not until the middle of the nineteenth century that a more concerted approach was attempted. And not until the complete abolition of the waqf outside and the concentration of all waqf funds under a central ministry by the revolutionary reforms of 1952 was a true solution found to the problem that had plagued Cairo's development throughout the medieval period.

Each of these developments will be considered in greater detail in the discussion of modern Cairo, a city that came into being after 1798.
PART II. THE MODERN ERA:
A TALE OF TWO CITIES
Cleansing the Augean Stables
1800-1848

Wisma it is conventional for historians to date Egypt's entry into the modern era from the French Expedition or a few years later at the accession of Muhammad 'Ali, neither of which is strictly correct. In reality, the discontinuity between a medieval past and a modern future had already begun before the appearance of French soldiers, and the movement toward "modernization" or "Westernization" was not truly under way until the reigns of Muhammad 'Ali's successors during the second half of the century.

This was particularly true in the case of Cairo which changed little in tangible attributes during the first half of the nineteenth century. Modern Cairo is only one hundred years old and came into being after the death of Muhammad 'Ali. The outlines of Cairo and her two port suburbs were roughly the same in 1848 as they had been in 1798. Nor had the population experienced an appreciable net change during those fifty years. But

1 Gibb and Bowen have amusingly recognized that "many of the tendencies and factors . . . in Mehmed 'Ali's administration of Egypt—the economic exploitation, the military reorganization, the introduction of European technical experts, the attempt to shake off Ottoman insecurity and to extend Egyptian control over the neighbouring provinces—are already visible in Egypt and Syria during the last decades of the eighteenth century." See Islamic Society and the West, Volume 1, Part 2 (Oxford University Press, London: 1959), p. 237.

2 With respect to Cairo, Muhammad 'Ali's grandson, the Khedive Isma'il (1863-1879), must be credited with transforming the city.

3 Compare Map XI showing Cairo in 1798 with Map XIII of the city in 1861, below.

4 This cannot be ascertained exactly because few demographic records were kept during this period. However, if one accepts the French estimate of between 750,000 and 725,000 persons for Cairo alone in 1798, and if one accepts the figures variously presented from Muhammad 'Ali's census of 1836 of between 355,000 and 375,000 for the city, one must conclude that, whatever the fluctuations in the interim, the net change was minimal. The figure of 355,000 is given by Edward Lane in Appendix F of the third edition of his Manners and Customs (1; J. M. Dent and Co., London: 1838), p. 284, and is identified as having been taken from the census of 1827-1828. Lane believed the figure to be an underestimate. The official report of the Muhammad 'Ali census, as of December 14, 1846, has been reproduced in the Egyptian Ministry of the Interior, Bureau of Statistics, Recueil statistique général de l'Egypte, années 1873, 1874 (2), 1875, 1876, 1877 (Imprimerie de l'Etat-Major Général Égyptien, Cairo: 1879), p. 7, where the population of Cairo is given as 296,790, and that of the entire country as 4,650,244. Fluctuations in the intervening years appear to have been rather extreme. During the earliest period of Muhammad 'Ali's reign, the general insecurity undoubtedly depressed the urban population of the country. Félix Mengin, in his Histoire de l'Egypte sous le gouvernement de Mohammed-ali (A. Bertrand, Paris: 1873), estimated the population of Cairo alone (excluding Misr al-Qudimah and Bulaq) in 1833 at about 200,000. It probably remained fairly constant until about 1824, when increased stability and a flight from the farms pushed the population up. In the first edition of Edward Lane, An Account of the Manners and Customs of the Modern Egyptians, Written in Egypt During the Years 1835-1836, and 1839, partly from notes made . . . in the years 1829, 1830, 1831, and 1832 (Charles Knight and Co., London: 1836), i. 26, the author states that by about 1834 the population had risen to 240,000 for Cairo alone, but that this increase had taken place within only the preceding few years. In 1849, however, Cairo suffered from a severe plague (the last catastrophic one) which, according to official estimates, reduced her population by at least a third. This is noted by Lane in a footnote to his manuscript added to p. 46 between 1835 when the manuscript was completed and 1836 when it went to press. Again, massive migration from the rural areas seems to have repaired this loss shortl, although it is unlikely that the population ever reached the optimistic figure suggested by Clovis Bey in 1842. See Clovis Bey, Aperçu général sur l'Egypte (Fortin, Marin et Cie., Paris: 1840), 1, 184, where he estimates the numbers in Cairo at 309,000 and then, using the assumption of an average occupation of 20 persons per dwelling, reaches a total population for Cairo of 300,000. It is generally acknowledged that Clovis Bey's work heavily skewed the list, being more a paean to his patron, Muhammad 'Ali, than an objective or cautious evaluation. Given a government preoccupied with inflating the population, it is logical to see this optimism incorporated into Clovis Bey's estimate.

How are we to weigh these various attempts to establish Cairo's population? Logic points to the approximate figures of about 250,000 as an upper limit and 200,000 as a minimum during periods of population decrease. A substantial growth of Cairo's population would have been unlikely during the reign of Muhammad 'Ali, since, at least during the first half of his rule, the total population of the country did decline, a fact that has not been debated as much as Cairo's population figure. Some population estimates are given in A. E. Crowlehy, "A Century of Economic Development, 1837-1937," in L'Egypte Contemporaine (February-March 1938), pp. 133-135.
The Modern Era

soil for only three brief years, while the British occupied and administered the country for forty. Yet twentieth-century Cairo, where it deviates from the Oriental genre, is even today in the British mold. What impresses the visitor to modern sections of the city is its resemblance—albeit imperfect and perhaps shabby—to Paris. As recently as a dozen years ago the French language was prominent in advertisements on billboards, and even in conversation, although this has since declined rapidly. Commercial enterprises are set up and run on the French pattern. However, one can scarcely attribute these pervasive signs of French influence to the earliest period of contact. These indirect indications of France must be distinguished clearly from the more limited direct effects of the Napoleonic occupation which were, in the long run, minimal.

The French occupation, which destroyed or severely damaged large sections of Cairo, also imposed a number of "improvements" on the city. Scholars of Cairo's history have made much of these positive effects, but what has been overlooked, unfortunately, is their very short-lived existence. Of all the reforms instituted by the French, only two were to persist beyond the actual physical presence of their troops. One was the reorganization of Cairo's administrative districts. The French, by judiciously combining the 53 existing hārāt of Cairo, created 8 large arrondissements, each known as a tambour (Arabic tamboura). These large divisions established by the French more than a century and a half ago have been retained, with certain boundary modifications, in the present administrative organization of the city. It does not mean that they are always supplemented by the agām (districts) of the newer quarters of Cairo.

The second impact of the French occupation was on the street pattern of the city. For purely military reasons the French began to regularize a number of important communicating streets in the city, since European armies could not cope with the cumbersome, chaotic arrays of Cairo's maze-like system. In this process, al-Fajālih Street was cleared of obstructions, to allow the French reader access to the strategically important gates along the northern walls of the city. (Cairo al-Naqi and Bib al-Faruk). The ancient pathway which connected the Fatimids and Birkit al-Rabé sections.

The six divisions introduced by the French were: al-Ashâbiyah, Bib al-Shai'iyah, al-Jamāliyah, al-Darb al-Abār, al-Khalīfah, al-Miṣrī, al-Naqi, and Bib al-Faruk. Along these eight main streets, the entire length of the northern wall, had become completely concretized. (It is now impossible for vehicles to cross.)2 Bib Jīṣafījah (now called Shāhīd Kamāl Sidqi Pasha on modern maps) was a newer thoroughfare just outside the wall. It is now the only street capable of carrying heavy traffic between the northern portion of the medieval city and the major road and bus terminal at Bib al-Hadīl, and in this indispensable element in the street net- work of today's city.

3 This was the beginning of the famous Miṣrī Street, destined to become the first Westernized commercial zone of Cairo in the latter half of the nineteenth century. Several other French cities, like Phalère and other Oriental merchants established non-Oriental shops in Cairo. It has since lost its upper-class status. Miṣrī Street now caters to the native demand for domestic manufactured goods of low and moderate quality.

4 French innovations have been enumerated by Jeanne in "Description de la ville et de la citadelle du Caire," Description de l'Egypte: État moderne (L'Impératrice Royale, Paris 1822), p. 287; by Al-Mushrikh in al-Khitāb, major district still run under the name, al-Khitāb in the census of 1923. By 1927, in addition to the original aristocrats, Mise al-Qalīn, Miṣrī, Bib al-Shai'iyah, and Bib al-Faruk, added, as well as non-Biblians, during the late nineteenth and early twentieth centuries.

5 This street runs parallel to the older Bib al-Bahr Road over Azbikāliyah to the medieval city at the Mākī Bridge over the Khilīyah (mentioned by Maqrīzī) was similarly widened and straightened to permit the maneuvering of troops. The old road between Azbikāliyah and Biyyū was elevated and stabilised, again for purely tactical pur- poses. These streets have since become major thorough- fares of the city, indispensable to the present circulation system of commercial Cairo.

The remaining of the Egyptian reforms were obliterated directly after their departure. However, they evidently left germinitating seeds, since one reform after the other was undertaken in the decades that followed. So it was with the French attempts to clean Cairo's streets, to intro- duced minimal sanitation measures, and to require the registration of births and deaths. Street cleaning was not undertaken again until three decades later; refuse remo- val was reintroduced at that same time, and the keep- ing of accurate vital statistics had to wait even longer for reactivation. French regulations which had required householders to keep latrines burning throughout the night to illuminate the treacherous streets of Cairo did not outlast their presence. As soon as the French with- drew, the streets were again plunged into darkness. With in a decade or two, however, they had relapsed to some extent, since Muhammad Ali required pedestrians to carry their own lanterns when venturing abroad at night. Municipal gaslighting of public thoroughfares was not undertaken until the third quarter of the century.

For ease of control the French commandant had also ordered the removal of all internal fortifications and gates in the numerous darūt and hārāt of the city. And yet, even during the occupation, many of these gates had evidently been overlooked or rebuilt, since they were used by the rebellious townsmen in the 1800 uprising. After the French withdrew, occupants of the various darūt, hārāt, and other small enclaves once again in recollecting their gates. European visitors in the early nine- teenth century remarked on their ubiquity and, as late as the 1870s, they were still occasioning comment.6 Again, during a minor plague which made its unwelcome appearance during the French occupation, burials within the built-up section of Cairo were prohibited. From this many have assumed that intramural interments never again took place in Cairo. And yet we later learn, to our surprise, that the interior cemeteries at Azbikāliyah and Munsirīrah were still being used for burials as late as 1845. It was only when Muhammad Ali acquired this land in prepara- tion for his planned extension connecting Azbikāliyah with the Citadel that these cemeteries were closed, the area razed, and the bones removed to exterior cemeteries.

Thus, of the direct reforms introduced to Cairo by the French, few had any permanent effect, apart from sug- gesting procedures which were later followed. The most important effect—albeit unintended—of the French campaign was that it brought to Egypt's all the founder of the hereditary line which was to govern Egypt during a critical phase of her modernization, from 1805 until the Revolution of 1952. Cairo's development during the nineteenth century was characterized by that dynasty and, in particular, from its two major figures: Muhammad Ali (1805-1848), the founder; and Isma'īl (1865-1879), the builder or the profligate, depending upon one's prejudices.

Just as Sālīh al-Dīn had been brought to Egypt, almost by chance, by the Syrian force which expelled the cru- saders, so Muhammad Ali had come, equally capri- ciously, as lieutenant commander of a small corps of Albanians in the Turkish army which helped repel the French.7 In both instances, Cairo's development was

6 As early as 1814 their large number is noted. See Henry Louis Labouchère, Athens, Jerusalem, and Cyprus in the Year 1834 (Rockwell and Martin, London: 1838) They are also described by a visitor a few years later, See Edward de Moncrieff, Travels in Egypt during 1835 and 1836 (Volume 5 of the New Voyages and Travels series) (Phillips and Co, Lon- don: 1832), p. 9. As late as 1885, John Wilkinson, in his A Hand- book for Travellers in Egypt (Murrays, London: Revised edn. of 1867), mentions these gates in every city except the tour of the new.

7 For the French order prohibiting intramural interment, see Muḥammad ʿAlī, al-Kitāb, i, 61, and Clerget, Le Caire, i, 190. However, in his discussion of the history of the Muḥammad ʿAlī Boulevard (now Shāhīd al-Qalīf), Muḥammad noted that the Azbikāliyah and Munsirīrah cemeteries were still used for burials up until the terminus of the modern Cairo-Egyptian railway in 1867.

8 For an account of Muhammad Ali's life and activities, based on archival research, see Henry Dodwell, The Founder of Modern

Cleansing the Augean Stables

shape, so to speak, by military command. Of the two leaders, however, Sālīh al-Dīn arrived at the more pro- pitious moment. Though he could not in one stroke get rid of the plague of being a world metropolis, Muhammad ʿAlī inherited an unattractive and senile provincial capital.

The interregnum years following Ottoman reoccu- pation were dark ones for the townsmen, who had been pillaged by the French soldiers, were victimized doubly when at the mercy of the disciplined and rivalrous factions of the Turkish army. Anarchy was even greater outside the walls, with villages beset by bedouins and Mamluks alike. This anarchy seems to have extended to the very gates of Cairo, since at one point bedouins even controlled the millet-jong road between Biyyū and the city. Several years of struggle over booty and power in Cairo had made the Albanians a leading faction. By then, Muhammad ʿAlī's astuteness (and the death of his competitor) had catapulted him to the head of this unruly but powerful group. Finally, the Porte, to restore order and placate the Cairoites, recognized the de facto control of the Albanians by appointing Muhammad ʿAlī as Pasha.

But it was a pitiful prize. Muhammad ʿAlī had been elevated to the Pashalik of a country but had become thereby the reluctant heir to its host of woes. The prob- lems were both political and physical. The country itself was divided, with the Mamluks in control of Upper Egypt and another Turkish faction holding Alexandria. Even within Cairo there was a precarious balance and the threat of renewed Mamluk strength. Law and order, never secure, had become virtually nonexistent during the decades of shifting elite power. Within the country- side this was evident in the frantic raids on settled communities and the total disruption of lines of communication between cities. Within Cairo to venture out at night was to court disaster, or worse. A becomes accepted custom for Jamiyahs and Mamluks, then French, and finally the Albanian successors, to help themselves openly from the shops of Cairo, sometimes even repealing an accommodating merchant with a gru- tlous behavior. Even. Given this situation, it was hardly surpris- ing that Muhammad ʿAlī's first efforts should have been directed toward the consolidation of his position in Cairo and the unification of the remainder of the country under his rule. The first decade or more of his reign was devoted almost exclusively to this difficult but essential task.

The physical and economic problems of the country and Cairo were not pressing but, they could be ap- proached only after political stability had been achieved.

Three centuries of neglect had led to the gradual sliding of Egypt: A Study of Muhammad 'Abd (Cambridge University Press, Cambridge: 1931). For a brief account of his rise to power, see pp. 9-32.
up of the canal system, so essential for irrigating agricultural lands. In the process, at least one-third of the land had gone out of cultivation. To restore the productivity of the land, it was first necessary to clean, excavate, and extend the irrigation canals.

The physical neglect of the countryside was more than matched by the physical deterioration of the capital city. For three centuries she had been falling imperceptibly into ruin. House after house in the older quarters had crumbled and been neither cleared nor rebuilt. For centuries rubbish had been disposed of in the most primitive manner: it had been dumped into the Khali (long since dry for all but a few months during high flood) or thrown over the city walls. This process had turned the once-charming canal into a fetid stream or, during the dry season, into an off-odor-laden offense to eye and nose. This process had also resulted in the accretion of an almost continuous band of high mounds which virtually surrounded the city on all sides, breeding flies, rats, and disease. Interspersed among these unnatural hills, particularly on the western extremity, were lowlands, swamps, and periodic ponds which harbored the mosquitoes and other insects whose contribution to Cairo's recurring epidemics still went unrecognized. Until these areas could be cleared and leveled, there was no real hope of tackling the serious health problems of the city or of making room for future expansion.

43. A masbah of the early 19th century

The situation on the periphery, however, was no worse than that in the city's center. Within the city, street corners got progressively dirtier, and the streets silted, unswept, and unwatered (even during Maqrizi's time water had been sprinkled on the streets to keep down the dust), but they were also becoming increasingly impassable. Many structures had ground-level appendages which jutted out into the narrow lanes. In addition, each tiny cubicle of a shop had its own massive stone bench (masbah) extending out into the roadway in front, on which customers and tradesmen sat to talk and smoke, and where the proprietor performed his ritual prayers. So congested were the streets and alleys that often only one donkey could proceed down them at a time, and a loaded cam had to choose its route with care. The houses were as unkempt as the public ways and the mosques and other public facilities—the zabbī (drinking fountain), baths, and schools—had inevitably deteriorated. Waqf revenues had for too long been diverted into the pockets of their administrators. Industry and trade, the economic bases of the city for more than six centuries, had stagnated and declined; they were ill-adapted, in addition, to the needs of a modern age. Trade with Europe was minimal and a knowledge of Western technological advances utterly lacking.

This was hardly an enviable inheritance for the ambitious founder of a modern state. The stable was filthy; no new growth could take place until the Heraclean task of cleansing had been carried out. It was to Muhammad 'Ali that this task fell.

There is no need to describe here the vast program of reforms—some wise, some foolish, most uncoordinated, in instituted by the Albanian ruler, but a few might be mentioned because, for several decades, they took priority over improvements in Cairo. First came the codification of power, culminating in the destruction of the Mamluks who, after six centuries, were finally divested of their power. Then came a confiscation of illegally constituted agricultural waqf lands and eventually a monopolization of all cultivable land. To bring this land back into

44. In 1811, six hundred chief Mamluks were invited to participate in the procession organized to celebrate the appointment of Muhammad 'Ali's young son, Tulin, as head of the army being sent against the Wahhabis in Arabia. As the procession filed slowly out one of the Cleopatra's Needle—the highest point between the upper and lower gates of the narrow passage way and, by prearranged plan, slaughtered by Muhammad 'Ali's soldiers. Those still remaining in Upper Egypt were relentlessly pursued until the surviving remnant took refuge in Ethiopia. As much of the royal land of a family so long grazed not as freehold property but as military fief. Gradually, however, these had been converted (with the authorities looking the other way) to private property and later family property and estate holdings. In 1868 Muhammad 'Ali ordered a checking of titles and added to the crown lands all properties of dubious title. By 1884

productivity—and later to devote some of it to the new crop, long staple cotton, that was to play so vital a role in his imperial imagination. During the Egyptian military's conquest of Egypt—virtually the irrigation system of the Egyptian Delta had to be rebuilt. Thousands of villagers were conscripted to perform this back-breaking work, and between 1842 and 1843 hundreds of canals were made functional. Not the least important of the canals constructed was the Mahmūdīyah navigation canal, which permitted water-borne traffic to ply between Alexandria and Būlāq with only one barrier, thus making possible the economic development of such forces happened to be concentrated in the capital; a spotty development of certain outlying suburbs of Cairo, as a by-product of Muhammad 'Ali's predilection for bureaucratic hygiene; and a rather intensive development of Būlāq, chiefly again as a by-product of his industrial and educational ambitions.

It was only during the last two decades of his rule that Cairo began to receive direct attention and that the amalgamation of her difficulties became an end in itself. In these later reforms the hand of Muhammad 'Ali's adopted son and brief successor, Bīrāhm Pasha, is seen with increasing frequency. Although history is mute on this point, credit for the conception of many of these projects, as well as their execution, perhaps should go to Bīrāhm rather than his father.

During these later decades, changes in the city were directed toward cleaning up the abuses which had rendered the older city less and less habitable. Among the changes introduced in this era were the leveling of the rubbish mounds on the western edge of the city; the filling in of the ponds, depressions, and swamps; and, in general, the preparation of land for the future expansion of the city; sweeping, dusting, painting, and otherwise "window-dressing" the older city; and, at the very end, the first tentative start in opening up the circulation system of the city in preparation for a revolution in transport.

During the first few decades of Muhammad 'Ali's rule, the most pressing urban as well as national problem was the need to restore order and security. Consequently, one of the first reforms affecting the city was the suppression of its disorderly troops and the constitution of a strong, well-disciplined, quasi-military police force. All the older gates to the various streets and quarters had been replaced and private watchmen once again stood guard over their entrances; this had been the security

Cleansing the Augean Stables down in the history of Cairo in the rather prosaic role of housekeeper. Cairo and its problems never seemed to have the same magnitude or potential as his idea of empire and the decades of his rule changes in the city were minimal and were more the by-product of other activities than ends in themselves. The chief changes which occurred during this period were a reorganization of governmental administration, in which Cairo profited but no more than any other part of the country; a restoration of peace and order following the reorganization of police and military forces in which Cairo profited primarily because the efforts happened to be concentrated in the capital; a spotty development of certain outlying suburbs of Cairo, as a by-product of Muhammad 'Ali's predilection for bureaucratic hygiene; and a rather intensive development of Būlāq, chiefly again as a by-product of his industrial and educational ambitions.
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system from time immemorial. Muhammad 'Ali supple-
mented this system by assigning his Albanians, and later
joint military and civilian patrols, to make nightly rounds
throughout the city to protect the populace. In addition,
all pedestrians were required by law to carry their own
lanterns after dark to light the streets and facilitate the
work of the patrols. Police posts were established in all
quarters of the city. The uniformed police were assisted
by a roving contingent of plain-clothes police (perhaps
identified by a small badge, although reports vary) who
were posted during the daytime throughout the markets,
coffee houses, and other public places to help keep the
peace.18

Until about 1830 the office of chief of police was held
by the governor (wāli) and the ḍāhti jointly, but shortly
thereafter authority was concentrated in the ḍāhti alone
who, from his central office in the Frankish quarter, dis-
patched summary justice wherever possible, referring only
the more difficult and serious cases to the Pasha's court
at the Citadel, where they were usually handled by
Muhammad 'Ali's deputy. After this, the office of
wāli became less and less important and was eventually
reduced to a merely honorific position. The role of the

18 As noted earlier, the lighting regulation was already in force
in 1812 and continued without change throughout the reign of
Muhammad 'Ali. For the period before 1836, see Lane, Manners
and Customs (3rd ed.), pp. 123-127; for its continuation until
1844, see Chater, Arabic Government and Egypt, i, 181; and until
1847, John Wilkinson, A Handbook for Travellers in Egypt
(Being a New Edition, Corrected and Condensed, of "Modern

It is impossible to determine exactly when the police reform
was instituted. Lane, writing in 1839 but basing his material on a
former trip in the 1820s, noted the existence of this new police
force. See Manners and Customs (3rd ed.), pp. 114, 122-123.
Later confirmation is found in Chater, op. cit., ii, 188.

44. Muhammad 'Ali's palace in Shubra

45. The fashionable carriage-way of Shari' Shubra ca. 1860

46. Tree-lined Shubra Street at the turn of the century

47. Shari' Shubra just after installation of tramway tracks in 1903

48. The indispensable traffic artery of Shari' Shubra today

qāḍī, once a principal municipal officer in the Middle
Ages, had also been reduced by this time to an absolute
minimum. He was appointed for a year's term from
Constantinople and, since the price of his office was high,
had to recoup his investment in hane. Having neither
continuity in office nor sufficient familiarity with the
language, laws, or customs of the people, he could scarcely
perform his essential role of adjudicating lawsuits, settling
inquiries and other family disputes. In effect, the office
was administered by his local and permanent assistant.19

In addition to these changes in affairs of justice, a
number of other administrative reforms were made early
in Muhammad 'Ali's rule to facilitate more efficient man-
agement of the city and country.20 But, as in the past, the
administration of Cairo was not really separate from the
administration of Egypt. Both came directly under the
authority of the Pasha, now assisted by the various coun-
cils and ministries he established and by numerous staff
officers to whom he delegated limited authority. Although
Cairo was given, together with Rosetta and Damietta, the
special status of muhādiq (governorate) and was there-
fore administratively independent of the provincial chiefs,
she was still a long way from home rule. She has enjoyed
this status of governorate ever since, although only re-
cently has it meant any degree of autonomy.

As noted earlier, the few physical changes in Cairo
which were made during this early period were each
more by-products of other ends than outgrowths of direct
concern with the city. Like Sa'bīl al-Dīn before him,
dental "planning" of Muhammad 'Ali, since Shirî Shu- 
brâ, as this road is still called, remains the major access route to the heavily populated district of Shubra and Rawd al-Faraj, twentieth-century additions to the metropolis.

As Salâh al-Dîn had done, Muhammad 'Ali turned his 
attention to the Citadel, which again became the site of intensive construction. Large sections were ruthlessly 
cleared of older monuments to make room first for 
Muhammad 'Ali's new palace and later for his mosque, 
whose dome and twin minarets still dominate the skyline of Cairo. Walls and fortifications were reconstructed in 
the European manner and, when an explosion of a pow- 
er magazine destroyed a large segment of the old walls 
in 1824, they were promptly replaced by ones of Western 
design.

Other royal palaces were scattered throughout the en-
virons of the city. The western edge of Azhakhîyâ and to 
a lesser extent the open area to its south, Bûlibîq, and the 
land intervening between the port and Shubra were pre-
ferred sites. Although none of these palaces seems to have 
been located with any idea of determining or influencing 
future urban development, each later constituted a nu-

cleon for a future residential zone of Cairo.

Only in the development of Bûlibîq does there seem to 
have been any conscious plan. Every previous ruler of 
Cairo had his own favorite section which therefore tended to 
absorb a disproportionate share of urban growth. 
Salâh, al-Dîn had the Citadel which pulled the city 
southward; Baybars had preferred the Husaynîyah sec-

tion which stretched the city northward; al-Nâṣir ibn Qâsim had favored the western bank of the Khali细细 
which led to that area's growth. Muhammad 'Ali's clear 
preference was for the extreme northwest corner of the 
city, demonstrated by his palace at Shubra and even more 
by his policies in Bûlibîq, which was transformed during 
his era.

In 1824 Bûlibîq still bore the marks of French destruc-
tion; two years later recovery was underway, aided by the 
presence of the Pasha's naval arsenal and docks, renewed 
traffic, and a small construction boom.28 Within the en-

28 Lüthy, Narrative of a Journey in Egypt, p. 34, described the destruction in Bûlibîq still evident in 1823, but note the contrast between Bûlibîq and Cairo in the comments of Henry Light just two years later. With a glance away from its (Caireans') popula-
tion and adds to its ruins; nothing is required that grows old; but ... White Cairo appears neglected, Bedæa, its port, increases. 
New houses are built by merchants, ... some of them ... large ... it contains the naval arsenal and docks of the Port of Bûlibîq. Traveling Light, Traveling Dark. The con-
tinued decay in al-Qahirah is described by Count de Forbin, who 
visited Egypt in 1821-1822. See his Travels in Egypt, Being a 
Compendium of the Travels in the Holy Land, in 1821-22 (Vols. 1-2 of the New Voyages and Travels series) (Sir Richard 

suizing decade Bûtîq became the site for many of the new 
industrial establishments set up by Muhammad 'Ali as 
part of his plan to modernize the economy. In 1824 a 
wood factory was established in Bûtîq, and other textile 
factories for cotton, linen, and lighter weight woofs fol-

dowed. By 1826 Bûtîq proudly contained the first iron 
foundry of Egypt. That year also marked the laying of the 
foundation stone for the National Press, its operation by 
1822. To this nucleus were added improved naval instal-
lations and enlarged facilities for riverboat construction.

Spinning mills went up in Saâbihîyâ on the northern 
fringe of Bûtîq, and still farther north, between Bûtîq 
and Shubra, an enormous bleaching plant was built to 
service the various textile factories. Bûtîq was, in ad-

29 Estimated of Muhammad 'Ali's industrial establishments 
can be found in Chol-Bey, Agencie générale de l'Egypte, 3, 113 and 
9, 289-294; in Clerget, Le Caire, 3, 195-197; and in the Master 
88-89.

50 The Polytechnic Institute, see J. Heyworth-Dunne, An 
Introduction to the History of Education in Modern Egypt 
(Louis, London: 1932), pp. 108, 124-125; and also Chol-Bey, 
Agencie générale de l'Egypte, 3, 27. For a firsthand account of it 
and particularly its "strange" library, see M. Sherer, Scenes and 
Impressions of Egypt and in its Italy (London, Hurst et al., Lon-
ton: 1852), pp. 189-206. On the other schools, see Heyworth-
Dunne, 92-93, p. 154.

30 Wilkinson, A Handbook for Travellers in Egypt (1824 edn.), 
p. 144; St. John, Egypt and Mohammed Alî, 1, 114; D. Millard, 
Egypt, a Modern History, 1801-1854 (London: Longmans, Green, 
1854), pp. 3 and 149; E. S. Forbin, Travels in Egypt and the Holy Land, 
During 1842-43 (Printed by E. Shepard, New York [Rockefeller], 
1843), p. 21; Edward Lane and his sister, Sophia Poole, occupied 
one such house in 1843, until the "Effendi" forest there re-

31 H. C. Maxwell, The Englishwoman in Egypt; Letters from 
Cairo (Sieben, Philadelphia: 1845).

50. Small-scale industrial workshops in Bûtîq today

a pleasant, bucolic suburb. This conflict was resolved 
early essentially during the Muhammad 'Ali period. One 
glance at current Bûtîq suffices to indicate the outcome 
of this competition. Today Bûtîq is a densely settled in-
digenous quarter filled with moderate-scale workshops 
and warehouses and populated by a heterogeneous work-
ing class drawn from all parts of Egypt. To the north of 
this district now stretches a fan-shaped sector of the city in 
which is concentrated the bulk of the city's newer industrial 
plants. Muhammad 'Ali's premature attempts to 
industrialize Egypt may have ended in abnegation but 
they established Bûtîq unequivocally as a future indus-
trial zone of Cairo.

The capital itself, which had been sorely neglected 
during the first part of Muhammad 'Ali's rule, became 
the scene of intensive efforts during the terminal half. 
Beginning in earnest in the 1830's, one after another of 
the city's sanitary and aesthetic affronts was attacked with 
vigor. One of the very first reforms instituted aimed 
directly at cleaning the streets of the city which for 
generations had been known as the "dirtiest in the world," a 
distinction. A contemporary observer wrote in amazement:

I have not been many days in Cairo, and yet I discover that 
many changes have taken place in its appearance ever 
since the descriptions of the very latest travelers were written. The streets, formerly so filthy, dirty, and 
filthy, are now remarkable for their cleanliness, being all 
swept three times a day.29

32 Written in 1823 by St. John, Egypt and Mohammed Alî, 2, 140. Italics added.
Brîhîm Pasha had ordered each householder to sweep the area in front of his building, and hundreds of bullock-driven carts were employed to collect the refuse and remove it to the sea. As a result, the city was no longer simply dumped in piles to rot. At the outskirts it was sifted, combustibles salvaged for fuel, and the remainder used to fill in existing depressions and swamps.

This transformation of the city and its environs involved the rubbish mounds which had grown to impressive heights on the northern and western perimeters of the city. These were to be levelled and the area reclaimed. In this process, the task of filling the swamp and several marshy ponds in their vicinity. This work seems to have been well under way by the early 1830s, particularly in the southwestern section between the city and the Nile. Again, this was primarily the work of Muhammad 'Ali's adopted son, Brîhîm. In the area now known as al-Insha and Dawâ‘în, Brîhîm planned a plantation and, on the site of present Garden City, a palace. To prepare these areas, the mounds had first to be levelled, trees planted, and roads constructed. These improvements had already been made by the time Brîhîm constructed his new palace compound (with white exteriors and, a marvelous innovation, glass windows) north of the preexisting Qar al-A‘ny in 1839.68

67 Last one concludes from this that Cairo had “solved” her sanitation problem. But, as early as about 1847, it must be included: “All the animals that die in Cairo are cast upon the mounds of rubbish, where they are quickly devoured by vultures, kites and dogs.” This is taken from p. 158 of Edward Lane, Cairo Fifty Years Ago, edited from notes of the author by John Murray, London: (1867). From the context it is clear that this observation postdates the construction of Brîhîm’s palace in 1839.

68 The mounds on the southern and western fringes of the city were possibly even higher, and their presence is noted by Lane in Cairo Fifty Years Ago, p. 35. It is significant that the filling of the city’s fringes and the diminution of agricultural lands near Heliopolis and the Birka al-Hujjî near it. It served none of its functions well and the agricultural lands were experiencing critical shortages. To increase the amount of water supplied to the surrounding areas, a new and more direct canal beginning at the Nile just south of Bûlîl and merging with the northern arm of the Maghrib Canal was constructed in 1830-1831.69

69 In that location until 1866, when a private firm bought the land, tore down the palace, and sold subdivided lots for the modern development of Garden City. See Master Plan of Cairo, p. 31.

70 These have also been observed in site by John St. John in 1835, Egypt and Mohammed Ali, v. 3, 412-442, for a description of this operation. Another firsthand account, written perhaps in 1835, described the area as follows: “I have just been in Al Amin, one of the colleges or schools established by Muhammad Ali, and the Kasr or palace of Ibrahim Pasha; the neighborhood of which has been greatly improved within the last ten years, by the planting of trees, the removal of rubbish of mounds, and the formation of gardens and avenues. See John Wilkinson, Modern Egypt and Thebes (John Murray, London; 1843), the original source for the later Murray Handbook (guides) referred to throughout this section. There has been taken from Volume 1, p. 285. This refers to the completion of a task that St. John had observed in its initial stage. Brîhîm’s palace remained unfinished this period. Similarly, Birka al-Râfî (now Shykhâr al-Qur’ân) and the southern—situated Qamhâl, Qasîm Bay in the southern suburbs, which surrounded the palace of Mâhmûd, Kihkyâ Bay under Muhammad ‘Ali.71 In brief, land throughout the city but particularly on the western fringes was being prepared for future urbanization.

71 Like also in the 1860s that a number of superficial changes were introduced which, nevertheless, began to alter dramatically the appearance of Cairo. The domestic architecture of that city, which had evolved little during the earlier centuries of Turkish rule, slowly yielded to Western influence. The first signs of dissatisfaction with Cairo’s appearance are hinted at in the 1850s. When Brîhîm returned victorious from his Syrian campaign, many of the houses in the city were whitewashed and decorated in honor. Evidently this so pleased him that a few years later an order was issued making it mandatory for every household to whitewash the exterior of his building. This practice persisted—despite the horrid glimpse of Westerners—until well past midcentury, although the buildings of older Cairo have long since reverted to their original dun and mud hues.

72 Clerget, Le Caire, t. 191, is the source for this information on the filling in of the Râfî and Qasîm Bays. It also indicates that the Birka al-Râfî was seasonally filled through the 1850s. Mrs. Pool described the beauty of its flood-time appearance in Cairo Thirty Years Ago, edited by Stanley Lane-Poole. On the Birka al-Râfî, see id., pp. 279-280.

73 This custom is of early origin and is still practiced in the villages and small towns of Egypt, where a return from the Pilgrimage is frequently compensated by the painting colorful murals on the exterior walls of the pilgrim’s house. In the first writing of Lane’s Manners and Customs in the 1830s, Mrs. Pool, see footnote 19 noted prior to the publication of the first edition in 1856, the whitewashing of houses in honor of Brîhîm’s achievement was acknowledged by the year of his death, 1867. By the third edition of his book, prepared in the 1890s (and reprinted in the 1980 edition cited earlier), an additional notice had been appended to the effect that the Pasha had since made whitewashing mandatory. See note 2, p. 96, and note 2, p. 354, of the 1890 edition. In that year also, Mrs. Pool, in her letter July 1843, states that . . . at last a proclamation has been issued by the Pasha for extensive alterations and repairs throughout the city. The houses are to be whitewashed with and without; those who inhabit ruined houses are to sell them; and unfinished dwellings are to be pulled down for
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51. Aishah working on old house near al-Zahir Mosque

52. Windows and balconies of a house in Būqāl

Muhammad 'Ali's reign did he finally address himself to the problem which modern observers, from their advantage of hindsight, would have given highest priority—namely the need to improve the antiquated and impossible street system. Apart from regulations related to street cleaning and face lifting, undertaken as part of the other schemes described above, no direct attacks on the convoluted circulation pattern of the city was attempted until 1859. One ought not be too harsh in judgment, however. Despite the tremendous technological progress achieved during this period in the technology of transportation had yet occurred. Massive introduction of wheeled vehicles had not yet compounded the difficulties of the past. True, Muhammad 'Ali himself possessed a carriage, "a cardinal's at second hand, similar to our Lord May's wagon," an English visitor was to note as early as 1843. But, considering the state of the roads, he added: "How fortunate it is that there are not two carriages in Egypt." Nevertheless, by 1850 the Pasha had imported a number of these outmoded vehicles from Europe, although they still numbered perhaps a little over thirty in all of Cairo and her environs. It was illegal, in fact, for anyone outside the royal family to purchase a carriage, and the Pasha had bestowed only a few as rewards to his most trusted ministers. The "wheels" of the future, however, were not to be halted and even by the end of Muhammad 'Ali's reign, although the basic rules remained in force, the number of carriages continued to increase. Even so, no overwhelming traffic congestion resulted.

53. From page 58 of Sir Frederick Hemmick, Notes During a Visit to Egypt, Nabik, The Oasis, Mount Sinai and Jerusalem (John Murray, London, 1853).

54. This remarkable fact is so significant that I quote at length from Clo-Frey. "Before Muhammad 'Ali this means of transport (carriages) was virtually unknown. One might cite how remarkable an object was the carriage which Ibrahim Bey received from France, and during the French Expedition, the carriage of Napoleon, drawn by six horses and racing down the straighter streets of Cairo and Boulogne, was one of the wonders of the country." Aperçu général sur l'Égypte, u. 456. "Since that time, the carriage has begun at first to use this equipment for his highness. In the end that of Mur Hammam, followed by him, Ibrahim Bey, Pasha, Abbas Pasha and all the rest of his family have adopted this convenient means. It cannot become popular, nevertheless; because this is a family affair, no one can see except those many of his ministers to whom he has given them. . . . Today, one owns in Cairo environment only thirty people who have carriages," ibid., p. 457. Translation and italics mine.

55. Harriet Martineau, who visited Egypt at the end of 1856, commented upon the recent increase in carriages in that city. "Carriages are quite alarming in Cairo, which was not built for the passage of anything so large. They are very contemptuous, having no idea of stopping for anybody. . . . The keeping of carriages was much on the increase. . . . A friend of mine found one horse in a street where there are only half a dozen, and I had been living there for more than a year before my visit; and now there are twenty-four or twenty-five, making the passage of the street very hazardous." See her Eastern Life (Roberts Brothers, Boston: new edn., 1876), p. 324.

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resulted from the fact that the city contained hardly any streets broad enough to accommodate one, much less two passing carriages. But even the royal coach could not proceed down the few thoroughfares of the city without colliding with flimsy appellations or being halted altogether by a more recalcitrant projection into the street. It was on these streets—and these streets only—that Muhammad 'Ali reclaimed the public way from the private usurpations made during centuries of lâzûes later.

In the opening years of the fourth decade, masâbâh and other projections still impeded traffic with impunity. Streets were becoming cleaner but were still dusty, unwatered and, of course, unpaved. Above the bazaars, tarred awnings still gave way occasionally, depositing accumulated dirt on the heads of unsuspecting passers-by. Shops were unpainted, cluttered, and unrepaired. Most of these abuses had received some attention but results were spotty and impermanent. A new concerted effort was made in the opening years of the 1850's to end them once and for all. Masâbâh on the major streets were summarily ordered removed, and only later were a few in the wider portions of the thoroughfares allowed to be rebuilt. An order was similarly issued for the regular replacement of the flimsy szy coverage with more substantial wooden planks, although this order seems, in the main, to have been ignored. Also resumed was the earlier practice of sprinkling the unpaved streets to help settle the dust.

Consensually as they were, these piecemeal efforts failed to provide a basic solution to the growing problem

The modern reader can but wish that Miss Martineau could see the present traffic congestion of Cairo.

44. Lane, in the text of his first edition (1856) of Masters and Customs, takes cognizance of the ubiquitous masâbâh and the contended condition of the street awnings. In portions of his book prepared during the life's three problems are described. See the 1856 edition, Volume ii, p. 10. In a note added between the first writing and the book's publication, Lane informs us that Muhammad 'Ali "has lately caused the masâbâhs in most of the thoroughfares to be removed, but in the narrow streets of the city, it will be recalled that St. John observed several of these new buildings just north of Arakibah as early as 1833. However, they seem not to have become very

houses for nobles which were constructed in the early 1850's, the arched doorways of the Oriental genre had been replaced by stark rectangular windows copied from Europe. Always covered by iron grillwork, they were sometimes also equipped with glass panes—a style that became increasingly common as the decade advanced. By 1850 the trend was to fill many of the "early modern" sections of Cairo with architectural monstrosities and melanges seems to have been well established—and irreversibly.

It is perhaps strange that only at the very end of common until the very last years of the decade. Thus, Lane in the first edition of Masters and Customs (1856) does not consider them significant enough to mention. By 1843, however, they had evidently grown in importance, and in his third edition Lane has added a note to the effect that "windows with European styles of glass, each with a sash of close trellis-work outside the window, are very common in new houses, in many parts of Cairo. They are mostly houses built in the Turkish style, more or less approaching to European fashions; not well adapted to a hot climate. . . ." See Lane, Masters and Customs (3rd edn.), p. 8. Clo-Frey, writing in 1859, is harsh indeed in his evaluation of the "new" architecture. He states: "In the last few years, the style of construction (Arab) has been considerably modified. The Constantinople style, a bastard genre, mixing in the very worst taste a degenerate Greek style with the Arab, has been adopted. Many wooden buildings have been constructed according to this system, in which the arched windows have been replaced by rectangular ones and in which arched refuges have been sacrificed to more uniform surfaces" (my translation). See Aperçu général sur l'Égypte, u. 179.

The purpose of forming squares and gardens; meherebeyah are forbidden and mourning scarves are to be removed." Quoted from page 157 of Mrs. Poole, an extract of which appears in note 35 above.

43. Egypt: Familiar Description, p. 43. See also description in M. Sharer, Scenes and Impressions, p. 175. There is no doubt that this is not the "hour for Later additions. Muhammad, al-Khâlit, 1, 83, acknowledges that Muhammad 'Ali was the first to introduce "Western" streets to the city. It will be recalled that St. John observed several of these new buildings just north of Arakibah as early as 1833. However, they seem not to have become very

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of circulation and, by 1845, Muhammad 'Ali was ready with a more direct approach. A tanqim (plan) for the city was drawn up, providing for a number of new or enlarged streets. Among these was a design to widen and extend the lateral thoroughfare through the Frankish quarter (Shirāl al-Mānī and its eastern extension, originally named al-Sikhab al-Jalih or Run Nueva, now called Shirāl Jawhar al-Qil'ūd). Also proposed was a much more ambitious new diagonal to be cut like a surgical incision through the densely packed residential quarters between Azbukiyah and the Citadel (Boulevard Muhammad 'Ali, now more descriptively named Shirāl al-Qil'ah, or the Street of the Citadel). Neither of these ambitious conceived arteries was destined for completion during his lifetime.

The need for Shirāl al-Mānī was related to recent changes in the status of foreigners. From its tiny original nucleus, the Frankish quarter expanded during the reign of Muhammad 'Ali to encompass the alleys and byways on both sides of the Mānī. European merchants, encouraged by the Pasha's protection and a burgeoning taste among the elite for goods of Western manufacture, migrated to the capital to open shops along the Mānī.43

43 Amir Sinin, in Tāgpešl al-Nil [Almanac of the Nile] (Cairo, 1936), in, 527-529, notes that by 1847 there existed a malāš tanqim al-mu'ādārib (council of tanqim) of Cairo which recommended that many of the streets be given names, that houses be numbered, and that street signs be installed. These suggestions do not seem to have been followed very enthusiastically, if at all.

44 Lane, in Cairo Fifty Years Ago, p. 79, described the new Mānīki: "In this, as well as in some of the neighboring streets, most of the shops are constructed and fitted up as in Europe, with glass fronts, and stocked with almost all the luxuries of western countries; these are occupied by Franks and Greeks."

begun. But no construction was ever undertaken and the project remained abandoned until Isma'il tackled it anew and carried it to completion a generation later.44 Despite these few attempts to open the circulation system within the city and to extend its lines of communication outward, at midcentury Cairo still remained an insular and inward-looking community. Throughout the suburban hinterland were villages and small towns that were destined to become an integral part of the city during the next century but, as yet, these remained unconnected with the capital and led independent existences. One might mark their presence, however, since they will figure in our later discussions of Cairo in the modern era.

Making a full circuit of the city, one notes to the east the high mounds (the so-called windmill hills) which still separated the medieval walled core from the Mamluk tomb city in the desert beyond. Few persons then lived in the cemetery area, except in the vicinity of the mausoleum of Qaṭīr Bay.45 Northeast of the city were a few scattered villages, Matarīj, Heliopolis, and Dimārīshā, whose inhabitants were engaged in agrarian pursuits. Agriculture also predominated near north of the city walls, with the inlying villages of Māmshāh and Jazīrat al-Badrīn and the more peripheral ones of Shubrah and Minyat al-Sirīr surrounded by fields. In the northwest corner was the expanding but still ecologically discrete town of Būlāq, already taking on an industrial character.

Southward, along the eastern shore of the Nile, all mounds had been cleared; in their place stood scattered palaces amid rich plantations but, as yet, no urban forms. Already existing were: the Qasr al-Dībakhrāh, a palace built originally by Muhammad 'Ali's son-in-law and later occupied by the Pasha's Harīm, which gives its name to the madīnā near which the American Embassy now stands; the Qasr al-'Aynī, an early palace around which the present medical complex of public hospital and medical school grew and evolved; another palace, al-Qasr al-'Ali, built by Ibrahim Pasha in the zone known today as Garden City, near his extensive plantations on the linear strip destined to become the government ministry zone of a later era. This entire eastern area was already served by a tentative system of roads, although not yet hard-surfaced.

Several miles to the south and still separated from the main complex by rubble and swamp land was the small independent suburb of Miṣr al-Qadīmanī. While she had lost much population, even since the time of the French,46 she had established her future character as host to the less attractive industries of the city and to a reviving Christian community. East of the town were the kharīb covering the still unexcavated remains of Fustāt, and beyond them, the Khulīfah cemeteries.

Out into the Nile and across the river on the western bank were other small settlements—each more forlorn than the last. Half of the once-populated island of Rawdāh was occupied by a botanical forest laid out in the 1830s for Ibrahim Pasha by a Scotch horticulturist, while the remainder was but sparsely and spotily occupied. The three islands strung out in a row opposite Būlāq (which had been mapped by the French and were referred to collectively as Jazīrat al-Būlāq) had finally coalesced into a single larger one. While this island was destined to become one of the prime residential quarters of twentieth-century Cairo, Zamālik, it was then still subject to periodic flooding and inaccessible except by boat. It remained deserted except for the seldom-frequented retreat which Muhammad 'Ali had constructed there in 1830. On the western bank of the Nile, stretching from north to south, were the small villages of Imshāb (where Napoleon had won his decisive victory over the Mamluks), Būlāq al-Dakīrī, Diqqī and, farthest south, the ancient town of Jīzāh, which had declined from the luxurious summer resort favored by the Mamluk lords to a handful of houses, a mosque, and a pottery works.

Throughout the environs, then, there was room for potential growth. The city, however, had not yet expanded to encompass the preexisting settlements. The era of building had to await a population explosion and a technological revolution—both of which began during the second half of the nineteenth century but were not fully underway until the twentieth. The work of Muhammad 'Ali had been to clear the preindustrial city of her encrustation; the modern city came into being in the age that followed, but it would not have taken the form it did without the preparatory efforts of Egypt's first "modern" ruler.
54. Shiri' al-Miṣkī today, relatively unchanged

Although this street had been regularized by Napoleon, it was still too narrow to accommodate the cart traffic generated by a thriving trade. To answer the vociferous complaints of the foreign merchants, Muhammad 'Alli condemned and then purchased all land and buildings in the path of a broad (all of eight meters!) thoroughfare. Demolition began in 1845 when the partial plots lining the street were sold to private investors. Progress was evidently slow—to which Muhammad 'Alli's declining health may have contributed—for at the accession of Abbas in 1849 only a small portion of the street had been completed. The Miṣkī itself was widened, but the extension of the path into the Jewish quarter east of the Khalīj had barely begun. By 1850 the road had reached its way to the Masjīd Qanṭarat al-Miṣkī where it ended in a confusing maze. It remained for Muhammad 'Alli's successors to complete its route to the edge of the eastern desert.

CLEANSING THE AUGEAN STABLES

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44 According to Lane (Ibid., p. 139), its population in 1847 was no more than 4,000.

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43 Lane, in Cairo Fifty Years Ago, p. 70, described the new Miṣkī: "In this, as well as in some of the neighboring streets, most of the shops are constructed and fitted up as in Europe, with glass fronts, and stocked with almost all the luxuries of western countries; there are occupied by Franks and Greeks."
The Origins of Modern Cairo

A picturesque visitor to Cairo just after the turn of the twentieth century noted that “European Cairo ... is divided from Egyptian Cairo by the long street that goes from the railway station past the big hotels to Abdin [palace]. ... And it is full of big shops and great houses and fine carriages and well-dressed people, as might be a western city. ... The real Cairo is to the east of this ... and is practically what it always was.” The insulation between the two Cairos was so absolute that an English visitor in 1889 could remark with manchness that “... with the polo, the balls, the races, and the riding, Cairo begins to impress itself upon you as an English town in which any quantity of novel oriental sights are kept for the aesthetic satisfaction of the inhabitants as much as of the proprietor of a country place keeps a game preserve or deer park for his own amusement.”

Thus, by the end of the nineteenth century Cairo consisted of two distinct physical communities, divided one from the other by barriers much broader than the single street that marked their borders. The discontinuity between Egypt's past and future, which appeared as a small crack in the early nineteenth century, had widened into a gaping fissure by the end of the century. The city's physical duality was but a manifestation of the cultural cleavage.

To the eye of the native city, still essentially pre-industrial in technology, social structure, and way of life; to the west lay the “colonial” city with its steam-pow- ered techniques, its faster pace and speeded traffic, and its incessant Western European identification.

To the east lay the labyrinth street pattern of yet unpeaved kahrut and duruth, although by then the gates had been dismantled and two new thoroughfares pierced the shade; to the west were broad straight streets of macadam banked by wide walks and setbacks, militantly crossing one another at rigid right angles or converging here and there in a roundpoint or madayn. The quarters of the eastern city were still dependent upon itinerant water peddlers, although residents in the western city had their water de-

lered through a convenient network of conduits con- nected with the steam pumping station near the river. Eastern quarters were plunged into darkness at nightfall, while gaslights illuminated the thoroughfares to the west. Neither parks nor street trees relieved the sand and mud tones of the medieval city; yet the city to the west was elaborately adorned with French formal gar- dens, strips of decorative flower beds, or artificially shaped trees. One entered the old city by caravan and traversed it on foot or animal-back; one entered the new by railroad and proceeded via horse-drawn victoria. In short, on all critical points the two cities, despite their physical contiguity, were miles apart socially and cen- turies apart technologically.

The history of the second half of the nineteenth cen- tury is essentially the history of the new western city. At the end of Muhammad 'Ali's rule in 1840, Cairo was still a single city with somewhat fewer than 300,000 in- habitants, including her port suburbs of Bulaq and Mārij al-Qādirah. By 1857, Cairo was composed of two symbiotic communities whose combined population ap- proached 500,000. In 1847 the number of European foreigners in Cairo was still insignificant, comprising chiefly the old and expanding Greek community to which had been added a small number of Italian and French "adventurers." By 1857, Cairo's European popula- tion exceeded 30,000. Numbers, however, tell but part of the story. In 1847 Egypt was still a semi-autonomous member of the Ottoman empire, ruled in Eastern fashion by an Easterner. Westerners were still barely suffered, despite the handful of trusted advisers retained by the Basha. By 1857, although still nominally within the Ottoman fold, Egypt had been governed by a representa- tive of the British government for some fifteen years. European nationals monopolized the important govern- ment posts and enjoyed privileges, exemptions, and a style of life that made them the envy not only of Egypti- ans but also the Westerners. In 1847, the British had become the most important foreign power in the shores of the Mediterranean, and the first of the modern French Egypti- ans and Egypt and Europe were first becoming acquainted. 5

5 The 1850's saw the publication of two remarkably parallel books. The English introduction to Egypt, Edward Lane's mag- nificent The Manners and Customs of the Modern Egyptians was first published in 1836 and proved so popular that it was reprinted several times. At that very time, educated Egyptians were reading Lane's first account of the manners and customs of the modern French, Taḥṣīl alt-ḥārīa ilā Taḥṣīl Barī, by R diaḥ R. Tahtawi, first published by the Bulaq Press in 1834, and reprinted in numerous editions.

the first transportation links were being forged,6 and trade had barely begun. By 1857 the destinies of Egypt and Europe had become intimately intertwined.

The fifty years had been critical ones. They witnessed not only an agricultural and demographic revolution within the country but also the transformation of Egypt's status vis-à-vis the world. The same inscribed the expan- sion of the city of Cairo, a phenomenon that had not occurred since the fourteenth-century reign of Sultan al-Nāṣir Baybars al-Qāwīn. During that earlier period Cairo had, in a brief vision, doubled in width, incorporating the parallel strip just west of the Al-Mu'alla' that had hitherto marked its western boundary. During the latter half of the nineteenth century Cairo again widened to encompass a third band beyond the western limit of the city, rising toward but not quite reaching the river's bank. This new strip included portions that had been developed in the fourteenth century but which had long since been abandoned.

The reigns of Muhammad 'Ali's first three successors contributed little to city development, although they were marked by events that excited important if indi- rect influences on the city's future.

By 1857 Muhammad 'Ali's advanced age and declining mental powers left the administration of the country, in the hands of 'Abd allāh, a de facto situation finally recognized late in 1847 when the latter conferred upon his eldest son his office as Waqf diwān. By the end of that year Ibrahim had succeeded his father and the succession fell to Muhammad 'Ali's nephew, 'Abd al-Munim, who ruled until his death in 1854. It is difficult to determine exactly how the young man could possibly act as prime minister. In effect, he was completely unattactive as 'Abdāb Pasha is pictured, for one searches in vain in Western literature for a sympa- thetic word or a redeeming virtue. It is true that it is possible that many of 'Abdāb's contributions were, from an European point of view, negative, two of his policies did leave permanent marks on the city. The first was the con- struction of a railroad between Alexandria and Cairo; the second was the founding of a small military city in the desert outpost of 'Abdīliyah, now a well-populated quarter in northeastern Cairo that bears the name of its founder.

Even before his accession, 'Abdīliyah had been approached by the British who solicited his support for their scheme to extend their sphere of influence in the Eastern Mediterranean. The Ottoman Egyptian plan was to build a railway from the sea to the interior, but the British were not willing to finance that and proposed a much shorter line. The British then offered to finance a larger line, which would be even more attractive to the Egyptians, would run from the Mediterranean to the interior, and would thus provide a link to the British Empire. The British then offered to finance a larger line, which would be even more attractive to the Egyptians, would run from the Mediterranean to the interior, and would thus provide a link to the British Empire. The British then offered to finance a larger line, which would be even more attractive to the Egyptians, would run from the Mediterranean to the interior, and would thus provide a link to the British Empire. The British then offered to finance a larger line, which would be even more attractive to the Egyptians, would run from the Mediterranean to the interior, and would thus provide a link to the British Empire.
ing; with the advent of the railroad she began to look—and then to stretch—outward.

The terminus of the new railway was constructed on the site of the former Fatimid port of al-Maqṣ, more recently marked by the westernmost bastion of Saḥāb al-Din’s wall, the Bilb al-Hadid. Although this historic gateway had been demolished by Muḥammad ‘Alī only a few years earlier in 1847, the station took its name from the former landmark. The location of the terminal at Bilb al-Hadid, then the outer limit of the city, determined the ecological future of the surrounding land. Not only did its presence stimulate development, but around this “port of entry” assembled many of the later immigrants (both European and native) to the city. In the old Coptic quarter between it and the Azbākīyah grew up a zone of marginal uses, including roosting rooms, coffee shops, and later, the prostitution district of the city.

In the northeast quadrant of the contemporary city, surrounded by middle-class zones, is a small slum-pocket known today as ‘Abbāsīyah Bahārīyah. Its isolated position cannot be understood unless one knows that its development began in 1849, whereas the surrounding sections remained unsettled until the twentieth century. This was the area contributed by ‘Abbās, Muḥammad ‘Alī had rid himself early of the troublesome Albanian mercenaries, by means of whom he had gained power, and had substituted a conscript army of Egyptian falāḥīn. ‘Abbās reverted to imported troops but, perhaps re-membering their undisciplined nature, decided to station them outside the city. In 1849 he had built for them a series of barracks on the desert edge along the route to the onlying villages of Matariyā and Heliosip. Soon a complement of businesses and dwellings began to grow up around this core. To encourage their development, ‘Abbās gave free land to those wishing to build and houses for tradesmen and officers went up rapidly. A hospital, a school, and a palace for the Pasha added further vigor to the section whose population was swelled by that of the neighboring village of al-Wajīl, settled by a bedouin tribe (the Bani-‘Urg). In short, a sort of royal suburb—that recurring phenomenon of Cairo’s history—began to take shape.

It is difficult to predict what might have been the pattern of Cairo had ‘Abbās lived long enough to put his “town” on a firmer footing. But his unexpected death only five years later condemned the settlement to stagnation. His successor sent the mercenaries packing, stationed his new troops in barracks on the shore of the Nile, and ‘Abbāsīyah was abandoned as abruptly as it had been founded. Only fifteen years later the area was described as a “miserable memorial...” of its founder... (which) in a few years... will be an unprofitable mass of ruins.”10 This prediction proved overly pessimistic, for ‘Abbāsīyah remained a somewhat forlorn outpost until infused by British troops after 1881. It was finally incor-porated into the city during the first decade of the twentieth century when a great speculative boom swept urban forms about it like a Bood.11 The creation of one of Cairo’s most famous landmarks, Shephard’s Hotel, also dates from the era of ‘Abbās, and therefore cannot be left out of any discus-sion of contemporary developments. Samuel Shephard, who had gone to sea to escape the drudgery of appren-ticeship to a pastry cook, landed somewhat fortuitously in Egypt in 1842, having been put ashore there in conse-quence of a minor mutiny. After some years as assistant and then manager in several small British hotels in the Frankish quarter, his opportunity came through a meet-Ing with ‘Abbās over their shared interest in hunting. This initial contact was exploited until, as Samuel Shephard wrote to his brother in November 1849, the Pasha “has given me a grant of a large college to build an Hotel on the site. I am now busy making a plan.” The site granted to the hotel-keeper was none other than the Palace of Ali Bay, overlooking the Azbākīyah, which had been requisitioned by Napoleon during the French occupation and later, during the educational exer-cessions of Muḥammad ‘Alī, had housed his famous School of Languages. ‘Abbās, having little use for such fru-riteries, had closed the school, the thus making it available for the hotel that was to attain such real and symbolic fame.12 These seem to have been the sum total of ‘Abbās’s contributions to the city. True, he had considered water

11 Lamplough and Prattis, Cairo and Its Environs, pp. 28-36, describe graphically the jerry-building of that period.
12 A full and fascinating account of the hotel and its founder can be found in Michael Bird, Samuel Shephard of Cairo (Michael Joseph Press, London: 1997). Quotation has been taken from a letter dated November 1849, appearing on p. 46. The Shephard’s Hotel known to twenty-century visitors would not have been recognized by Samuel, since he sold his interest in 1860 and retired to England to live out his few remaining years in country-squire style. Another enlarged Shephard’s Hotel was built on the same site soon afterward, where it remained until burned in the Cairo riots of 1952. A final successor now exists in Cairo, but it is a modern building on the shore of the Nile and bears no resemblance to the earlier models.
distribution (mostly for his arid 'Abd'allah) but, in typically fashionable, abandoned the plan upon seeing the first cost estimates. Nor did he neglect entirely the project begun under Muhammad 'Ali to extend Suez'. Miski into the heart of the old city, but progress was so desultory that, by 1854, the Rue Neuve extended only up to the Bazaar of the Brassworkers, Sîq al-Nahhâbîn. There were more than 100,000 deaths at the death of 'Abdallah and the appointment of Muhammad 'Ali's youngest son, Muhammad Sa'id, as his successor, but perhaps none was as jubilant as Ferdinand de Lesseps, the "father" of the Suez Canal. Sa'id's education had been entrusted to French savants and among his instructors had been the son of the French Consul in Cairo, young de Lesseps. Upon Sa'id's accession, de Lesseps wrote his congratulations and in turn received an invitation to visit Egypt, a bid he accepted with alacrity and not without empty hands. With him he brought fairly detailed plans for the projected canal, elaborations of those first proposed in 1844 and refined further by the Société d'Etude du Canal de Suez, organized by Enfantin in 1848. De Lesseps reached Alexandria on the seventh of November and by the last day of that month had Sa'id's signature on the canal concession. All that remained was to obtain the Sultan's ratification of the agreement—a simple matter which, in fact, required almost a dozen years to negotiate. British opposition, through the usual influence which Lord Canning exercised in the Con-

14Ali Moharrak, Al-Khâtât al-Tawfiqîyyah al-'Afâ':'lînîn (Bîlbîq Press, Cairo: 1888), 1, 87; Amin Siîlîm, Ta'âdîl bîlîlîn, Volume 1, Part 2, s. g. 15Moharrak, Al-Khâtât, in, 85. This was still less than half the distance to the eastern delta.
16Brubier, L'Egypte de 1798 à 1900, p. 158, gives the early history.

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61. Qasr al-Nil barracks in the 1940's

62. The same view showing the new Hilton Hotel along the post-1952 Corniche Drive

stainciple court, placed obstacle after obstacle. In desperation, de Lesseps raised his capital and began construction by 1859, all without Porte sanction.

Ratification by the Porte and completion of the canal did not occur until years after Sa'id's death, and yet to him must be assigned responsibility for this single most important event of nineteenth-century Egypt—an event which altered the entire future of the country and, with it, that of the capital city of Cairo. The canal thrust Egypt onto the center of the world's strategic stage, a position she had not occupied since the fifteenth century. But it also enmeshed her in the rivalries and machinations of the empire builders and led eventually to British occupation and the growth of "colonial" Cairo. While these were to be the long-term effects of the decision, the short-term impact was relatively negligible. The years between 1854 and Sa'id's demise in January 1861 witnessed few alterations in the structure of Cairo. 'Abd'allah was neglected when troops were rehoused in newly constructed barracks at Qasr al-Nil (the site of the present Hilton Hotel) just south of Bûlîq. The gradual development northward along the finger of Shubra Road continued in undramatic fashion, aided somewhat by the construction of Sa'id's Nûhadha Palace there in 1868. The second leg of the railroad, between Cairo and Suez, was completed in that same year, which tended to encourage scattered growth along its route, notably at Mubârâkhah. But in general, the city, like the country, seemed to be marking time, thanks in part to the ruler's paradoxical tendency first to monopolize all govern-

tamental responsibility and then to devote minimal time and effort to the business of governing. The statistic of all the canal was made even more conspicuous by the sudden explosion of activity that followed. It was possibly the proverbial calm before the storm.

Ismâ'il, son of 'Abdallah, inherited his father's drive and love of urban embellishments. He also inherited Egypt at a moment when many events, some planned, others coincidental, converged to stimulate the most dynamic era of city building that Cairo had experienced in hundreds of years. He came in on the crest of a cotton boom caused by the withdrawal of American supplies during the Civil War. He came in just as Egypt's population was experiencing its first upsurge of the modern period after centuries of decline. The pace of growth was quickening but, in forcing that pace, he helped to precipitate foreign intervention.

In the past, canal building and land stabilization of the flood plain had always preceded urban development. This period was to be no exception. Just as Sultan al-Nâṣir ibn Qâlûwîn first constructed the Maghribî Canal to allow the city to expand on land into it and the Khâdir to subdue the Eunuch's, construction of the Khâdir Canal helped prepare for the settlement of the new quarters of Imsâ'ilîyah and Fâji'a (the latter named for Fish, the radish which had until then been cultivated there). The Imsâ'ilîyah Canal was but a part of a broader program of public works which was energetically launched. One of the very first acts of the new Pasha had been to abrogate several clauses of the concession granted to the Suez Canal Company, the most important of which was the agreement governing a fresh water connection between Cairo and the Isthmus at Lake Timsah. Ismâ'il retained the right to construct a fresh water canal which had formerly been granted to the company. Construction of the Imsâ'ilîyah Canal began shortly thereafter, together with related embankment reinforcements at Cairo. In charge of these projects was the French engineer, Boccard. By 1866 not only had the major canal been completed and opened to traffic but the shoreline north of Bûlîq (Rawd al-Faraj and Sibîl) had been stabilized and, in addition, the island opposite Bûlîq (originally Jastîr al-Bûlîq, then al-Jâzirat, and, finally, Zamâlik, its present designation) was made almost entirely flood free.

With these engineering feats accomplished, the adjacent areas underwent significant changes. The Maghribî Canal, long an unimportant backwater channel for the Khâlit, was finally filled in completely and, with the loss of its source, the smaller canal that Muhammad 'Ali had used to divert the Nile to the Azabkhayh also dried. Birkaat Azabkhayh was no more, and roads replaced the path of the Qanûrât al-Dakkhah Canal and the circular one around the former marsh. The adjacent lands of al-Jâzirat, Ismâ'ilîya, and the two tracts remaining from Birkaat Azabkhayh once the smaller rectangular park was delimited, were all ripe for the development which was soon to take place.

Hand in hand with these public works went an attempt to provide Cairo with water and gas—municipal utilities which were becoming the sine qua non of the modern European city. (Drainage was also contemplated, but its price was so prohibitive that it was not introduced until some fifty years later.) The year 1865

For other concessions revoked and renegotiations agreed upon, see Hallberg, The Suez Canal, especially pp. 197, 207, 324; Dranet, Histoire du ... Khédive Ismaïl, Tome 1 (Institut pêlegrinage de l'étude pour la reconsociation de géographie et d'histoire, Rome: 1943), 279-280.

At the end of Ismâ'il's reign the population of Egypt was probably in excess of 7 million. Two generations earlier at the time of Napoleon's invasion the population had been estimated (variously) at between 2 and 3 million, a figure which did not begin to mount until about 1840.

The claim that Ismâ'il's irresponsible borrowing and excessive spending were the major reasons for Western intervention in the affairs of Egypt is one-sided if not naive. Perhaps the fairest appraisal of Ismâ'il is given by George Young, in Egypt (Charles Scribner's Sons, New York: 1957), who points out that the insulting of Egypt to pay for the Suez Canal, forces which she could not profit, and the unscrupulosity of both foreign contractors and financiers must share this responsibility.

18Most of the land west of Sharî' Abî al-Faraj had hitherto been subject to periodic flooding and could be used only for agriculture. Between 1865 and 1866 the embankments were improved and, with the Imsâ'ilîyah Canal siphoning off Nile water south of Bûlîq, the land to the west was made cultivable. al-Dâlîkhah, in, 320. After that, the area served as a northern extension of the river port of Bûlîq. Today, long after the closing of the main installations at Bûlîq, silts and silt deposits are still depositing their wares and service the abâbin which exchange their rice for rice.

Eventually a permanent separation between al-Jâzirrat and the west bank was accomplished by the channeling of the "Blind" Nile. Even before this, however, the island was raised and protected from flood. See, for example, the account in Baedeker's Guide to Egypt (Carl Baedeker, Leipzig: 1865).
marks the establishment of both the Cairo Water Company and the Cairo Gas Company. In February the company of M. Charles Lebon, already engaged in supplying the city of Alexandria, was granted the concession to provide gas to Cairo and the suburbs of Bāḥīya and Miṣr al-Qāmilah. The following year government land in Bāḥīya was donated to the company for its plant and, in April of 1869, the train station at Bīb al-Hadid was symbolically lit to celebrate the inauguration of this service. Gradually, Azbakiyyah and its vicinity, the new quarter of Ismā'ilīyah, the major thoroughfares, and the Khedive's palaces were brought into the network which eventually extended into parts of the older city as well.

The work of the water company proceeded less efficiently. In May of 1869 the concession to provide Cairo and her suburbs with municipal water was granted to M. Cordier, who had successfully provided water to forty French towns and was engaged in a similar operation for Alexandria. Late in the year a joint stock company was formed to raise capital for the venture. The city donated land near the Qasr al-'Aynī at the mouth of the Khabil for the major pumping station and, by the summer of 1869, the first conduit (to the Citadel and thence to 'Aḥṣafiyah) was laid. But financial and/or engineering inefficiencies aroused the ire of both shareholders and Ismā'il Pasha, and Cordier was finally discharged. The company was then reorganized and its deadline extended until 1871.24 It moved from its site near the Ismā'ilīyah Canal and conduits were laid to serve Azbakiyyah and Ismā'ilīyah. Only gradually and incompletely were these extended to other parts of the city.

Thus by 1869 Cairo was physically prepared to enter a new era of city building. An event of that year provided a model for the new city and stimulated the motivation for it: the Exposition Universelle held in Paris in the spring of 1867. The exposition was Baron Hausmann's pièce de résistance, the climax of his career which was fated to end in calamity and rejection only two years later. By then, Hausmann had been Préfet de la Seine for more than a decade and a half, during which he transformed the Ile de la Cité, planted the peripheral zones, and ruthlessly imposed formal parks and broad boulevards on the antiquated street plan in a manner so associated with his name that even today this method of planning is referred to as "Hausmannizing." Municipal utilities had been installed on a grand scale, including the famous sewers of Paris through which visitors to the Exposition were conducted with pride.

The Universal Exposition was designed to display Paris' accomplishments to the world. Even the site of the exhibit, the Champ de Mars, was redesigned for the events in the same grand style. The impact of the Paris Exposition Universelle on European city planning of the nineteenth century was as significant as it was unquestioned. It set the style and served as the model for numerous countries for decades to come, just as the Chicago World's Fair of 1893, with its return to the classic mode, set the style for the "city beautiful" movement which dominated American city planning for decades. It is perhaps testimony to the new relationship of Egypt to Europe that she, too, was so deeply affected by the ideal incorporated in the Exposition Universelle.

To establish Egypt among the concert of "important" nations and to establish himself, perhaps as a peer of European royalty, Ismā'il accepted the invitation of Napoleon III to participate in the Exposition. Indeed, the Egyptian display was one of the most elaborate, includ-
settlement in the area known as Ismailiyah as early as 1865, the area remained unimproved by streets and owned by utilities until its intensive planning and development began in the 1930s. Before 1933, the eastern boundaries of Ismailiyah were defined by sidewalks that had been laid out according to plan, and the district, about one square mile in area, was subdivided. The Khedive offered the royal lands without charge (with euvolea virtuosity!) both the educational and sewerage systems of that city. His appointment as Minister of Public Works, and concurrently as Minister of the Awqaf as well, therefore, was hardly illogical. He continued to occupy the former position with only brief intermissions during most of his later career. Periodically he served also as Minister of Education and, in addition, found time to write books on military engineering, educational theory, and the work for which he is deservedly most famous, his twenty-volume Al-Khitaṭ al-Tawfiqiyah al-Jadidiyyah, sections of which are devoted to an historical and topographic description of Cairo.

"Ali Mohirak tells us that the planning of Ismailiyah took place at the same time plans were made to subdivide the two triangular plots remaining once the smaller rectangle of Azizkhalil Gardens was demarcated and fenced. After these plans had been drawn up, Ismail issued a further order to replan the remainder of the city according to the same principles.24 Both of these events appear to have occurred in 1867 but, because the first set of improvements involved the new or raw land whereas the latter required land acquisition and demen- tion of existing structures before plans could be executed, it was natural that progress should have been faster on the former. By 1871, the Suez Canal, considerable headway had been made in developing the new sections; the plans to redevelop the older city were never fully executed, and it was many years before even those few plans of the part that were executed showed any results.

Even before Ismail's trip to Paris he had evidently concurred with the idea of a new city addition to be built in the area bounded on the north by the road to Bulaq, on the west by the main road to Mu'izz-al-Din Shihâr (today Shihâr al-Qasr al'Anî), on the south by the lands of al-Lûq, and on the east by the built-up edge of Cairo. While an attempt may have been made to encourage

20 We are fortunate to be able to rely heavily on this most relevant source of data on developments in Cairo under Ismail. Much of the preceding information about Ali Mohirak has been taken from his autobiography, included in Al-Khitaṭ, 1:52-55. Details of his career and his maintenance in the archival documents reprinted in Amin Sinu, Taqwil al-Nil, Volume II, Part 11.

21 For the orders relevant to the former, see Mohirak, Al-Khitaṭ, 16, 67, 119. Concerning the replanning of the old city, see his 8, 83, and 12, 55.

22 For the opening performance, see Genetti, Work of the Theatroadi, and of the Khedive (Smith, Elker and Company, London, 1873), p. 205. Indices added. This book covers the author's trip to Egypt made in the winter of 1870-1871 and makes it possible to establish the exact date of his observations. A map dated 1872 (but undoubtedly later, because it shows Boulevard Muhammad 'Ali, not constructed until 1873-1874) and serving as an annex to a Guide annuaire d'Egypte by Francois Levernay, which I had occasion to examine and transcribe in Cairo, shows graphically the limited extent of the buildings in

64. The Cairo Opera House ca. 1946.

November canal celebrations25; and other public edifices built in the European style. The remaining structures in the vicinity of the Azizkhalil were whitewashed and renov- ated; gaslights were installed along all adjacent streets; Shihâr Miskî was "upgraded" and Europeanized on the extremity closest to the Azizkhalil, and even the minarets of the nearby mosques were given gaily painted red and white stripes for the occasion.

The central park of Azizkhalil, however, still remained in only partially finished form. Its preliminary design of a large circle at the core and straight radiating spokes was, to say the least, somewhat unimaginative. In a bold move, Ismail imported the French landscape architect whose work he had admired in the Baix Boisogne and Champ de Mars and commissioned him to redesign Azizkhalil as a Parc Monceau, complete with the free form, pool, groto, bridges, and belvederes which constituted the inevitable clichés of a nineteenth-century French garden. Thanks to the fast growing season of Egypt, shrubs and flowers were already blooming when the guests arrived in November.26

The need to prepare the city for the coming celebra-
66. Tourists lounge in the 'Umar Khayyam Hotel today

These developments on the Jazirah and the western bank, plus the construction of another Khedivial palace at Jezah and the location there of the terminus of the new rail line serving Upper Egypt, all contributed to a growing need for a bridge to connect the two banks of the Nile. Ferries and small wind-propelled craft were the only means for crossing from one side to the other, a fact which intensified the contrast between the rural western shore and the urban eastern bank. It was perhaps natural that the idea of a bridge should suggest itself at this time.

In the spring of 1869, just before setting out again for Europe, Isma'il contracted the French firm of Fives-Lille to construct a massive iron swing-bridge between the eastern shore at Qayr al-Nil and the southern tip of the Jazirah, a span of over 400 meters. A smaller span across the Blind Nile (the Kubri al-Jal') was also planned at this time to complete the connection with the western shore. Neither of these bridges, however, could be completed in time for the opening of the Canal and the temporary expediency of a floating boat-bridge was sorted to in order to give the Empress Eugenie access to her apartments on the Jazirah. By 1871, the smaller bridge over the Blind Nile was completed and, in the following year, the finished swing-bridge was demonstrated before an incredulous audience. The knitting

67. First Qayr al-Nil Bridge to al-Jazirah

68. Second Qayr al-Nil Bridge

69. Cloverleaf with underpass: present approach to the Qayr al-Nil Bridge

completed several years later. See Anil Sinha, Taqsim al-Nil, Volume 11, Part 11, p. 622, and Wilkinson, A Handbook for Travellers in Egypt (1897 edn., with addendum to 1899), pp. 2, 7. A rail bridge to connect the Delta Line terminating at Bli al-Hudud with the Upper Egyptian line terminating on the west bank was not constructed until the twentieth century. For information on the first Qayr al-Nil Bridge, see Anil Sinha, op.cit., Volume 10, Part 11, p. 625 for contract and p. 629 for demonstration of opening.

One of the most acid critiques ever leveled against any master plan was that of Arthur Rhoad concerning Cairo's. He recalled the early days of Isma'il when "the Viceroy and his ministers spoke them with glowing enthusiasm of the rebirth of
The plan advocated a direct attack upon what was becoming Cairo's most pressing problem—traffic. Carriages were multiplying at an "alarming" rate, while there remained only a few streets wide enough to admit one, much less two vehicles abreast. It will be recalled that in 1823 Cairo had but one carriage, the Pasha's. By 1844, while ownership remained a royal prerogative, there were some thirty to forty carriages at large in the city. By the time of Ismai'î, however, the monopoly had been broken, with carriages available for hire and private ownership extending to the merchant as well as to the lower echelons of the ruling class. Mohirî's census of vehicles about 1875 enumerated almost 500 passenger carriages and twice that number of transport carts.48

Clearly there was a need to "break into" the medieval city, Muhammad 'Ali had already begun this process by opening the first section of the Rue Neuve (al-Sikkah al-Jaddîlah). Ismai'î continued the efforts of his predecessors and finally extended that road all the way to the edge of the eastern desert. Now the master plan contemplated a network of supplementary latitudinal and longitudinal thoroughfares as well as numerous connecting diagonals.

Map XIII that follows shows my reconstruction of the mazyâdes (open spaces) and the thoroughfares projected in the master plan for the old city.49 These were to be superimposed on the maze-like pattern of the preindustrial city. The motif was everywhere the same. At the core of the system were the open spaces out of which were to radiate wide straight streets cutting through the old hârîfâ like the boulevards of Haussmann's Paris. Among the mazyâdes anticipated by the plan were those of (1) al-'Atâhâb al-Khadîrî, (2) 'Abdîn, (3) Khâzîzdînâ, (4) Bîb al-Hâlidî, (5) Sayîlî dîn Zaynabî, (6) Bîb al-Qâdî, (7) Bîb al-Futûh (8) Muhammad 'Alî, (9) Sultan Hâsan, (10) Qur al-Nîl, (11) Theater or Opera, (12) Birkat al-Fîl, (13) al-Azhar (not near the mosque of that name but in Bîb al-Qâdî). Each of these was in turn to be connected with others, a plan which, had it been carried out, would have given to Cairo the pattern shown in broken lines on the map.

But this was not meant to be. It was quite possible to impose this system on the tabula rasa of the new quarters. Thus, most of the streets and squares projected for the western section of the city were built according to plan, including the mazyâdes of Kûbîrî Qur al-Nîl, Bîb al-Qâdî, al-Azhar (now Falâkî Square), 'Abdîn (fortuitously open, thanks to a preexisting birrak) and their connecting streets. The three mazyâdes bordering the Abyalîkhân Garden—Khâzîzdînâ, Opera, and al-'Atâhâb al-Khadîrî —were also completed with little difficulty, since they were located on essentially vacant land. But in the older areas the need to survey properties, to settle on compensation, to acquire the plots and demolish the existing structures made the process lengthy, expensive, and uncertain. While a small beginning was made in the early 1870's to actualize the plan for the existing quarters, the difficulties proved overwhelming and, of the ambitious program, only two mazyâdes and two thoroughfares saw fruition. The mazyâdes were those of Bîb al-Hâlidî (which required no clearance) and Muhammad 'Alî (which required only peripheral land acquisition since it was located on the site of the old Qâramyâdan). The two thoroughfares, Shârî Côt-Bey connecting Bîb al-Hâlidî with Maydân Khâzîzdîr, and its continuation, the Boulevald Muhammad 'Alî, between Maydân al-'Atâhâb al-Khadîrî and the yet-unfinished mazyâd beyond the Mosque of Sultan Hâsan at the foot of the Citadèle, were not undertaken seriously until 1873 and were not completed until two years later. Despite this overall failure of Ismai'î's master plan, the scheme continued to exert a lasting influence on later attempts to open up the old city, and a number of projected streets and mazyâdes were eventually constructed almost as Falâkî had designed them.

This tremendous flurry of municipal planning and reconstruction is based on the verbal descriptions given by Mohirî. See his al-Khâlidî, 1, 83: 11, 65, 68, 83, 118-124; 13, 35.
Financial difficulties approached a crisis in 1975 as the Egyptian government struggled to finance its ambitious program of nationalization. The government had previously been a major investor in the country, but in 1975 it was forced to reduce its expenditures in order to maintain payment of its external debt. This resulted in a significant decline in the value of the Egyptian pound, which had been fluctuating wildly since 1973. The government also faced pressure from international creditors, who demanded that Egypt bring its fiscal affairs under control. The country's debt continued to grow, and in 1976 Egypt was forced to agree to a new loan from the International Monetary Fund (IMF). This loan, known as the "Egypt Emergency Program," was intended to help Egypt stabilize its economy and reduce its reliance on foreign aid.

In the context of the Arab-Israeli conflict, Egypt's economy was also affected by the war in 1973. The country's oil exports, which had been a major source of revenue, were disrupted by the crisis in the Middle East. In addition, the war led to a significant increase in the cost of military equipment, which was financed through a large foreign loan.

Despite these challenges, Egypt continued to pursue its policy of nationalization and economic development. The government invested heavily in infrastructure projects, such as the Suez Canal Expansion Project, which was completed in 1975. The project was intended to increase the canal's capacity and reduce congestion, but it was also controversial, as it involved diverting a large amount of water from the Nile River. The government also embarked on an ambitious program of rural electrification, which aimed to bring power to areas that had previously been unreached. These efforts were intended to help Egypt achieve its goal of self-sufficiency in food production.

The government also continued to pursue its policy of Arab solidarity, despite the war with Israel. Egypt's relations with other Arab countries continued to be strained, however, due to disagreements over the country's policies and the role it played in the region. Egypt also faced challenges from the United States, which was critical of its support for Syria in the conflict, and from Israel, which continued to occupy the Sinai Peninsula.

Despite these challenges, Egypt continued to make significant progress in its economic and political development. The country's economy continued to grow, and it became a major player in the region, with a strong voice in international affairs. However, the country faced ongoing challenges, and it remained a significant source of tension in the Middle East.
The situation was anomalous. Officially, Egypt remained a member of the Ottoman empire subject to the ultimate authority of the sultan. In practice, however, she had Khedive Tawfiq (1879-1912), son and successor to the exiled Isma'il. In reality, however, decisions were made by the British Consul General (Lord Cromer between 1882 and 1907), often subject to the approval of as many as fifteen other European powers. Theoretically, a parliamenary government with ministries staffed by Egyptians administered the country, but Cromer’s slogan of “Egyptian nearer than ever” is an example of how limited her share of power was in reality. Neither the attempts to set up local government (embodied in the Organic Law of 1871) nor the efforts to deal one by one with the specific abuses of the Capitulations seemed to have altered the basic inequity of the arrangement.

British efforts during the first tentative years of occupation were directed toward agricultural reorganization, chiefly of cotton cultivation. One of the first public schemes undertaken was the reactivation of the barrages at Qanātīr, which, since its inception under Muhammad Ali in the 1820s, had proved a disappointing failure.86 Twice commenced under that ruler, it remained incomplete until Isma’il oversaw its final stages. But poor design and materials resulted in the appearance of serious breaches in the foundation when a full load was placed against the structure in 1865 and again in 1890. Since that time it had stood sentinel over the baking of the Crozet, Modern Egypt, in two volumes (The Macmillan Company, London, 1933). Sir Alfred Milner, England in Egypt (Edward Arnold, London: 7th edn., revised, 1899). Francis Adana, The New Egypt (T. Fisher Unwin, London: 1893); Lord Lloyd, Egypt since Cromer, in two volumes (The Macmillan Company, London: 1931 and 1932); and, of course, the innumerable Government Blue Books on the Egyptian question (of which appeared in the first year following Tāīrātīl al-Kalībī or the Arab travels). French-English conflicts of interest are treated in J. L. Lagrange’s, The Question of Egypt in Anglo-French Relations, 1879-1904 (Pembroke, Edinburgh: 1932). Complete documentation now exists to support my contention that between 1888 and 1908 neither of the two parties was entirely unreasonable. See the book by Robert Tignor, Modernization and British Colonial Rule in Egypt, 1882-1914 (Princeton University Press, 1975), especially pp. 88, 391-392.

85 These were concessions granted by the Ottoman Porte to Europeans, including exemptions from various local laws and financial responsibilities. More will be said of them later.

86 The purpose of a barrage, unlike a dam, is to maintain a relatively constant height for water downstream to permit year-round irrigation. For an early firsthand account of the barrage, see Governor Cawley’s map. These “barrages” were abandoned without any warning, leaving a list of various scattered notes. For later developments and an evaluation of this scheme, see Milner, England in Egypt, William Loeb, Irrigation of the Egyptians (Charles Scribner’s Sons, New York: 1916), pp. 170-171; and Tignor, Modernization and British Colonial Rule in Egypt, pp. 116-119.

Thus began a new phase of Cairo’s history, a phase marked by the final evolution of a self-contained colonial state, a notable step forward, by a total revolution in the technology of transportation, and by the development of an Egyptian middle-class city on the north. During the next decades, barrages, canals, and the dam at Aswān (first completed in 1902) helped to reorganize Egyptian agriculture, creating an agricultural surplus which permitted Cairo’s population to grow faster than the country as a whole. During the ensuing decades mass transit and then the automobile made their apparatus, permitting the physical expansion of the city along the newly created axes of transportation. The next decades also saw an intensification of nationalist sentiment and ideology which led eventually to Egypt’s independence.

These momentous events were sluggish in starting, however, and few of their results became apparent until the terminal years of the nineteenth century. The first decade of British occupation witnessed no drastic alterations in the development of the metropolis but merely a continuation of the trends that had already been set in motion during the later years of Isma’il’s reign. Whether stagnation was due to the fact that power was concentrated in the hands of a foreign group that viewed its responsibilities as “temporary” and “custodial” rather than developmental, or whether it was an inevitable renewal process that lay between 1885 and 1888 was characterized accurately as a “race against bankruptcy” is, for our purposes, irrelevant.

When Britain stumbled into the affairs of Egypt in 1882, its initial reaction was to feel marry to Egyptian interests and to hope for a speedy withdrawal. Throughout the first decade its official documents always refer to the temporary nature of the occupation and reiterate its intent to evacuate as soon as its self-rule were restored. Beneath these protestations—which seemed to have grown more vociferous as Britain became more firmly entrenched—there was an increasing reconciliation to her role, aided not a little by her realization that Egypt offered richer opportunities than previously believed and by her increasing dependence upon the Suez Canal for her Indian traffic. These “forced” her to tighten her hold over Egypt even as she paid elaborately lip service to evacuation.84

very controversial material, gleaned primarily from the account in Holloway, The Suez Canal, pp. 250-256, has been presented merely to indicate why few changes occurred in Cairo after 1875 and to prepare the reader for the next era which British occupation led to in the development of Cairo. Controversy still rages as to the causes and significance of the Urabi rebellion. For our purposes, its significance was that it provided a convenient rationale for further Egyptianization and for the next significant Egyptian statement: the death of Isma’il and the accession of his son, Khedive Tawfiq, to the throne of Egypt.

84 These conflicts in the British position are painlessly obvious in the writings of the time. Among the sources are: The Earl of river, moving its builders’ hopes to revise the system of Delta irrigation. Declared valueless in 1883, the barrage lay abandoned. Greatly reduced in size and replaced by a smaller project, it was used by-products of soil depletion and bilharziasis to the Delta.

This and other irrigation projects helped to increase Egypt’s agricultural productivity and expand the area under cultivation. Coupled with the establishment of elementary health and sanitation measures, this seems to have been responsible for the substantial population increase which Egypt experienced between 1872 and 1897. During that decade and a half, the number of inhabitants increased from about 6.5 million to over 9.5 million.85 Cairo shared in this population increase, growing from over 400,000 (my revised estimate) in 1872 to almost 600,000 by the end of the century. As before, her growth came not from natural increase but from migration, since deaths still outnumbered births in the capital, making it impossible for the city to maintain even a constant population without continuous replenishment from the countryside.86 The demographic revolution that was to drive down urban death rates faster than rural ones had not yet occurred. Some of Cairo’s increase resulted from foreign immigration, as Greeks came in search of commercial opportunities. Coupled with the machine-tool making, shops and minor industries being established, French, Swiss, Swedish, Belgian, and English entrepreneurs and just plain adventurers were attracted by expanding opportunities.

85 It is unlikely that the population growth was as great as these figures indicate. The 1892 Census generally admitted to be inaccurate and an understatement of true population. It is my considered judgment that the population was already in excess of 7 million at the moment in question. This is based on the admission of the Ali Bedu and the index of foreigners (small, absolutely, although large relative to the past) nor the setting of the bedouins can account for more than a fraction of the increase. Although reliable death rate statistics are unavailable for the period, it is an inescapable indirect conclusion that some net decrease in maulity must have occurred during these years, although such a decrease is certainly not apparent in the Cairo data. My best judgment, in fact, is that the largest rate of growth was marked by a decline in the average mortality rate, achieved primarily through control over the “exhaustive” death rate, i.e., that sudden influx of the “3rd rate” death rates was compensated for by more declines in the infantile, maternal, and epidemic. These data are dealt with in much greater detail in the chapter that follows.

86 In the 1875 Census the population of Cairo is given as 570,000. The 1907 Census estimates this at 589,000. A higher death rate in urban centers and the city is very characteristic of the preindustrial and early industrial era. In Cairo between 1872 and 1875 the average estimated CDR was about 28 per 1,000, compared with an average worldwide of 43/1000/1925. See Clerger, Le Caire, 11, 24, and Chapter VIII, below.

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Origins of Modern Cairo

PORTUNITIES WHICH, thank the immunities granted them under the Capitulations, they were privileged to exploit. To these must be added British military and civilian personnel assigned to protect the country and help administer its government. Other minority groups, such as Armenians, Jews, and Syrian Christians, also grew in number as their power increased. But the bulk of the city’s new population came, as before, from the rural hinterlands of Egypt.

Given the pressure of this substantial population increase, it was natural that Cairo expanded physically during this period. However, all expansions took place in those areas immediately adjacent to the built-up city, areas that had been blocked out for development under Isma’il but had failed to fill up for lack of population. The region just west of Aswāhlylah Gardens experienced the most intensive development, with taller and more tightly spaced commercial, financial, and consular buildings supplementing the villas, small apartment houses, and gardens of the previous decades’ growth. The major commercial zone had leaped from the Miski just east of the Gardens to the vicinity of Makhdīm Opera on the western border; the older center of European commerce in the Miski was given over more and more to Greek, Armenian, and Jewish merchants who provided cheap Western goods to the indigenous population.

To the south, the area of Isma’illah, which had been open land or open space in 1860, was divided into small lots to urban uses. Villas mushroomed in the southern half while higher density developments proliferated to the north, particularly in the neighborhood of the new hospital near the Miski and almāshārī Būlīq. Despite these changes, however, the area retained much of its suburban aspect, with buildings still interspersed by the gardens and agricultural plots which remained limited in extent. It may be that also that government buildings and ministry offices began to gravitate toward the linear strip east of and parallel to the Shāri‘ al-Qār al-Aynī south of Bīb al-Lūq. This land, originally the site of Buhārī Pascha’s plantations during the first half of the century, had been retained in royal ownership. As early as the time of Isma’il it contained the Ministry of Public Works; during the later period many additional ministries were grouped around it. These later nineteenth-century constructions formed the nucleus of the present governmental zone, known as al-Isna and Dawā‘īn (pl. of dawā‘īn). The concent...
tration of civil servants to staff these ministries led naturally to an increased demand for housing in the vicinity. Large white Victorian mansions, designed chiefly for the foreign "advisers," began to be constructed along the western edge of the governmental zone while, due to east of the strip, new apartment houses were built for higher-ranking Egyptian officials. Darb al-Jamiliyyah in the Sayyidah Zaynab section owed its upgrading to this new demand, and the Hilmiyyah quarter (on the site of the former Birkat al-Fil) was later developed in response to these same pressures.

Only along the shore of the Nile did former patterns of land use persist. These riverine lands were still not completely free of flood danger. In addition, the Khedivial family still held title to the palaces and royal gardens that stretched all the way from the Qasr al-Nil barracks southward to the Qasr al-'Ayni Hospital. Farther south near the Farn al-Khalji, the land formerly ceded to the Water Company and then abandoned was in disputed ownership, which precluded the possibility of its subdivision and sale. The expansion of the city into the riverfront strip, which is now the luxurious facade of the contemporary city, had to await the great speculative boom of the next century.

To the north of the existing city, parallel developments were taking place, particularly in the Faiqiah district, that triangular plot wedged in between the old Coptic quarter, just north of the Asbakliyah Gardens, and the diagonal course of the Ismailiyah Canal. By 1880 this area had already been tentatively subdivided and, in the decade that followed, row apartment houses architecturally reminiscent of the Passey Quarter of Paris began to be constructed. This area provided a safety valve for the heavily overcrowded and obsolescent Coptic quarter. Wealthier Christian merchants joined the recently arrived European migrants there to create a new middle-class zone which, via the roads built by Ismail (Shir'i Clo Boy and Shir'i Nabar Pasha, formerly the Qasr al-Dikkah), was directly connected to the newly evolved business district near Assakiyah.

Only one large pocket of potential settlement within the circuit of the existing city remained completely unexploited until the 1890's. This was the broad triangular plot bounded on the south by Shir'i Bulaq, on the east by Shir'i Nabar Pasha (now Shir'i 'Abd el-Yady and Shir'i Jumbirliyyah, respectively) and on the northwest by the Ismailiyah Canal. This area had once been submerged beneath the main channel of the Nile before the river shifted its course. It still remained a deep depression in the terrain where swamps combined with the concentration of canals in the vicinity to make it an ideal breeding ground for mosquitoes. The neglected wasteland became more and more conspicuous as the city gradually encompassed it. The draining and leveling of this site and the filling in of the superfluous canals was undertaken by Khedive Tawfiq in the mid 1880's, thus creating the quarter known today as al-Tawfiqiyyah, an integral part of the present central business district. When the land was finally subdivided and sold in 1899-1900, it found an eager market due to its proximity to the very heart of the new "western" city. Plots in the district brought prices well above those in the more peripheral zone of thousands of rural migrants who had been drawn to the capital. A new European-style city had developed parallel to it on the west and had begun to encircle it on the north, but this community remained socially and physically distinct. Each city had a predictable continuity of its own.

This continuity was abruptly shattered just as the nineteenth century drew to a close. The cause was a total revolution in both the demand and supply elements of urban growth. The demographic revolution in the country finally reached Cairo, and, combined with an unprecedented trend toward urbanization, served to swell the demand for capital city residence. At the very same time, a revolution in the transport technology of the city (tramways) opened vast peripheral areas to urban settlement, creating, as it were, a new supply of land to meet the demand pressures of population. The combined impact of these changes stamped into existence within the span of a single lifetime the vast attenuated metropolis known to us today.
that this population was roughly equivalent to the level that some scholars have estimated as a maximum during earlier periods, despite the high fertility rates. It appears that there has been the saturation level of the country when the economy was based upon agriculture and when the exploitation of the natural irrigation powers of the Nile was at a maximum, and the technological revolution of dams and barrages permitted the wide-scale conversion from basin to perennial irrigation, was this asymptotic ceiling exceeded.

This increase within fifty years is impressive and can be accounted for only partially by the settling of the beduins, which took place at this time, and by the immigration to Egypt from other parts of the Ottoman empire and from Europe. While the latter was substantial in comparison to the past, it was numerically insignificant in terms of total growth. Even in the absence of reliable vital statistics for the era, the conclusion is inescapable that the increase was primarily the result of a rather marked decline in mortality rates and, consequently, of a sharp increase in the rate of natural increase, since there was apparently no change in fertility.4

The declining death rate was experienced first in the rural sections of the country where dependence upon subsistence farming made numbers immediately responsive to the increasing food supply. In Cairo, where famine

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4 The only source this author has located which attempts to reconstitute the growth variables during the pre-British era of the nineteenth century is a publication of the Egyptian Ministry of the Interior, Bureau of Statistics, in 1879, Entité de statistique générale de l’Egypte, années 1872 . . . 1877 (Institut de l’Etablissement Maestri, Cairo). Vital rates to derive the population estimates in this publication were provided by Théodore Gérard Sainte-Suzanne. According to Table 1 on p. 6 of this report, between 1867 and 1877 deaths exceeded births in the country only during the years 1847, 1848, 1850, 1851, 1852, and 1859; 1858 was the nearest year of the era from 1845 onward, was 1897 in which in the total number of recorded deaths exceeded the total number of recorded births, although in 1846, as in 1851 and 1854, these data are not necessarily reliable in the manner described. Not too much credence can be given to these figures in themselves, since many of the observed changes may have occurred in the degree to which births and deaths were reported. Death reporting (except in the very young-age groups) was probably rather than birth reporting at the beginning of the period studied, since burial permits were required. Olynyk, p. 7. Over the years, the reporting of births, although not uniformly accurate, is far better than that of deaths, and death reports could be seen from the "order of magnitude" of the recorded numbers: around 44,000 births per year ca. 1845-1850, 50,000 by 1850, and about 60,000 by 1850-1855. It jumps to 140,000 by 1856, to 200,000 in 1857-1860, and then stays at 200,000-250,000 per year until 1900. The figures reconstituted to the authors of this report, between 1846 and 1881 Egypt experienced an annual net increase of population of 0.44 percent per year (compound annual growth rate), as compared with an actual growth rate of 0.92 percent per year. See expansion on p. 18. Growth rates after 1876 were even higher. The 19th century witnessed a sharp decline in the death rates, which were as low as 2.5% in the 19th century.
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is evident from the most recent intercensal periods when Cairo grew almost twice as fast as the country (see Chart 1). Table 1, which summarizes comparative growth rates for Egypt and Cairo since 1857, demonstrates this proposition beyond any question.

The spectacular growth of Cairo in the twentieth century—growth that has taken place within the lifetime of her oldest inhabitants—resulted not only from the general demographic "revolution" in the country but from what might be termed an "urbanization revolution." Cairo along with other urban centers throughout the country experienced the impact of a massive movement of population off the land and into the cities. In 1857, less than 15 percent of the Egyptian population resided in Cairo. For reasons that will be presented in greater detail below, it would be false to assume that all, or even most, of this urbanization involved the physical displacement of persons, although actual migration did play an extremely important role, particularly in the growth of the very largest cities, such as Cairo, Alexandria, and the new towns that developed along the Suez Canal. First, the high rate of natural increase in the country and the pattern of dense settlement on limited land have tended to raise a number of former villages to the urban size class without a relocation of population or, indeed, an acculturation to "urban" ways or an urban economic base. Second, growth in even the largest cities is now coming increasingly from natural increase, as will be shown.

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that by 1970 Cairo should have contained 17 percent of the Egyptian population. Cairo is still growing at about twice the national rate and faster than all urban areas combined.

During the twentieth century, Cairo's growth can be traced to three relatively independent sources whose separate contributions must be distinguished. In the analysis that follows, intercensal population increments are broken down into three components: (1) natural increase, the excess of births over deaths occurring within the city limits; (2) migration, the net change in population due to the excess of persons moving into Cairo from other areas over the number of Cairoines emigrating from the city; and (3) annexation, the incorporation of nonmobile persons into the city due to an expansion of city limits. Whereas the first two sources represent a true increase in the demand for urban expansion, the third is a by-product of that expansion. Statistically speaking, the former have been responsible for the major share of population increase, while the contribution of the third has been relatively insignificant.

During the decade between 1899 and 1907, insofar as the situation can be reconstructed from admittedly inadequate data, Cairo's population grew from 596,572 to 849,000 as shown in Chart I. The interpolations have been made from figures appearing in the published official census reports. Several words of caution concerning these figures must be introduced at this point. There are a number of discrepancies in the reporting of total and Cairo populations in various census editions. For example, the total population of Egypt, as reported in the original Census of Egypt, 1877, has been revived in later editions. In the Census of Egypt, 1907 (National Printing Department, Cairo: 1909), the 1877 figure was adjusted downward to eliminate the area that had been coded to the Sudan during the intervening decade. The Census of Egypt, 1927 (Government Press, Cairo: 1947) reports a further downward revision of the population total in 1877. Similarly, the 1877 figure for Cairo is given at about 720,000 in an earlier edition but 918,000 in a later revision. In these cases, I have used the most current revision of the figure in question. Therefore, individuals wishing to recompute or check the statistics presented in this chapter are urged to examine all relevant sources. The Preliminary Reports of the Census of 1966 have been used to compute the figure of 13 percent. A small degree of variation may be introduced if computations are made from final returns. However, on the basis of these tentative figures, it appears that the total population of Egypt increased by about 38 percent over the thirteen years since 1877. During this same interval, the total urban population (i.e., population in communities containing 20,000 or more inhabitants) increased from 2,073,700 in 1927 to about 5,952,000 in 1950 (computations made). This represents an increment of 69 percent over the earlier figure. Cairo's increase—from a million in 1937 to almost 5.5 million in 1966 (by boundary corrections)—was, in contrast, on the order of 75 percent. The projections for 1970 can be derived from Chart 1. Since this section was written, Cairo's population has been dramatically inflated by at least half a million refugees-migrants from the Canal Zone cities, as a result of the 1967 war.
30 percent of Cairo's growth could be attributed to natural increase while, of the remaining 70 percent due to in-migration, almost two-thirds was due to an influx of foreigners.22

The decade between 1907 and 1917 was, by contrast, a period of much slower population growth which coincided with a financial re-emergence (precipitated by the "crash" of 1907) and a dramatic cessation of many of the employment opportunities that the preceding boom had nurtured. Economic recovery did not begin until the World War 1 years, and this recovery, in Egypt at least, was really not experienced until about 1917 when Britain concentrated many of her installations and personnel in the Cairo region. This slowing down of urban growth is masked, statistically, by a boundary expansion of the city which must be isolated before internal developments can be evaluated.

Between 1907 and 1917, the boundary of Cairo, which had formerly included only that part of the urban region on the east bank of the Nile, was expanded to include the settled portion on the west bank as well, which increased the area of the city from 108 to 161.7 square kilometers. By 1917, therefore, the city included 34,500 persons living in the primarily agricultural communities and estates that dotted the western shore. When one eliminates this "fictitious" growth from the intercensal War 1 years, and this recovery, in Egypt at least, was really not experienced until about 1917 when Britain concentrated many of her installations and personnel in the Cairo region. This slowing down of urban growth is masked, statistically, by a boundary expansion of the city which must be isolated before internal developments can be evaluated.

The remainder of the increase was due to an excess of births over deaths, and, as new settlements and inhabitants to a less marked movement of Egyptians from rural regions within the country to the capital city. While it is impossible to gauge the precise proportion due to each, one can reach a rough estimate of the increase from an internal logic. An examination of the vital statistics for Cairo during the period leads us to conclude that the net rate of natural increase could have been no higher than 3.5 per 1000/year. This would have been a "steady" rate, unaffected by "periodic" (i.e., every several months later and was not unrelated to them causally), with its attendant foreclosures, mortgage defaults, and contraction of credit, served notice that Egypt was not to be another "America." Fortunes were not to be made on a speculative shoestring, the myth that had attracted so many of the foreign immigrants during the

My analysis of the proportion of Cairo's growth attributable to net increase and immigration is in complete disagreement with that of the demographers who compute the Census of Cairo, 1907, their estimates appear on pp. 26-27 of that document.

This point, so obvious from a critical examination of the statistical sources, seems to have been totally overlooked by other students of Cairo's growth. It will be particularly important to bear this in mind when the actual pattern of the city's physical expansion is discussed in the next chapter. The great period of speculative building and of opening up new areas occurred between 1879 and 1907, not in the depressed decade that ensued.

18 These figures have been taken from the Summary Table 1, p. 2, contained in the Census of 1907, Government of Cairo (Government Press, Cairo, 1914). Evidently, Egyptian demographers are found in their documents on this subject. Both population figures are higher than those recorded in the Census of Egypt, 1907, Table v, p. 30.

19 For the basis this assumption is, in part, intuitive, in the sense that it is the assumption which best reconciles existing vital statistics data available for Cairo with the known rates of population growth. While no absolute proof can be offered, the following is certainly a reasonable indication of what happened. In a press statement of the Ministry of Interior, Department of Public Health, issued a set of vital statistics on Births and Deaths in the Principal Towns of Egypt for the First Quarter of 1905-1906 (National Printing Office, Cairo: 1906). Cairo data are presented separately. In January-March of 1905, the CBR for Cairo was computed at 2.7 and, since then it is shown in the most reliable

20 As of the first quarter of 1906, the CBR was 3.5. For comparable figures of 1905, the rates were respectively: CBR 4.1 for the first quarter and 4.4 for the second quarter; CBR 2.8 for the first quarter and 3.4 for the second quarter. Averaging the natural increase rates for each quarter in each year, one arrives at about 7/1000, a figure quite consistent with evidence from other sources.

While I shall attempt to avoid too technical a discussion of Egyptian statistics, some explanation of why I have interpreted existing data rather "freely" must be given to the specialist. Vital statistics, that is, annual births and deaths from which mortality and fertility rates can be computed, have been collected in Egypt since the period of I mam. The quality of this reporting, particularly in rural areas and until very recently even in urban ones, has left much to be desired. Underreporting has been the rule rather than the exception. While this is no longer of statistical significance, the systematic correction of this underreporting may still be as high as one-third outside of the major towns. Series of crude birth and death rates for Egypt and for Cairo may be found in a variety of sources. The Department of Public Health publishes summary volumes of vital statistics as well as a Quarterly Return of Births, Deaths, Infectious Diseases, Marriages and Divorces together with the corresponding average areas of the public health bureaus. Clerget, Le Caire, n. 24, has conveniently compiled the series of crude birth and death rates for Cairo between 1879 and 1930, which is easily brought up to date by the governmental publications noted above.

I have chosen 1917 as a break point in this volume because they would require substantial revision. The major conclusion that can be reached by a demographer when confronted with these figures is as follows: Since the error of the 1907 census was not corrected, and that the constants that would be required to correct them cannot be reconstructed from the past. For example, if we accept the figures at face value, it would appear that Cairo's crude birth rate has increased over the past century from 45-50 to 70-75 per 1000. A biological analysis of this sort, however, cannot be made in this deeming such an increase in fertility has occurred. To investigate even this simple point would involve research on pre-modern small beginnings, however, have been made in answering this question. To take an even more obvious example, one can compare fertility rates in rural areas with those in urban areas and conclude, on the basis of published statistics, that the urban birth rate is almost twice as great as the rural. This, from the few careful demographic analyses that have thus far been made, is certainly untrue. Among the studies that may be consulted for "true" figures on fertility rates in the "Fertile Places in Selected Areas in Egypt" (unpublished Ph.D. Dissertation, Princeton University: 1959); Mohamed El-Bedwy, "Some Demographic Currents Based on the History of Census Age Distributions," Michaelis Memorial Fund Quarterly, XXXIII (July 1955), 306-305; H. Schott-Ahls-Mach, "Life Table Functions for Egypt Brand

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By early 1939 all signatures had been secured, and by June of the same year the Governorate of Cairo formally adopted the plan. In 1939 Elkhokh and Jones recommended by both the ministries of Public Works and Health. Among the expenditures authorized in 1939 was the preliminary sum of £75,000 from the Reserve Fund for the Cairo Drainage Scheme. Two contracts were awarded: one to an English firm for the surface water drainage of Cairo, the sewerage of Zaytun and other suburbs, the construction of the main collector, and the building of purifiers at Khalkhail five miles north of the city; the other to a French firm for the construction of the rising main from the central pumping station to the purification works.

With financial support assured, execution of the drainage system was begun, although progress was slow and intermittent. By 1941, however, most of the system had been completed, including the main collector, the purification works, the sewage farm at Khalkhail, the main pumping station, the compressed air station and 65 excavators. The system was officially inaugurated by the Minister of Public Works in March of 1939. Although the system was designed to cover all the newer quarters of the western and northeastern sections of the city as well as substantial portions of the medieval town (excluding the funerary quarters of the east and south, the island of Rawdah, and the western boundary beyond the more inlying portions of Subura), sewer reticulation and house connections lagged behind, due to the interruption of the war. It was only after the war that intended to be covered, with an additional 25 kilometers of sewers laid in 1940 and some 27 more, primarily in the older quarters, installed in 1940. And while in the newer quarters many owners availed themselves of the opportunity to connect with the system, participation in the older quarters was extremely spotty. The effects of even this incomplete sewerage system in depressing mortality rates within Cairo were not long in appearing. It is believed that it was not accidental that the 1920’s witnessed such a rapid decline in the death rates prevailing in Cairo and that, after the initial and rather sharp descent, the change in rate leveled off somewhat. The inauguration of the drainage system, supplemented by later extensions and the establishment of a parallel system at Zaytun on the western bank, contributed in no small measure to the emigration of a healthier urban environment and thus to the increased chances of survival of the urban population.

While it is impossible again to separate precisely the portion of Cairo’s growth attributable to increased rural-to-urban migration from the portion due to her improved potential for natural increase, some rough estimates may be offered here. In 1937, there had been some 2,300,000 Cairo inhabitants. In 1947, an additional 76,660 born outside the country. By 1957, these figures had increased to 3,985,691 and 81,835 respectively. Weighing these increments against a total population gain during the decade of 275,600, and cross-checking this against the estimated rate of natural increase, I conclude that, during this period of extremely rapid urban expansion, a little under half of the increase was due to an excess of births over deaths while the remainder was the result of net immigration to the city.

The fact that most of the migrants arrived early in the intercensal period helped to swell the increase due to natural increase.16

The prospersous 1930’s were succeeded by the depressed 1940’s, in Egypt no less than in the rest of the world. Egypt experienced a severe recession in 1940, due to the temporary drop in cotton prices, from which she had not fully recovered when the 1947 New York crash reverberated on the Egyptian stock exchange. In Egypt, as elsewhere, this economic state was rather directly reflected in both a slower rate of population growth and a depressed rate of urbanization. In fact, it appeared to contemporary observers17 that Egypt’s rate of population growth might actually be stabilizing at a maximum of 1.2 percent/year, since the death rate showed no signs of further decline. During the 1937-1947 decade, population increase was moderate, the total rising from 14,247,864 at the beginning of the period to only 15,955,654 at the end. A somewhat similar situation prevailed within the city of Cairo. The momentum of the previous drop in the urban death rate appeared to have played itself out, and contributed to the slowing down. The end of the decade was only slightly higher than it was ten years earlier. Furthermore, migration from the rural areas to the cities was temporarily suspended. Poor as conditions may have been, the Egyptians, many preferred the marginal subsistence of farm areas to precarious employment in urban centers. A very similar phenomenon was noted during the depression era in other parts of the world, including much highly industrialized countries as the United States where urban growth rates received a temporary setback. Thus it was that the population of Cairo grew from 1,603,979 in 1947 to only 1,612,096 by 1957. Of this relatively small increment, approximately two-thirds could be attributed to the effects of natural increase, which by then was slightly higher in the city than in the remainder of the country, while the remainder was due to an inevitable migration trickle. Despite the comparatively slow rate of population increase during this decade, there was little doubt that pressure was building to explosive levels in the rural areas. The standard of living, which during the nineteenth century had shown a fairly constant rise, dropped faster and faster as population outdistanced resources. While some land was added to cultivation with the successive heightenings of the Aswan Dam, this did not keep pace with population increase. Much of the existing land was subdivided into smaller plots to accommodate the inhabitants of the swollen villages. Cairo, with its lack of demand, could no longer serve as a safety valve although it did absorb people from the rural hinterland. Last year, crowding into the older districts of the city or seeking squatter’s rights on still vacant wasteland or in makeshift tomb dwellings in the funerary cities on the eastern and southern fringes of the city.

Said the situation of country and city when World War II began. Rural pressures on the land found a wicked outlet in the major cities where industrial and military population had been generated by the war. An exodus from village to city began in the early 1940’s and continued in unprecedented fashion. The internal migration that had occurred toward the end of World War I and in its aftermath, substantial as it had been, was in retrospect a minor current when contrasted with the flood of migrants who invaded Cairo and other major Egyptian cities in the early 1940’s. Between 1937 and 1957, with only a modest boundary adjustment that increased her area from 164 to 178 square kilometers (and that of land still predominantly in agricultural use), Cairo was called upon to absorb more than three-quarters of a million additional inhabitants. By 1947, her population exceeded 2 million and had been growing at a rate close to 5 percent per year. It was inevitable that this enormous population growth not only led to astrophosphrophic conditions in the city quarters but set in motion new urban expansions which totally transformed the outlying sections.

It would be incorrect, however, to assume that migration accounted for all of this urban increase. As before, a substantial portion of the growth came from natural increase, the dynamics of which were changing radically. The stability of the death rate throughout the 1930’s proved illusory, for with the return of prosperity came another decline in mortality rates that forced population up at the rate of about 1.8 percent per year. Cairo, due to her superior standard of living and health care and to the fact that the migrant population swelled the ranks of the fecund 15 to 40 age groups, experienced an even higher rate of natural increase than did the remainder of the country. It is possible to estimate that, even in the total absence of in-migration, Cairo was capable of growing at the rate of at least 2 percent per year, safely from an excess of births over deaths. When one adds to this the immigration of several hundred thousand villagers, one begins to appreciate why Cairo’s population grew so rapidly during the war and postwar years. Between 1937 and 1947, of 778,558 new Cairoites, some 42 percent had been added through natural increase while those remaining 35 percent had entered the city through migration.

As has been true during World War I, residential construction virtually ceased at the very time when the city was becoming crowded. Thus, by 1949, the city’s facilities were badly strained. Older quarters that had been fully built up and overcrowded even during the preceding decades became even more densely packed as new inhabitants crowded into the remaining 10 percent per square mile and higher in certain of the inlying subareas. Close to 50,000 persons were living in the cemetery zones alone. Peripheral areas which at the beginning of the war had been vacant or in agricultural use were converted to urban uses, and other built-up fringe sections doubled and trebled their populations. The prosperity brought about by the war was sustained into the postwar decade which saw construction undertaken on an unprecedented scale.

Even before Cairo could begin to assimilate the increase population that had been her legacy from the war, she was again confronted with a new demographic crisis, the continued effects of which dominate the present era. The national death rate, which had shown only a small net decline during the preceding few decades, suddenly began a steep descent. Beginning with 1946-1947,
health conditions in Egypt experienced a notable improvement, the result not only of extended and better medical facilities but of the wider availability of new wonder drugs and insecticides. While infant mortality rates enjoyed the maximum impact, all age groups benefited from the decline. Cairo shared in this improvement if, indeed, it did not lead the way, experiencing a rapid decrease in its death rate from about 30/1,000 in the mid-1940s to about half that rate by the mid-1970s. Since the crude birth rate remained impervious to change, this resulted in an even more rapid rate of natural increase than had been the wartime. While migration from the rural areas declined somewhat (proportionately, although not absolutely) after the war, this was more than offset by the new demographic imbalance between births and deaths. The effects of DDT, penicillin, and other antibiotics on the crude death rates in underdeveloped countries throughout the world since 1946 have been noted by numerous demographers. Thus, this phenomenon was not unique to Egypt but was worldwide in its impact. In general, a differential decline in death rates has been noted within these countries, favoring the population in the younger age groups over those in the older ages and favoring the urbanized population over that in rural areas.

Recorded crude birth rates for Cairo have actually been rising over the years; during the most recent period they have ranged between 50 and 55. Older definitions in reporting have been almost totally revised, which accounts in part for the considerable increase. It now appears unlikely that the crude birth rate was ever much less than 48, despite recorded rates in the low 40s. Part of the recent observed increase is real, however, even though it does not necessarily indicate greater fecundity. The crude birth rate should be used with caution since it is affected by the age and sex distribution of the population. For example, an increase in the crude birth rate—indeed of a fertility change—will appear when the sex ratio of the population changes from a heavy excess of males to a more balanced relationship between males and females, a change that has recently occurred in Cairo. At the beginning of the twentieth century, the city was weighted toward males. Since about 1927, the ratio has been equalizing, having been approximately 103 in 1947 and only 101 in 1960. In addition, one can expect a higher crude birth rate, 

Since 1947 Egypt’s population has been growing by more than 2.5 percent per year, as compared to the world growth rate of about 2 percent per year. This resulted in a total population of over 26 million by the date of the Census of 1956 and about 35 to 35 million by 1970. Cairo’s population has been growing at an even faster rate. Since 1947 the number of city residents has increased by about 4 percent per year, yielding a 1965 total of close to 1/2 million. Cairo’s population, as projected to 1970, reached 6 million, exclusive of the rapidly growing industrial suburbs of Iftah to the west, Halwa’ to the south, and Davutli Mita to the north.

Of perhaps even greater significance is the fact that, unlike earlier decades, much of this growth has been unavoidable, since it came more from internal demographic potential than from migration. Of Cairo’s growth between 1947 and 1960, at least three-fifths was due to an increase of births over deaths in the city itself, a phenomenon which shows no signs of diminishing. Even if the attempts of Egypt’s planners to deflect migration streams from Cairo and channel them to other industrial centers are totally successful, this will curb only a small fraction of the city’s anticipated increase. The excess of births over deaths within Cairo will be sufficient to sustain a growth rate of at least 3 percent per year, an increase impervious to migration controls and other devices of growth limitation. It is therefore safe to predict the continued growth of Cairo in the decades to come, growth which, since it cannot be prevented, must at least be planned for.

The demographic and urban revolutions that began in Egypt during the nineteenth century but reached full strength only in the twentieth operated to concentrate within the capital city a population of several million persons, many of whom were actually newcomers to an urban way of Life. However, over this period, Cairo’s growth pattern was transformed from one in which the dominant—and indeed only—source was migration to one in which the major source of population increment has become natural increase. Until the closing years of the last century, the increasing demands upon city resources imposed by the rapidly growing population could be met in a manner not dissimilar from that employed during earlier periods of expansion. Medieval Cairo, at the peak of her prosperity and grandeur, had contained almost as many residents as the 950,000 persons who lived in the city of 1872. And medieval Cairo, during the fourteenth century, had covered almost as extensive an area as that staked out for urban development by the end of the nineteenth century. Thus, while the character of parts of the city had changed markedly in the interim, the basic factors of supply and demand had not. Only with the fantastic expansion of demand in the twentieth century came problems that could not be solved within the framework of the older technological order. The revolutionary demands generated in the present century required a commensurate evolution in supply. Urban space—both horizontal and vertical—was required to accommodate millions of new urbanites, and modern facilities were required to permit the larger and infinitely more complex metropolis to function and survive.

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The Increased Supply of Urban Land

Just as the expansion of Cairo during the Middle Ages was preceded by the recession of the Nile which made available new or old arable land, so the twentieth-century expansion was also facilitated by the addition of land. But whereas nature had been the active agent in the former case, during the present century it was man, armed with a newly gained power over nature, who "creased" the lands by making them accessible to the city and by draining or irrigating them—thus converting them into that precious commodity, urban land. This transformation was accomplished within a relatively brief moment in Cairo's long history, between about 1872 and 1917.

Peripheral land to the north and northeast of the city had always been in existence but, as long as transportation was by human or animal means, such land lay beyond the limits of reasonable accessibility. Separated from the heart of the city by several hours of tedious travel, the land was suitable only for truck gardening and other nonurban uses. Once transportation links were forged that brought them within an hour or less of travel time from the city's core, these lands became sites of potential urban expansion.

Similarly, the land was to the east of the city, but its elevation on the plateau and foothills of the Musqatam range placed it above the valley floor and rendered it a useless desert. Urban expansion into this area—or indeed any settled habitation—was precluded by the character rather than the location of the land. Only artificial irrigation could convert this land into a site for potential city growth.

If too little water prevented expansion to the east, its opposite hindered the setting of land to the west along the borders of the Nile. Up to the twentieth century, this land was still threatened by periodic flooding, causing structures to be confined to isolated high points in the terrain and consigning the bottom lands to winter cultivation. Until the fluctuations in the level of the Nile could be controlled with greater skill, this land also remained unavailable for urban growth.

Farther west, on the two islands formed in the center of the Nile (Rawdah and al-Jazirah) and on the fertile broad valley of the western bank, were additional lands not yet functionally related to the city. It was not distance

1 A case study of the effects of the transportation system on the conversion of nonurban to urban land has been done for the city of Boston, which offers an interesting parallel to the situation in Cairo. See Sam Walters, "Streetcar Suburbs" (Harvard University Press, Cambridge: 1965).

per se that prevented the city's expansion into these areas but the barrier of water. So long as access to the western bank could be gained only by wind- or muscle-driven ferries or over the single thin strand of bridge built by Isma'il, these lands could not be developed as an integral part of Cairo.

Distance, drought, flood, and the river, then, were the four forces which prevented Cairo's physical spread, which hobbled the city in all compass points and confined urban development to the region already settled by the end of the nineteenth century. During the opening two decades of the twentieth century each of these barriers was stormed, leaving the surrounding terrain almost defenseless against the tide of urban expansion demanded by Cairo's population explosion. In the history of these campaigns one found the key to the modern ecological structure of metropolitan Cairo.

The only meaningful measure of distance in a city is the amount of time, effort, and expense required to travel from one point to another; anything that reduces these "costs" shrinks distance. In this sense, nineteenth-century Cairo shriveled to less than a third of its original size (if looked at from the opposite point of view, tripped her area without increasing her size) within the two decades between 1896 and 1916. For in those twenty years a system of mass transit was installed which connected even the most distant points of the expanding city with the central core in a complex network upon which the present city is still heavily dependent.

Cairo inaugurated its first electric tramline several years before New York City was to take advantage of this means of transportation. The initiative and the capital came from Europe, a phenomenon we shall note over and over again as we examine the technological changes that took place in Cairo in the early decades of the twentieth century. In December of 1894, the Baron

2 Modern Cairo, more than an American city of comparable size, is essentially a mass transit city. The private automobile (which made its Cairo debut in 1906) was never a major player in the crucial role in Cairo that it has to the despots of planners in Western cities. The high cost of cars and gasoline coupled with the low level of income protected Cairo until fairly recently from a surge of automobiles but made her dependent upon a new, obsolete and overburdened mass transit system. The backbone of the system is the electric tramway that clings in its predetermined course down the center of most wide thoroughfares. Beginning in the 1930's, it was supplemented by buses. Gradually, trolley tracks have been removed from many routes as the trains have been converted to overhead wires.

Empain (better known in his capacity as the founder of the modern suburb of Hel良opolis) was granted a concession to establish a tramway system for the city of Cairo.

The following year he assigned this concession to a joint stock company which had been organized for that purpose by his fellow countrymen in Brussels. Funds were readily raised as European speculative capital was attracted to Egypt in anticipation of a boom. The original agreement had specified eight lines or routes, of which six were to radiate from the central terminal of Maydán al-'Atabah al-Khadžr at the southeast corner of the Azbēkāh Gardens. Between 1896 and the opening month of 1908 all eight lines, having a total track length of 24 kilometers, were inaugurated. The aim of this initial system was to create an internal network linking important points within the built-up portion of the city, not to extend the boundaries of that area. This fact is seen clearly in a catalogue of the routes themselves.

The First Eight Tramlines in Cairo*  

<table>
<thead>
<tr>
<th>Description of Route</th>
<th>Date of Inauguration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Line from al-'Atabah al-Khadžr via August 1896</td>
<td>Boulevard Muhammad 'Ali to Maydán Muhammad 'Ah (the old Qaramaydán below the Citadel).</td>
</tr>
<tr>
<td>Line from al-'Atabah al-Khadžr via August 1896</td>
<td>Shairi Bridge to the original Abī al-'Abī Bridge over the Ismā'ilīyah Canal near the shore of the Nile at Būlāq.</td>
</tr>
<tr>
<td>Line from al-'Atabah al-Khadžr via September 1896</td>
<td>Shairi 'Abdul Arūz to Bīb al-Lāq and from there south to the Nāqīlāy (pond) section.</td>
</tr>
<tr>
<td>Line from al-'Atabah al-Khadžr via September 1896</td>
<td>Shairi Ghot-Bey north to al-Faj’ilāsh and then eastward to 'Abbāsiyyah.</td>
</tr>
<tr>
<td>Line from al-'Atabah al-Khadžr December 1896</td>
<td>southwest to Bīb al-Lāq and from there to the Qāzr al-'Ayni complex.</td>
</tr>
<tr>
<td>Line from al-'Atabah al-Khadžr via December 1896</td>
<td>Shairi Ghot-Bey to the railway station at Bīb al Ḥadīd.</td>
</tr>
</tbody>
</table>

Increased supply of urban land

Another fact is equally obvious from the catalogue. It would not be an exaggeration to claim that Cairo's mass transit system, at least in this initial stage, could not have been installed without the prior replanning of the city executed under Isma'il and his chief engineer, 'Alī Mubāriz. Not only that the metaphors of the new streets created in the 1860's and 1870's was invested into service as an essential link in the evolving transit system. There is no doubt that without the far sighted efforts of that earlier period such rapid installation of a transit system would have been impossible. Certainly, areas that lacked straight thoroughfares of modern dimensions were simply and totally ignored. Thus, the entire medieval core city was left out of the network, to this day a defect only partially remedied.

Initial progress was rewarded and, in 1897 and again in 1904, the concession of the company was extended to additional lines that were more ambitiously conceived than the first eight. The transit system was to be extended to areas beyond the built-up borders of the city and, within the city, was to be channeled along newly created routes. In this process Cairo's oldest landmark, the Khālij, disappeared, leaving a less picturesque but infinitely more functional thoroughfare and tramline as its substitute.

* A number of sources have been consulted to build up a comprehensive description of Cairo's evolving transport system as presented in this chapter. Among the more valuable are: Clerget, Le Caire, i, particularly the table compiled from the transit records that appears on pp. 107-108, and which has been adapted for our use here; Pāvă Faur, al-Qāhirah (McGraw-Hill Press, Cairo: 1945), ii, 561-565; Emīl Bousaid, Les tramways du Caire en 1904 (Imprimerie Barbery, Cairo: 1935); and several chapters in Montāfa Niţās, al-Qāhirah: Diwān Ta'dīkāt Tālām al-Mustāsir al-Khālij wa al-Mustāsir al-Mansūh (Cairo: Planning Studies in Traffic, Transport and Communications) (Anglo-Egyptian Library, Cairo: 1936-1939).

73. Ceremonial cutting of the dike to the Khālij ca. 1800.
The reader will recall the long history of the Khaliij. The canal connecting the Nile with the Red Sea had first been dug in the days of the pharaohs; it had been re-opened by Trajan during Roman times and had been reactivated by 'Amr after the Arab conquest. But gradually it ceased to be a link with the Red Sea and was reduced in function to irrigating the northern outskirts of Cairo and providing water to the city. Its ceremonial importance, however, exceeded its functional significance. For untold centuries (certainly predating the Arabs), religious ceremonies and great festivities had attended the annual cutting of the dikes of the Khaliij at Cairo. (At first, when the water level was higher, the canal was navigable all year and the flood stage was marked by construction of a dike. Later, as the land dried, this procedure was reversed, with the dike opened at flood time.) By this ceremony the head of the Egyptian state signalled to the entire Delta the moment after which the Nile's replenishing flow could be released over the parched earth. But, little by little, the Khaliij was diverted of its functions and, with the introduction of perennial irrigation, even its ceremonial importance was undermined. On the other hand, increased dessication had changed the canal into an unattractive and dangerous source of infection. The time was ripe for it to be filled.

In 1892 the Tramway Company agreed to compensate the city for converting the ancient canal bed into a level and wide thoroughfare and to construct a tramline along its entire length from Zahir (Mosque of Baybars I, north of al-Husayniah) to its bend at Sayyidah Zaynab (near the site of the seven water wheels of early history). Filling began the following year. By the summer of 1900 the course which had once carried white-sailed boats was being crossed by wooden trucks on a beeline traverse by rail. The work was completed in 1902, and the tramline was opened. The period between 1902 and 1907 was a period of rapid development in the city, and the tramlines played a significant role in the city's growth. The tramlines were particularly useful in transporting goods and people between the city center and the suburbs. The tramlines were also instrumental in the development of new neighborhoods and commercial areas along the tramline routes. The tramlines were eventually replaced by buses, but they left a lasting legacy on the cityscape of Cairo.
The process was one very familiar to students of urban land economics, one which has been replicated in every Western city under similar circumstances, and one which still continues, although superhighways have now superseded streetcar lines as the stimulus. It is significant to note that speculation began well in advance of a population growth that would have permitted urban development of all lands taken out of agriculture. Land was simply held vacant, even including plots in the central portion of the city, in anticipation of future gains. In the eighties of the last century, the character of land use began to change; wholesale and storage warehouses gravitated northward from Bulaq into the Shihāl Rawd al-Faraj (as the former port at Bulaq was relocated farther north), casinos and resorts were established at the ends of lines, and "speculator" houses were jerry-built along the north-east axis toward and beyond 'Abbāsīyah.

Other lines were soon added, either to fill in the interior network or to reach across the river over the series of new bridges that had been constructed. By 1911, 98 kilometers of tramlines were in use, over which rolled some 8,513 trolley cars serving about 55,700,000 passenger-fares yearly. Thus, in the brief span of only fifteen years, Cairo had become a mass transit city. The Euecker edition of that period assured its readers of Cairo's ubiquitious and convenient system of transportation. By that time, one could travel between al-'Atabah and Mīr al-Qudināwī in less than forty minutes on tramcars that passed every six or seven minutes. This was the trip that had taken several hours over a dusty donkey path less than fifty years earlier! At twelve-minute intervals a tram ran between the Sporting Club on the Jāzirah, the Atehā-kiyāt Gardens in the heart of "down town," and the Citadel—a journey which, again, had required several hours and several modes of transportation in earlier days. Every three minutes a tram was dispatched from al-'Atabah al-Khadīrī to the railway station and, from there, to 'Abbāsīyah, once the desert outpost near which beduins encamped. Within five minutes one could catch the tram that left from the Mosque of Baybars (at the time of Napoleon isolated amidst cornfields, now the heart of the well-populated district of Zāhirī) for Saidhāl Zaynah and the slaughterhouses beyond, traveling along the course of the old Khālij Mūsi. Every six minutes trams served the growing suburbs of Shubra and Rawd al-Faraj on the north. Only the west bank of the river remained relatively inaccessible; the single line between the Qasr al-Nil Bridge and the pyramids carried only one car every twenty to thirty minutes.*

**Final Additions to the Tram System, 1908-1917**

**Date of Inauguration**

18. Line connecting Idris on the west—March 1908 across shore with Mīr al-Qudinah via the new bridges (see below).
20. Between the Qasr al-Nil Bridge March 1910 (east bank) and Māyūn 'Abdīn and Māyūn 'Abd al-'Azīz.
21. Along Shāhī al-Faydiyah to the Between maydān (Karakol) near Bīb-al-Ah bar 1910 Ḥasīlī and then northeast to Sakā- kīnī, January 1911.
22. Connection between Sayyidah Zaynab June 1911 nab and Nāṣīrīyah.
23. Sayyidah Zaynab southward to the September 1911 abortors.
24. From Bulaq over the new bridge to July 1912 the Jāzirah.
25. Between the two western bridges October 1912 on the Jāzirah.
27. Connection between the Jāzirah March 1913 and the village of Imbūhān on the western bank via the Šamsīlīk Bridge.
28. Extension of the northern lines to November 1913 Rawd al-Faraj and Shihāl Rawd al-Faraj.
29. Line from the Citadel southward December 1916 into al-Khalīfah cemetery as far as the Tomb of Imām Shāhī's.
30. Southern extension from Mīr al-September 1917 Qudinah to outlying Athar al-Nabī.

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*Figures on rolling stock and passenger-fares used throughout have been assembled from various issues of *Dawar Statistik*, issued biennially until 1906-1901 by the Government of Egypt, Department of Statistics and Census. See issue of 1914 as well as later editions.*

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80. Al-'Atabah al-Khadīrī in the 1940's decade that followed, the character of land use began to change; wholesale and storage warehouses gravitated northward from Bulaq into the Shihāl Rawd al-Faraj (as the former port at Bulaq was relocated farther north), casinos and resorts were established at the ends of lines, and "speculator" houses were jerry-built along the north-east axis toward and beyond 'Abbāsīyah.

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81. Streetcar line to the pyramids

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82. The Shāhī al-Athār shortly after it was opened

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**INCREASED SUPPLY OF URBAN LAND**
were desicated plateau lands which prevented the city’s expansion in that direction. Up to 1953, only one attempt had been made to crush through the desert barrier\footnote{By 1941, 24 kilometers of Metro lines were in operation. After that date, only 3 kilometers of feeder lines were added, the maximum being reached about 1950. After that, the extent of trackage was reduced to 22 kilometers, its present length. See Annuaire Statistique, various issues from 1914 to 1954.} and that attempt, a prototype for all to come later, was realized in the creation in 1940 of Cairo’s most impressive suburb, Heliopolis. Its development was intimately tied to the expansion of the mass transit system in Cairo.

In 1906, the Tramway Company had agreed to construct and equip an electric street railroad (Metro) which would serve its new community. By 1908 the outermost portion of this line was already in operation, connecting the new city with the terminus of the tram tracks at ‘Abbâbiyâh. In the following year another line was inaugurated to link Misr al-Jadidah with the other outerlying suburban community of al-Qubbah, where the residential palace of the Khedive was located. In 1910, the system was completed by an extension which continued the Misr al-Jadidah-‘Abbâbiyâh line all the way to the terminus at Port Limonau station, just across the Ima‘âlîyâh Canal from the rail terminal of Báb al-Hadid. Other feeder lines carried traffic into the heart of the city, although these have since been removed. It was this transportation link which permitted the growth of Heligopolis and which resulted, much later, in a continuous band of urban settlement stretching all the way from ‘Abbâbiyâh to Heligopolis and beyond. The gigantic gamble undertaken in the opening decade of the twentieth century by a Belgian “robber” Baron recompressed its foreign investors beyond their wildest hopes.

Some indication of the venture’s success is that by 1927 the suburb in the desert contained a resident population of almost 50,000 persons and now houses more than twice that number. Nor is it any longer a mere dormitory suburb. Close by are three airports, extensive military installations, and numerous factories offering local employment. In addition, an important secondary government center is located within the town itself as well as a fairly self-sufficient central business district. While large numbers of its residents still commute the half-hour to Cairo, the community has gradually taken on many qualities of the satellite town initially envisaged by its founders.

Thus, within the opening two decades of the twentieth century the desert barrier had been pierced, although admittedly the single breach at Heligopolis was far from...
THE MODERN ERA
a decisive victory. It proved, however, that expansion into the desert was feasible and economic; further conquests required merely the stimulation of demand.

These were also the decades during which Cairo conquered the barrier which the Nile had always presented. Although the opening skirmish had taken place in the nineteenth century, intensive canal building and the first iron bridge of Qar al-Nil, it was not until the first years of the twentieth century that the city was able to break through the riverine barrier sufficiently to permit urban development of the low, river-margin land, of the islands in the middle of the river, and of the agricultural land on the western bank.

The decisive "battle of the Nile" was not fought at Cairo but more than 500 miles upstream at the cataract above the uppermost provincial town of Aswún, not far from the Sudanese border. In February of 1858 a group of British financiers combined to underwrite the costs of constructing a dam and reservoir at that site, engaging the firm of Sir John Acland and Company to execute the massive engineering project. By December of 1902 a dam, a mile and a quarter in length and capable of maintaining a 95-foot head of impounded water, was dedicated and put into operation.19 This low Aswún Dam with its associated reservoir gave Egypt some measure of control over the river at whose mercy she had existed since earliest recorded history. During the late summer flood and the winter months, the reservoir stored the excess water which formerly had roared and eddied downstream, overflowing the banks before being lost finally into the Mediterranean. These impounded waters could be drawn off during the drought months of late spring and early summer to maintain a water supply for year-round cultivation in the Delta. While this was the major purpose of the dam, one side effect of the project was the flood damage on both margins of the river. Once the banks of the river had been stabilized it became possible to develop them more intensively and also to throw bridges across from one firm shore to the other.

It is therefore not accidental that the year 1902, which marks the inauguration of the first dam at Aswún, also marks the initiation of plans for several bridges spanning the tamed waterway. Three bridges began in that year which were completed and opened for traffic in 1907. These were the 'Abbâ Brick, 535 meters long and stretching between the western edge of the island of Rawdah and the west bank of the Nile at Jazâh; the Malik al-Sâlih Bridge, spanning the short distance between the eastern edge of Rawdâh and Mîr al-Qudâmâh; and the Muhammâd 'Ali Bridge, connecting the Qar al-Ayâni with the northern tip of Rawdâh. These three bridges created a southern route to supplement the central connection originally achieved in 1874 by the Qar al-Nil Bridge and the inland extension across the Jazirât.

The dam at Aswún, hailed at the turn of the century as the "final" solution, soon proved inadequate for the task assigned to it and, in 1909, over the protests of concerned archaeologists, plans were made to brighten the crest to increase its storage capacity, a scheme finally completed by 1912. Following this new heightening a third bridge connection between the eastern and western banks at Cairo was added, this time to the north of the existing bridge at Qar al-Nil. In 1912 work was begun on the Abî al-'Abbâ Bridge, connecting Bûlqîq with the northern half of the Jazirât, a span some 274 meters in length. By 1912, this bridge (now known as the 'Abbâ Bridge) and its western extension to Imbâhîm (called the Zâmâlik Bridge) were both completed and opened to wheeled and tramway traffic. Two years later, the older Jâlî Bridge (western extension of the Qar al-Nil Bridge) and its extension to Imbâhîm were placed by a wider and sounder structure. With these final additions, the bridge building phase came to a halt temporarily.20

Thus, by 1914 there were three alternative routes connecting the banks of the river, two using the Jazirât as a stepping stone to link east and west at the northern and central sections of the city, the third employing the island of Rawdâh for its full length. The first two were placed by a wider and sounder structure. With these final additions, the bridge building phase came to a halt temporarily.20

Within the broad strip of land bequeathed by the filled canal a major transportation axis was created, upon which the present circulation of traffic and independent of the traffic in the canal. There was a critical link in her unification, giving simplified access to the settlements proliferating from the railroad station and Helêpolis.

The construction of a dam at Aswún was not only associated with the development of bridges in the Cairo area but also with the development of the narrow strips of land bordering the arbitrary unstable edges of the river, strips which have since become the most exclusive residential quarters of the contemporary city. Their development also dates from the opening decade of the twentieth century.

In 1914 made possible the expansion of the city onto the two islands in the midst of the Nile and, beyond, onto the western shore. Note that here again the "creation" of ad hoc islands and then the phenomenal upsurge in demand of the 1920's.

The disappearance during this period of one further landmark of the city must also be noted. With the filling in of the Khalîl Mîry, Cairo was left with only one major canal to remind her of the medieval period when her canal system had been likened to Venice. This was the broad Khalîl Ismâ'îlîyy, built less than fifty years earlier as a replacement for the Maghrebî Canal and as a fresh water link with the Suez Canal. With only a handful of bridges crossing it (notably the Qanarat Bûlqîq near the shore of the Nile; the Post Limous at the railroad station of Bîb al-Hadîd; and a final one over its juncture with the Khalîl Mîry), the canal presented a serious barrier to the integration of nineteenth-century Cairo with the still-independent communities of Bûlqîq and with the northern suburbs that were developing in Shubra and Rawd al-Farâî. On the other hand, the functions which the canal originally had been designed to serve had become irrelevant. Shipping technology had so altered that the canal was useless as an interior waterway. Furthermore, the port of Bûlqîq had gravitated northward to Bîb al-Rawd al-Farî and was no longer vitally connected with Mediterranean traffic, again due to the disappearance of the vessels from that direction. After 1850, the canal system supplanted its irrigation functions, while the filling of the Khalîl Mîry before the turn of the century eliminated even its limited role in the waterway's internal transportation system of the city itself. The filling in of the Ismâ'îlîyy Canal in 1912 was, then, a logical and final step in the centuries-old process of converting Cairo from a city at the mercy of her river to a city functionally independent of the river.

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In the nineteenth century as well as earlier, the preeminent land use found along both shores and on the islands within the Nile was royal. Here were scattered the numerous palaces of a large ruling family, interspersed by gardens, plantations, and orchards. Particularly at the time of Ismâ'îl all these areas had received preferential development. By 1857 the following were located on the east shore southwest from Bûlqîq: (1) the barracks of Qar al-Nil, originally constructed by Sa'id; (2) the palaces of Ismâ'îlîyy and Dîbbâhîrî, surrounded by their gardens, in the general area known as Qar al-Dîbbâhîrî extending between the street leading to the Qar al-Nil Bridge on the north and the Shîrî Dîbbâhîrî on the south; (3) the plantations north of and associated with the two palaces of the Queen Mother and the older palace built by Muhammad 'Ali's son, Bîb al-Hadîd; and (4) vacant land which had been ceded to the Water Company for its pumping station but abandoned after the pumping station was relocated near Bûlqîq; and finally (5) the Qar al-Ayâni of Muhammad 'Ali, which had been serving as a military and public hospital for many decades.

On the Jazirât opposite Bûlqîq there was the palace which Ismâ'îl had built just prior to the opening of the Suez Canal and, north of it, the gardens designed and executed by Burjelit-Deschamps. In 1880, when Ismâ'îl's creditors claimed many of his possessions, the palace itself had been sold to a hotel chain and subsequently was turned into the luxurious Jazirât Palace Hotel, rival to the famous Shepheard's and under the same management. (After a generation as a private residence, it has recently been converted back to a hotel, the "Umar Khayyám." Around the palace lay the race course, polo fields, and gardens which became the elite Khedivial Sporting Club (now known as the Jazirât Club), while to the west of the palace Bûlqîq's farmland was opened to the public as an aquarium and park in 1902. Circling the island was a shaded carriage way which had displaced Shîrî Shubra as the favored promenade of the fashionable.

On the island of Rawdâh to its south the uses remained a strange combination of rural and regal. At the southern end was a park belonging to the heirs of Hasan Pasha and the ancestral Nilometer; in the northern and eastern parts of the island were several royal family palaces and the remnants of Bîbîrîn's famous botanical forest. Intervening were small rural settlements (including the village of Mârsây) in which a peasant class which cultivated the island.

On the western bank of the Nile was a similar compound of uses. The villages of Imbâhîm, Mit Kârdâk, Mit 'Uqâhûf and their surrounding fields and 'îbâd (feudal settlements) preempted the northern portion.
Development of Garden City, however, took place only gradually, since the economic crisis of 1907 and the deflation of speculative demand which followed inhibited the construction of many of the homes planned for the area. By the World War I period, although streets had been laid out all the way from Qasr al-Dihlārāh south to the Qasr al'Aynī Hospital and although several intervening palaces had been demolished, there were only a handful of elaborate villas sprinkled over the extensive quarter. Not until the more prosperous 1920's did the area begin to fill in, and not until the even more active 1930's and 1940's were these villas replaced by the tall apartment houses which now predominate in the quarter.

Developments on the Jazīrah date from the same era of speculative expansion. Between 1905 and 1907 the Barbier Society purchased and subdivided the portion of the island north of the Jazīrah Palace Hotel. Houses were constructed on the lots closest to the center of the island, while more peripherally located sites were held vacant or still farmed in anticipation of future demand. What was true of the Jazīrah was even more typical of the western bank of the Nile. There, speculators had purchased all lands not usurped by the royal domains or tied up in waqīf but, except for the very narrow strip between the river and the major tramline which contained a string of elegant homes, only spotty building gave evidence of fulfilled promise.

Thus by the end of the second decade, all the barriers which had prevented the city's expansion before the twentieth century (except the still-extant khārāb south of the major nucleus) had been methodically demolished. Distance had been compressed by mass transit; the desert had, in places at least, been irrigated and developed; bridges spanned the river at three important points, bringing the islands and the west bank into the potential circumference of the city; and drainage and flood control had made possible the subdivision and sale of lands bordering the no-longer capricious river.

These lands had been added to the city's supply during an era of unprecedented foreign investment, real estate speculation, and unguarded optimism concerning Egypt's economic future and her secure position as a British colony, in fact if not in name. The tremendous population boom experienced in the 1920's had not yet occurred. Nor was it then predictable that by 1932 Egypt would gain some greater measure of autonomy under a constitutional monarchy. Nor could the world-wide depression which inhibited urban growth during the decade of the '30's have been predicted during the revolutionary opening decades of the twentieth century.

All these events were yet to come. The evolution of every quarter of the city was to be affected differentially by them, but it is important to note that without the new urban framework established between 1877 and 1917 none of these developments would have taken the form they did. Later we shall trace the evolution of each of the quarters to show how both supply and demand interacted to yield the particular ecological pattern of contemporary Cairo. However, before proceeding to this final section,
Urban Problems: Old, Persistent, and New

By 1917 Cairo was prepared to embark upon a new phase of development destined to transform her into a more prosaic but certainly more familiar model of a modern metropolis. The groundwork for this transformation had been laid during the nineteenth century and the opening decades of the twentieth. Within that span of time many of the older problems that had been her legacy from medieval and Turkish times had, in large measure, been solved. A significant few, however, only slightly modified or ameliorated, persisted to hinder her metamorphosis. Finally, and perhaps of greatest importance, it was at this time that new and unprecedented problems came to be recognized, ones which were not unique to Cairo as a Middle Eastern city, nor an Islamic one, even as a prototype of a preindustrial city but familiar problems faced by any major city in the twentieth-century Western world. The emergence of these problems indicates that Cairo was, indeed, evolving into an industrial metropolis. While the unique history of the city's development shaped the particular form the problems were to take, the problems themselves signaled the passing of uniqueness.

Most of the problems resolved by the early twentieth century may be classified as physical and technological, rather than social or institutional. The preceding chapters have explored in some detail the physical advances made in the critical century between the later decades of Muhammad 'Ali's reign and the opening years of World War I. Thus, only a brief recapitulation is necessary.

Among the earliest improvements were the removal of most of the rubbish mounds that had surrounded the city (all but those in the vicinity of Old Cairo and on the eastern border of the walled city) and the successive filling of the numerous basins and marshlands that had constituted major barriers to the expansion of the city. This was followed by a stabilization of the banks of the Nile at Cairo, a process which although it began in the 1860's was not completed until the inauguration of the first low dam at Aswun in 1902, and not fully perfected until the subsequent heightening of that dam in 1909-1912 and, again, in the early 1930's.

A road system in many new sections of the city had been substantially achieved by the early twentieth century. The planning of the Ismailiyah quarter, the Fajjih area and the section of the Tahririyah, followed by similar innovations on the Jazirah, along the banks of the Nile in Qasr al-Dibihan and Garden City, as well as on the Jizah side, and culminating in the subdivision of the northern quarters, such as Shobra, Zaher, Sukhna, and extending to 'Abduniyah, Qubbah, Matariyah, Zeitun, and Murs al-Jadlih on the northeast—all these represented a "final" solution to the old problem of space. The solution was opening the bridges and other major technological innovations in the form of bridges and, most important, a network of electric tramlines that threaded the newer districts and joined each to the city center.

Not only had the city successfully cope with the problem of space and accessibility, but by 1917 a safe and relatively sanitary urban environment—notoriously absent as late as the nineteenth century—had been achieved, even though much room for improvement remained. While the political stability attained during the Muhammad 'Ali era must be credited with having initiated this process, the safer environment could not have been created without the institutional innovations of hospitals and clinics, the regulatory innovations in the field of public health, and, finally, the physical addition of the drainage-sewage system for the city. Although there were areas in which inadequate efforts had been made and although only a relatively tiny proportion of the national budget was still allocated to these ends, the fact remains that, even with the minimal and inexpensive means employed, Cairo by 1917 had become an infinitely safer place to live than it had been and live than she had been a scant fifty years earlier.

While most of the solved problems may be classified as "physical," most of the unresolved ones were to be found in the social, economic, and institutional aspects of urbanization. Although some small beginnings had been made in ameliorating these remaining impediments to modern development, their ultimate solutions lay in the future. Perhaps the most basic unsolved problem was the most ancient. Egypt, on the eve of World War I, still lacked political autonomy and was still governed essentially by an alien elite; even though its nature had altered significantly since the days of the Manakols. As we have seen, this situation was scarcely initiated by the British occupation of 1882 which, rather, must be viewed merely as a preliminary—although different in kind as well as degree—of the pattern which for centuries had separated governmental and social decision-making from the indigenous population.

The problem of political autonomy had once come close to solution. The military exploits of Muhammad 'Ali and Britshim Pasha had been attempts to establish Egypt's independent status vis-a-vis the Ottoman Sultanate, a failed attempt by European intervention in 1840-1841. Thereafter, fiscal rather than forceful means were employed to the same end, particularly by Ismail, in an effort to extract in piecemeal concessions what had been denied in principle and in toto. The attempts were clearly "purchased" from the Porte, however, was coded to the British Consul General after 1882, so that little net gain could be recorded. Ironically, Egypt's declaration of independence from Constantinople came in 1914 during the unilateral British creation of a protectorate state for Egypt—a step which was an inevitable consequence of the state of war existing between the two "partners" in Egypt's rule. Thus, while autonomy was theoretically achieved, self-government by native Egyptians remained if anything an even more remote possibility.

Self-government and the elimination of alien elements from the control of national affairs, however, were becoming the goals of an increasingly articulate Egyptian nationalist movement. It is certainly beyond the scope and requirements of the present study to trace the development of this movement from its modern beginnings during the second half of the nineteenth century. We need note merely that decades of preparation and built-up pressures lay behind the "crescent point" that was reached at the outbreak of World War I, when Egyptian nationalist leaders claimed the autonomy that they believe England and Britain had promised to grant once hostilities ended. The formation of the Wafd by Sa'id Zaghlul, the frustrations that exploded into the national strike in 1919, the "investigating committee" appointed by Great Britain, the initiation, breaking-off, and resuscitation of negotiations—these are merely some of the landmarks in the crisis leading to the British declaration officially terminating the protectorate and recognizing the status of Egypt as an independent sovereign state.

Not that the establishment of an independent political entity entitled fulfillment of nationalist demands or aspirations. With the agreement of 1922 opened the way for a constitution (1923) and a good measure of de jure independence, the continued presence on Egyptian soil of a substantial British military force (one of the rights reserved in the agreement) tended to detract from the real gains made to the British declaration officially terminating the protectorate and recognizing the status of Egypt as an independent sovereign state.


2 A recent account of the actual events, then and later, together with relevant documentation, can be found in John Marlowe, A History of Modern Egypt and Anglo-Egyptian Relations, 1800-1953 (Prager, New York: 1954).

DE FACTO exercise of self-determination. It was not until the Anglo-Egyptian Treaty of 1936 that physical and numerical limits were imposed upon the British military forces, even though the existence of World War II soon invalidated the terms of these restrictions. The final evacuation of all British troops from Egyptian soil did not take place until 1952, when Egypt became sovereign in the fullest sense of that term. Nevertheless, the 1922 agreement did contribute substantially to the "nationalization" of the government if not the social elite, by eliminating foreign nationals from many top positions in the bureaucracy and by turning over the administration of the country to its inhabitants. This was as true with respect to the administration of Cairo as it was with respect to the administration of the country and were thus untouched by the concessions granted to the nationalists in 1922. The Capitulations, which had given to these groups their favored and protected status and had aided them in their accumulation of economic and social power, remained unaffected by the agreement of 1922. For example, the Mixed Courts, which had been established in 1876 for the purpose of enabling foreigners to seek an unified legal system the multiplicity of jurisdictions permitted under the Capitulations, remained in force. These continued to place native Egyptians at a practical if not legally sandwiched between the two voluntary national states. While British policy occasionally chafed at the diffusive powers of the Capitulations, and while certain modifications and concessions were sought and even obtained—probably the most important being the informal consent of the British government to the Capitulations to confer British, with certain conditions and limitations, until approximately 1951, when they were comprehensively revoked. Not that the problems outlined above were two additional institutional difficulties that still beset Cairo in 1917 and were not to be solved so easily. One was the lack of a home rule (that is, municipal status with its attendant power to finance locally determined improve.
ments from an independent budget) and local representa-
tive government through which local aspirations could be
translated into action. The other was the lack of local institutions for financing private urban
developments on a modern scale. Each of these requires
more detailed analysis.
It was at the outset that the issue of local government
has not the emotional commitment in many parts
of the Orient that it has in the West. While in
Europe local administrations often preceded—and jeal-
ously guarded—the establishment of a central or
national government, the process was generally
the reverse elsewhere. Certainly, in Egypt the central
administration always took precedence and local subdi-
visions were often created primarily for the purpose of
ensuring the execution of policies that had already been
determined.
Cairo, as the capital city, was in an even more anomalous
situation than most other local communities. Al-
though since Mamluk times at least she had always been administered by special city officials—a quasi-military
governor subordinate to the ruling house, a chief security
officer, and at least two qalids (one for Qahirah, the
other for Fustat) who practice a separation between
local and national politics was hardly feasible. To control
the capital was, in fact, to control the country. And the
converse was so compelling that the security of the capital
cities always became the critical issue during the power strug-
gles that recurred regularly throughout the centuries. It
was perhaps due to this fact that, even after other local communities in Egypt began to enjoy a greater degree of
decentralization and home rule, Cairo was consciously excluded from their ranks.
It is conventional to attribute the inauguration of a
modified system of decentralized government in Egypt to
the passage of the 1864 First Organic Law. In actuality however, the administrative subdivisions utilized in this
system had been delimited in 1820 by Muhammad Ali
in accordance with a reorganization that was taking place throughout the Ottoman empire. Furthermore, the
British administration continued to use their newly estab-
lished provincial councils not to initiate policies (which
had been their ostensible purpose in the law) but, rather,
in the same manner in which their predecessor-institu-
tions had been used, i.e., chiefly as agents of execution.
Even before passage of the Organic Law, however, the
foreign communities in several Egyptian cities had seeded the
ground for local government. As in the medieval
cities of Europe, the pressures toward self-government
were "burgers" in their origins and "commercial" in
their motivations. Thus, in 1856, the cotton export mer-
chants of Alexandria agreed to contribute taxes or, more
accurately, to pay assessments to improve the road be-
 tween Minat al-Basul and the port, a venture the government
helped to support by an annual subvention. This
muska today was already in place in 1850 by a municipality
(baladiyyah), the first to be established in Egypt.4 While
merchants in other communities also appear to have made
some efforts to establish independent local go-
vernments on a small scale, the practical difficulties
involved in setting up a municipal structure, which in
the case of Alexandria had required the signature of all
Capitulatory Powers, were sufficient to ensure Alexan-
dria's uniquely guarded control and authority.
In that year, the Ministry of Interior authorized nine
 cities to form local commissions for the purpose of plan-
ing municipal improvements that were to be financed
by subventions from the national government.5 These
"local governments" were to confine their attentions,
however, to apotolic housekeeping functions, such as
arranging for the installation of water and electrical
systems, overseeing the maintenance and cleaning of
streets and public gardens, regulating public facilities, and
the like. Eleven more communities were added to their
ranks in the next three years. However, the uncertainties of
planning for even these minimal services without some guaranteed
form of locally raised revenues, coupled with the legal impossibility of collecting taxes from foreigners,
were problems unsolved in the local commission. The
Local Mixed Commission, in which foreigners were
given equal representation in return for their voluntary com-
mitments, was an expedient measure, perhaps more so rapid a pace during the preceding century. The
system that evolved to meet these exigencies had its own
tailorable problems, of which two were perhaps of greatest significance: First, the system's very urban
character, that the other, the diffuseness of responsibility within it.
By education primarily the responsibility of the re-
ligious hierarchy or, later, a national ministry, with
pliances with local taxation, was initially set up in 1896 in
Manṣūrah as a way out of this dilemma, and other com-
munities with powerful foreign minorities were quick to
convert to this new form.
By 1908, three dozen Egyptian cities had local or mixed
commissions—but Cairo was still conspicuously absent from
their number. Despite the reforms of 1895 and the
greater autonomy that was coming to the local communities under this system to 43 by 1912, 62 by 1921, and even
more in the years that followed, Cairo's name does not
appear on the list. Even the Constitution of 1923, which established the provinces, cities, and villages of Egypt as
jurisdictions of the mukātābīah and which, in the modern
time, came under the rubric of the Cairo City Service. This
apolitical unit of urban management subsisted, in many
ways, from the missing municipal governance was assigned to
a special subsection of the Ministry of Public Works.
When that ministry was reorganized in 1879–1880, this
Tanzim section was revitalized and a special subunit of
it was given its own staff and a separate budget and
order to coordinate road planning for both Cairo and
outlying Hawāli. It was from this subunit of this subsection in
the ministry that the Cairo City Service evolved.
The British occupation of Egypt was a temporary loss of its relatively independent status. The
Tanzim section of the ministry became merely a staff aid to
the minister, as decision-making powers were concen-
trated more and more in the hands of Sir Scott-Moncrieff,
the Undersecretary of State responsible for all national
administrations in Egypt. When the Cairo Tanzim was resigned in 1885, it was granted
again in the late 1880's, it emerged as an easily recognized
defense and security too crucial to be left to a local unit, with
charitable institutions, hospitals, and other "public services" supported and administered under the auspices
of, or later, the direct aegis of the ruler or the national
government, there were only a few non sensitive managerial
functions which remained solely in charge and
be entrusted to local administrators. These were
functions which were often simply the business of the
jurisdiction of the mukātābīah and which, in the modern
time, came under the rubric of the Cairo City Service. This
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again in the late 1880's, it emerged as an easily recognized
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"British" institution, whose functions were threefold. First, it was a regulatory agency, promulgating and enforcing minimum standards of location, safety, and construction of railroads; secondly, a financing agency, concerned primarily with the preparation and enforcement of the Official Map (although it was not so designated in the law); and third, it was an action agency, involved in the control and improvement of public streets and roadways. However, since the Tanžim department had no capital improvements budget of its own, it could only recommend to the Ministry of Public Works two schemes for these purposes. This lack of fiscal capacity was a rock upon which many a development scheme in Cairo founded.

In addition, several functions that had formerly been performed by the Tanžim Service were disengaged and assigned to other agencies, which resulted in increased problems of coordination. The Governor of Cairo assumed responsibility for supervising public lighting, the Department of Sanitation was charged with street cleaning and watering, and a private firm was engaged to repair and maintain the existing public ways. The coordination of all these activities in Cairo was presumably to be maintained through the Council of Tanžim.14

A sorely inadequate budget, however, was the chief obstacle to the proper functioning of the Cairo Tanžim even in the single major function left to it by the reforms of 1895. And this inadequate budget was partially the result of Cairo's lack of municipal independence. Clerget has pointed out, with considerable justification, that lesser communities such as Đumârta, Mansūrah, and Alexandria, because they enjoyed municipal status, were all free to allocate proportionately greater funds for street improvements than Cairo, which lacked fiscal independence. For example, in 1902 when Alexandria budgeted some LE 300,000, Cairo, with her much larger area and population, had to manage on a budget of only LE 15,000 for that purpose.15

These inadequacies became increasingly obvious during the expansive era between 1895 and 1907. Due to public pressure, the proportion of the Tanžim budget allocated to Cairo was increased substantially and, in 1905, some of the fragmented services were recombined. However, the basic dilemma still remained: on the one hand, the Tanžim department was concerned not with Cairo alone but with the remainder of the country as well; and, on the other hand, it did not control all the public services and utilities in the city but was substantially limited to buildings and the public ways. Furthermore, not only was a unified government that could have coordinated the various projects undertaken by the separate ministries incoherent and inefficient in the governance of the city. These deficiencies are summarized in the report of the Consul General to the British Parliament in 1908:

The municipal services in Cairo are at present carried...

5. To propose to the minister the purchase of lands required for the construction or widening of streets, and to sell roadways no longer officially designated.
6. To establish the widths of plantings adjacent to the public ways.
7. To notify the minister of expenses required by urban services.
8. To present plans concerning the establishments of public ways.
9. To issue orders concerning structures in need of repair whenever they endanger the public safety or threaten collapse.

The Official Map submitted by the Council of Tanžim had to be approved by the Minister of Public Works; once approved, all construction on lands slated for expropriation was forbidden. Control was obtained through a system of licensing (šubhāh) (p. 80).

11 Clerget, Le Caire, p. 271.
12 It must be remembered here that the Tanžim department of the Ministry of Public Works was responsible not only for services in Cairo and other communities lacking municipal status but for planning and executing public buildings and roads throughout Egypt, as well as supervising plans submitted by local and native communes, wherever these existed.

and electricity to Jizah and the Jazirah. By 1936 the Cairo Tanžim had expanded so much in scope that one could identify it quite legitimately as the agency that "to a great extent exercises the municipal control of Cairo and its environs, including the city of Helwan." In addition to its original functions (street alignment regulations, building permits, enforcement of standards of safe construction and adequate maintenance of buildings, and the construction and maintenance of public roads), it was also responsible for street planting, the planting and maintenance of public gardens, and the watering and cleaning of streets and open spaces. From the standpoint of Cairo's physical development, perhaps the most critical function was entrusted to a subunit entitled the Town Planning Service. This division was charged with applying the "principles of town and country planning and of the garden city movement to the future development of Cairo," as well as with studying the traffic conditions in the city and recommending needed streets, bridges, and other public works. In addition, the unit supervised the activities of the public utility companies (i.e., the tramway, Metro, water, gas, and electricity companies) operating in the city.

Thus, in effect, many of the functions which would have been performed by a municipal government, had one existed, were actually concentrated in a bureaucratic agency that was, in turn, part of a ministry of the national government. Despite the inherent wastefulness of the system, much progress was made in providing paved roads and services to the expanding metropolis during the decades that followed, thanks to the more generous budgets allocated to the Tanžim. Table 2, which assembles budget figures for selected years, illustrates both the gradual increase in resources as well as the periodic setbacks experienced during wartime and depression.16

While to some extent the larger budgets paralleled population increases, they primarily reflected the addition of new services to the expanding scope of the unit. For example, in 1914, the Cairo Tanžim was responsible for street lighting and water supply in the city and for the provision of waste disposal and sewage systems. By 1922, the Cairo Tanžim extended its services to street lighting and waste disposal throughout Egypt, as well as supervising plans submitted by local and native communes, wherever these existed.

...to the projects the governor's supplementary acts, which delegated the powers of the Ministry of Public Works (or the governor's representative) to the Tanžim.17

This report might also have added that, as before, policing and security in the city, as well as the Government Office itself, came under the jurisdiction of the Ministry of Interior. A committee was appointed in 1907 to study the question of reorganizing Cairo's management and, in 1917, "the creation of a municipality for Cairo" was again under discussion.18 However, such a reorganization never did take place and, in lieu of a basic restructuring of Cairo's administration, reforms and expansions of responsibility and budget took place within the same fragmentary framework.

Despite the inherent unworkability of the system, much progress was made in providing paved roads and services to the expanding metropolis during the decades that followed, thanks to the more generous budgets allocated to the Tanžim. Table 2, which assembles budget figures for selected years, illustrates both the gradual increase in resources as well as the periodic setbacks experienced during wartime and depression.16

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13 See Egypt No. 1 (1907): Reports by His Majesty's Agent ... in 1906 (His Majesty's Stationery Office, London: 1906); p. 24. Italics added.
14 See, for example, "La voie publique et l'urbanisme de la ville de l'Egypt," L’Égypte Contemporain, No. 5 (January 1917), p. 34.
15 See Table 2: the Secretariat has been disestablished from various. See Egypt No. 1 (1907): Reports by His Majesty's High Commissioner ... for the Period 1917-1918 (His Majesty's Stationery Office, London: 1920), pp. 44-45. Clerget, Le Caire, p. 295; Egyptian Ministry of Finance, Budget of the Egyptian Government, 1922-23, especially under the heading of Ministry of Public Works: Egyptian Ministry of Finance, Budget of the Egyptian Government, 1922-23, which gives the appropriations between 1922 and 1923.
16 See Table 2: the Secretariat has been disestablished from various. See Egypt No. 1 (1907): Reports by His Majesty's High Commissioner ... for the Period 1917-1918 (His Majesty's Stationery Office, London: 1920), pp. 44-45. Clerget, Le Caire, p. 295; Egyptian Ministry of Finance, Budget of the Egyptian Government, 1922-23, especially under the heading of Ministry of Public Works: Egyptian Ministry of Finance, Budget of the Egyptian Government, 1922-23, which gives the appropriations between 1922 and 1923.
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During the second half of the nineteenth century when municipal service concessions of a modern type were first being granted in Egypt, this method was being used throughout France and other Western countries to establish similar municipal goals. That is, there was nothing particularly unique about the institution, nor were the concessions granted in Egypt basically different in form from those concluded on the European continent. In fact, many of the French and Belgian firms engaged to provide Egyptian cities with water and gas systems, with public transit, etc., were well established at home and had been in business in Europe. To a great extent the companies involved were the same as those that transplanted their methods of management and operation to Egypt.

Further, the diffusion of responsibility among separate municipalities intensified the problem of coordination. The role of the central government was, necessarily, the role of policy making as the unit of the concession area was the central administrative body. Therefore, the task of coordinating the separate public utility services was left to the central government. To make this task easier, the government decided to centralize the public utility services into a single governmental body. The new body, the Egyptian Public Work Department, was created in 1923, and it was charged with the responsibility of providing integral public utility services to the cities and towns of Egypt.

The operation of the new body, called the Egyptian Public Work Department, was successful, and the number of concessions decreased. By the late 1920s, the government had taken over the management of the concessions and started to replace the foreign concessions with government-owned enterprises. The government also established a new system of public works, called the Public Works Act of 1927, which provided a framework for the management of public works and utilities.

In conclusion, it is evident that the concessions were a failure. They were expensive, inefficient, and resulted in the loss of sovereignty over the concessions to foreign powers. The government realized that it needed to have control over the concessions to ensure their efficiency and profitability. Therefore, it decided to take over the management of the concessions and establish a new system of public works. The new system was successful, and the concessions were eventually replaced by government-owned enterprises.
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The failure of Egypt's first bank, which had been founded in 1877, has been blamed on the fact that it became too tightly regulated in the early 1890s, thus constricting its role in the economy.

Another bank, founded in the 1870s by a group of European financiers, also foundered on a similar reef at the time of Sa'id. During the reign of Isma'il, banks became an entrenched and indispensable part of state policy, and several European firms and branches were in operation in Egypt—not as public institutions but, more properly speaking, as financial houses specializing in interest-bearing loans to the government. At the opposite extreme, each year thousands of petty loans were negotiated individually on agricultural lands in order to meet ill-timed tax levies, but such disorganized and small-scale operations could scarcely qualify as mortgages; in fact, they were highly irregular procedures since, until the reform laws in 1895, very little land in the Egypt was in freehold tenure, so that it could not even be pledged legally against a loan.

Apparent, there were two prerequisites to the emergence of modern mortgage institutions in Egypt, both of which had been attained by 1880. The first was unprec.

Urban problems. 153


154 Cited by Boudot, La voix de l'eritique de la ville du Caire," p. 39. There were 10,000 millions to an Egyptian Pound.

155 See Legrand, *Les fluctuations de prix et les crises de 1897 and 1904 en Egypte* (J. Gauld, Nicosia: 1905), pp. 115-119 (my translation). Almost all companies of this type were founded during the late 19th century. Some insight into the rather wild speculative games also in Egypt—often involving the sale of land on the basis of fraudulent financial and even less moral capital—is found in the marvelous (if tragic) memoirs written by Lord Cecil who, in his capacity in the purchasing in newly subdivided urban quarters had the greatest chance for a financial coup. For example, in the district of Ma'adi, speculation directed toward Helipolis, land values increased from 2,155 millions per square meter before the 19th to over 2,300,000 per square meter by about 1910.

156 A boom of this variety, of course, grew out of the new kinds of psychological confidence, which is particularly vulnerable to the second thoughts of investors and to any contractions in credit. Both seem to have occurred in the European marketplace, though not in concert. The result was that credit had been overextended, coupled with the general tightening of money that was later to result in worldwide panic selling and bank runs, led to the abrupt suspension of Egyptian credit in both Paris and London. The effects of this sudden prick upon the speculative bubble were as immediate as they were catastrophic. The April panic was precipitated by the closing of a bank in Cairo. Thereafter, the Egyptian Bourse, an amateur operation that had never been able to control the wild speculations that ruled it, crashed, with shares depreciating by December of 1907 from 250 percent from what they had been a scant year before.

Urban development in Cairo, which had been closely tied to the general boom, experienced a deep setback from which it was not to recover until after World War I. Land companies entered into bankruptcy, titles were forfeited, and a virtual moratorium on land transactions was declared. One reads in the descriptive accounts of contemporaries the story of speculative building that rivalled that of the archaological remains of Upper Egypt. Another calls attention to the "hideous spectacle of grand-up-trees and foundations" along the once-famous Shubra Road, and to the island of Rawdah where the pashas had "allowed the Levantine speculator to tear most of their beautiful villas and gardens to pieces before he paid them the purchase price; and as the slump came before he had time to clear out of his gambles, they never did get the money, and no one ever did build a mushroom suburb."
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Thus, the first fruits of the mortgage institution in Cairo were speculation and premature subdivisions. Obviously, sound urban development required more than the institution itself. It required indigenous economic strength, based upon real rather than spurious improvements in productivity and demand, and it required a rational and creative rather than a wildly speculative use of the new tool. Evidence of the emergence of sound mortgage practices and of vigorous local investment does not appear in Egypt until after World War I. At that time Cairo entered another period of boom in land values and experienced a new spurt in building activity something what reminiscent of the earlier inflation. However, in very basic terms, this new expansion differed radically from the one that had ended so disastrously only a dozen years earlier. First, it was based upon demand whereas the earlier one had been based upon anticipation. By then, Cairo was suffering from a severe housing shortage since wartime migration had swollen the population just at the time construction was halted because of competing war requirements. Furthermore, prosperity had nurtured a rise in standards and expectations in housing which stimulated additional demand. Not only was the demand real, but the supply of capital this time was abundant, indigenous, and attracted to investment in land and buildings. Much of it had been accumulated locally through wartime profit taking. While some of this new capital was used to buy land already owned abroad and some flowed into the industries sponsored by the newly organized Bank Misr, a substantial portion helped to sustain the high level of construction in Cairo. During the 1920's, apartment houses in every urban center and even the foreign quarters were erected. In short, an unknown but probably substantial proportion of the urban real estate in Cairo was ineligible for mortgage financing. (The reader should bear in mind here that, under Islamic property law and convention, the major credit institutions had only minor interests in urban construction, and it was only during a few brief years of the 1930's depression, and again in the late 1940's, that urban properties constituted a sizeable proportion of the outstanding mortgage debt. For the most part, real estate in Cairo constituted a form of savings for the upper class, a pattern that has persisted even beyond the Revolution, when the Arabization and Kuwaiti capital became a substitute source. This meant primarily small-scale development—a single structure at a time, very often containing an apartment for the owner or his relatives. And in many other cities, it meant a preoccupation with construction of luxury housing and a neglect of middle-income and "popular" housing.

The private mortgage institution never did contribute to construction of the latter type. It was the Ministry of Waqf, later joined by other governmental agencies, that has been responsible for whatever large-scale moderately-priced developments have taken place in modern Cairo. Whether this positive effect of waqf outweighed its negative influence, however, is debatable. Certainly the existence of waqf property severely limited the extent to which the institution of mortgages could be used to develop and modernize Cairo during the nineteenth and twentieth centuries. It will be recalled that over the centuries rather extensive portions of the city had been placed in mortmain—either in the form of charitable (hakimiyat) or public (waqf) property. In their definition, property in waqf cannot be mortgaged, since its unalienable title cannot be pledged against a loan.28 Only the usufruct "belongs" to the beneficiary(ies) and cannot be mortgaged, pledged, renounced or transferred. In short, an unknown but probably substantial proportion of the urban real estate in Cairo was ineligible for mortgage financing. (The reader should bear in mind here that, under Islamic property law and convention, real estate that had been constituted into family trusts presented entirely different and much more complicated problems. Inherent in the system of the family or private waqf were problems of succession; and/or redevelopment could rarely be financed by internal means, and that the property itself could not be used to obtain development capital. The bequest specified that the property be maintained and any maintenance and administrative expenses had been deducted, were to be distributed among the beneficiaries, not reinvested in the property. Although beneficiaries could voluntarily choose to reinvest, no sanctions were available to encourage compliance. And, since the property itself could neither be pledged against a loan nor parts of it sold for the purpose of accumulating the capital required to develop the remaining portions, the system was by definition at best a static one in which adequate maintenance was all that could be hoped for. Even this minimal goal, however, became increasingly difficult to attain with each passing year after the demise of the original creator of the waqf. As beneficiaries multiplied and interests became more fragmented, responsibility for administering the property fell inevitably to salaried functionaries (the nûjar, for example) whose short-term goals dominated development decisions. The sole criterion of successful administration was a regular payment to the beneficiaries, rather than the long-term preservation of the property value.)

Three ways out of this impasse were possible. Either (1) the beneficiaries died, at which point the property was absorbed into the waqf hakimiyat; (2) the property deteriorated to the point where the original value was totally discarded. And therein lay the advantage: the property would then be made available for sale at market as feedback; or (3) long-term leases on the property could be granted to investors with capital. Ever since the seventeenth century, leasing had become more and more prevalent in Egypt and, by the nineteenth century, three basic lease forms—the hikr, the khâila, and the ijara-tere—were in use.29 Each was an ingenious device designed to circumvent the restrictive terms of the waqf by attracting outside capital. Not only private waqf could be rented on these terms but even parts of the waqf hakimiyat as well.30 Naturally, these devices were most effective during periods of economic expansion and healthy demand; in ways, dependence upon them created a much more volatile real estate market than would have resulted from simple private ownership.

Early in the nineteenth century, attempts were made to reform some of the abuses deriving from the Supreme Council of Antiquities' form of tenure, to convert some waqf lands to other forms of ownership, and to adapt the system to modern requirements. Thus, when Muhammad 'Ali commenced his land reforms after 1822, many parcels of land that had previously been constituted into waqf but which had actually been held as feedback (mulk) by the original bequestors

198 Debs, "The Law of Property in Egypt," p. 35. He defines each as follows. Hakimiyat: "In return for the possession of waqf property, the recipient of a right to hikr undertook to make improvements on that property and to pay an annual rent that varied in accordance with current property values. Once he had made substantial improvements, he was entitled to renew his lease as long as he paid the rent. All improvements made on the property, including, for example, buildings or plantations, became the property of the hikr holder. Under this arrangement, the lessee 'undertaking the rehabilitation of a parcel of waqf land, took the property for an indefinite period of time in return for the payment of annual rent.'" p. 197. Ijarat: This was another arrangement also employed to re-established wakfs which the lessee could continue to occupy for one lump-sum . . . based on the value of the buildings and then . . . an annual fixed rent based on the value of the land." p. 197. Of land that was sold for re-development of the waqf hakimiyat land in the Mu'awliya of Cairo and about which it permitted partial simulation of the market place, is found in Yacoub Attia, Eeal et ler eau du vanchement d'irent vie matriciale au Cairo (L'Institut Français d'Archéologie Orien- tale, Cairo, 1959). See also Attia's score of years to 1822 and vice versa. After the establishment of the waqf hakimiyat in the Mu'awliya of Cairo, and how it permitted partial simulation of the market place, is found in Yacoub Attia, Eeal et ler eau du vanchement d'irent vie matriciale au Cairo (L'Institut Français d'Archéologie Orien- tale, Cairo, 1959). See also Attia's score of years to 1822 and vice versa. After the establishment of the waqf hakimiyat in the Mu'awliya of Cairo, and how it permitted partial simulation of the market place, is found in Yacoub Attia, Eeal et ler eau du vanchement d'irent vie matriciale au Cairo (L'Institut Français d'Archéologie Orien- tale, Cairo, 1959). See also Attia's score of years to 1822 and vice versa. After the establishment of the waqf hakimiyat in the Mu'awliya of Cairo, and how it permitted partial simulation of the market place, is found in Yacoub Attia, Eeal et ler eau du vanchement d'irent vie matriciale au Cairo (L'Institut Français d'Archéologie Orien- tale, Cairo, 1959). See also Attia's score of years to 1822 and vice versa. After the establishment of the waqf hakimiyat in the Mu'awliya of Cairo, and how it permitted partial simulation of the market place, is found in Yacoub Attia, Eeal et ler eau du vanchement d'irent vie matriciale au Cairo (L'Institut Français d'Archéologie Orien- tale, Cairo, 1959). See also Attia's score of years to 1822 and vice versa. After the establishment of the waqf hakimiyat in the Mu'awliya of Cairo, and how it permitted partial simulation of the market place, is found in Yacoub Attia, Eeal et ler eau du vanchement d'irent vie matriciale au Cairo (L'Institut Français d'Archéologie Orien- tale, Cairo, 1959). See also Attia's score of years to 1822 and vice versa. After the establishment of the waqf hakimiyat in the Mu'awliya of Cairo, and how it permitted partial simulation of the market place, is found in Yacoub Attia, Eeal et ler eau du vanchement d'irent vie matriciale au Cairo (L'Institut Français d'Archéologie Orien- tale, Cairo, 1959). See also Attia's score of years to 1822 and vice versa.
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were confiscated or, with only minimal compensation, were absorbed into the crown lands. This action was justified on the grounds that only waqf property can be converted into a legal valid waqf. From this confiscation, some have drawn the erroneous conclusion that Muhammad Ali attempted to abolish the waqf system itself. Actually, only private waqaf of dubious authenticity were involved in this early reform. A more basic change was introduced in 1839, when a State Administration was set up to oversee many waqf khayati properties. It was this organization that constituted the nucleus—or rather the prototype, since it lasted only a few years—of what was later to develop into the Ministry of Waqf. A direct attack on the waqf institution itself, and a remarkably restrained one at that, was not ventured by Muhammad Ali until the end of his reign, when, in the Land Law of 1846, he forbade the future creation of waqaf. But an institution so deeply ingrained and so legitimized by religion as the waqf was not to be abolished that easily.

In the case of waqfs of buildings and of urban land, it appears never to have been executed; in the case of agricultural lands, it was effective for a short time only. 81

Waqf developments during the second half of the nineteenth century were characterized by two somewhat antithetical trends. On the one hand, there was an increase in the amount of waqf property. Paradoxically, the conversion of much of the country's land to freehold tenure has been a legal fact since the 1839 Code made possible the creation of legitimate waqf on many lands and buildings which were ineligible under their previous forms of tenure. This led inevitably to a steady increase in the area of land involved by over 200,000 feddans or acres. On the other hand, the government attempted to extend its control over waqf holdings and to channel their charitable intentions into government development. Realizing, perhaps, that the waqf was potentially a "government within a government," it sought to coordinate its resources with the goals of the state. Thus, the State Administration that had been founded by Muhammad Ali was reestablished by 'AbdīSīxīr in 1854. In 1864, 'Abdu'llah declared that this administration should succeed every nādir of a charitable waqf upon his death or removal from office, which resulted in further centralization. Soon, Realizing, perhaps, that the waqf was potentially a "government within a government," it sought to coordinate its resources with the goals of the state. Thus, the State Administration that had been founded by Muhammad Ali was reestablished by 'AbdīSīxīr in 1854.
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gradually been shorn of more and more of its resources and independence.

The final persistent problem which Cairo inherited from the nineteenth century was, of course, the social and functional bifurcation of the city into its two basic components—the old city and the new. Instead of being resolved in the first part of the twentieth century this problem became, in fact, more severe. It also differed in very essential fashion from the types of problems that have been discussed above, for this bifurcation was no mere "abuse" which hindered development. It was no superficial "problem" that could be solved directly through institutional or governmental reforms or edicts. This condition was nothing less than the physical reflection of the problem that afflicted Egyptian society itself. It was tangible and graphic evidence of that rent in the social fabric which new societies, emerging from a colonial past, must everywhere seek to mend, eliminating the threads which cannot be incorporated into the new warp and woof, and strengthening those which, from disease, have broken or frayed. A union between the two cities of Cairo was not likely to occur unless and until the deep cleavage, within Egypt's entire social structure—those which separated class from mass, alien or alienated elite from indigenous proletariat—were somehow mended or bridged.

The eighteenth century had been all of one piece. While certain suburbs of the city ranked above others socially, and whereas the segregation of subgroups persisted along lines established during the Middle Ages, these represented the coexistence rather than the exclusion of classes and social space. Even the new city added by Isma'ilIII in the 1860's might have been absorbed into this common framework had it remained merely "Western-influenced," rather than being conceived as a colonial socialodes, into "Western-dominated." The Western forms of city structure, had they been inhabited by Egyptians, might have gradually been assimilated to Eastern needs, and the cleavage between the two cities might never have become so extreme. However, with colonial rule and the influx of large numbers of Europeans, this new portion of the city was increasingly marked off as a "foreign" preserve. Azabka, the center of the new city, contained over 50,000 inhabitants in 1917, of whom only under 14,000 were Egyptian Muslims.48 The discontinuity between the two cities had ceased to be one of degree and had become one of kind.

While the underlying causes of Cairo's dual structure, then, must be traced ultimately to the very organization of Egyptian society, the duality itself was encouraged and intensified by the processes of modernization and technological change that, at an ever-increasing pace, precipitated the growth of an industrialized city. Thus, institutions that in themselves "created" new problems for the city, or led to the recognition of new areas of difficulty. Wherever their impact was felt—and this was chiefly in the newer quarters of the city, because of the inadequacy of the city's communications systems—new problems created and demanded and only there could they be accommodated and absorbed—one physical part of the city and one social portion of the community raced ahead, leaving greater and greater distance between itself and the remainder. In the short run, technological developments created new problems for the city, but problems that were felt selectively and primarily within the new city that grew up to the west and north of the original nucleus. In the long run, they created the major problem which Cairo now faces, namely, how to reunite the fragmented community and upgrade that portion of the city hitherto ignored in the process of modernization.

If one were to single out the two most important aspects of modernization that have affected Cairo's twentieth-century metamorphosis and have offered some of her most pressing challenges, one might easily select the car and the factory. Obviously, these are the very same elements that one might also select in discussing the evolution of any other modern city. But whereas the stimuli to the problem were the same, the responses and the solutions attempted must be viewed in the context of Cairo's specific character.

In 1905, when the first automobiles were introduced to the streets of Cairo, few could have foreseen the consequences of this innovation. The immediate impact, it must be admitted, was minimal. Cars neither displaced the usual wheeled vehicles nor inhibited their increase, as can be seen from Table 3.47 This was just as well, since Cairo's streets were in no way prepared. They were primarily unpaved and often deeply rutted, making them uncomfortable for animal-drawn vehicles and virtually impassable for vehicles of greater speed. In 1905, just prior to the "auto age," of the 2.758 million square meters of Cairo's area devoted to public roads, more than half were merely unpaved, mud-surfaced pathways! Even of the "improved" roads, most were minimally improved by a macadam base covered with gravel. Macadam roads covered by basalt and fully modernized roads paved with asphalt constituted only 4 percent of the total area in streets. Thus what few cars were introduced were confined to a tightly circumscribed circuit. In addition, most streets in the city, even if they had been paved, were much too narrow to admit a fast-sized vehicle. At the turn of the twentieth century, 53 percent of the entire length of the circulation system consisted of streets so narrow that the passage of automobiles and trucks was absolutely impossible. One of the first could admit one-way traffic at best; and only 8 percent were wide enough to accommodate two-way traffic.48 That few Cairo streets had separate sidewalks for pedestrians, that tram trucks often pre-empted most of the roadway of the wider streets, and that the dominant means of transportation in the city was still by foot or donkey, merely intensified the inadequacy of the circulation system for modern modes of transportation. The situation led all the ingredients of an impending catastrophe. If the 1930's were the years of the "race against bankruptcy," the twentieth century was to be the era of the race between cars and roads.

Table 3. Increase in Vehicles in Cairo, 1900-1910

<table>
<thead>
<tr>
<th>Type of Vehicle</th>
<th>Number of Vehicles in Cairo</th>
<th>1900</th>
<th>1910</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passenger cars (Coachmen)</td>
<td>1,600</td>
<td>2,000</td>
<td>4,940</td>
</tr>
<tr>
<td>Cars, wagons, and furgons</td>
<td>10,000</td>
<td>16,000</td>
<td>37,000</td>
</tr>
<tr>
<td>(Drivers of cars)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Wheelbarrow operators)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taxi autos</td>
<td>none</td>
<td>80</td>
<td>619</td>
</tr>
<tr>
<td>Private automobiles</td>
<td>none</td>
<td>182</td>
<td>182</td>
</tr>
<tr>
<td>Motorcycles</td>
<td>none</td>
<td>182</td>
<td>182</td>
</tr>
</tbody>
</table>

At first it appeared that the "street builders might emerge victorious. A Herculean effort was made during the first two decades of the twentieth century to contain vehicular growth and to convert the roads at least in the western and northern portions of the developing city to modern requirements. Particularly in the flush years between 1900 and 1906 much progress was recorded. By the latter year, despite an overall expansion of the circulation system, unimproved roads had been reduced to 43 percent (from 54 percent in 1900), while those paved with basalt or asphalt increased from 9 percent to 31 percent only six years later. Gravel, which was of course totally inappropriate for automobile traffic, was abandoned. The proportion of the system with gravel surfacing was reduced to 75 percent, as many of the roads were converted to harder surfacing. This remarkable rate of progress continued through the next decade and, by 1929, the Cairo street area that had been provided with modern paving amounted to 2.5 million square meters. Unimproved roadways persisted chiefly on the outskirts or in the heart of the medieval core.

This expansion kept pace with the rapid increase in automobiles and trucks and, except in the oldest quarters of the city, the streets proved adequate to accommodate their needs. However, in the 1930's there appeared signs of slackening growth with a few signs just as at the moment when the demands generated by the mass-produced automobile became more insistant. By the 1950's, matters had begun to get "out of hand," with motor traffic increasing far more rapidly than streets could be widened and redesigned to accommodate them.

The late 1930's witnessed a "wheelonal population explosion" in which vehicles doubled in number while street conditions remained constant. By the time wide-scale reconstruction and ambitious highway projects were undertaken in the 1950's, Cairo had become so congested that she required the kind of drastic surgery familiar to metropolitan dwellers all over the world.

A few illustrative figures may help to paint this picture more vividly. In 1910 there were perhaps 7,000 or 8,000 private cars in Cairo plus a small number of trucks, taxis, and buses. Five years later the number of private cars exceeded 10,000, supplemented by some 2,000 taxis, trucks, and buses. By 1930, there were over 14,000 cars registered in the city, and, although their number had declined somewhat by 1945, due to the unavailability of new cars during the war years, this decrease was more than compensated for by the increased number of taxis (4,200), trucks (2,000), and buses (750) on the roads. Motorcycles as well had begun to join the crowded traffic stream and by 1945 there were eight of these in Cairo. The temporary setback of the war years was soon overcome and, in the single decade between 1945 and 1955, the number of private automobiles in Cairo almost trebled. By the latter year, there were over 34,000 private cars in addition to more than 5,000 taxis, over 7,000 trucks and lorries, well in excess of 3,000 buses, and close to 10,000 motorcycles—all competing with pedestrians and animals for space on the streets of Cairo.

48 Figures are adapted from those appearing in Niyi, al-Qiblad, Table 8, p. 95, and Table 28, p. 129. Either there has been an interruption in the rate of increase, possibly due to restrictions imposed after the Suez War of 1948 or Niyi's figures include more than Cairo registrations of vehicles. The latest issue of Annuaire Statistique, 1970/1971 (Government Printing Office, Cairo: 1973), p. 302, gave the following figures for licensed cars in Cairo in 1975 and 1966:

<table>
<thead>
<tr>
<th>Year</th>
<th>Private cars</th>
</tr>
</thead>
<tbody>
<tr>
<td>1959</td>
<td>4,000</td>
</tr>
<tr>
<td>1960</td>
<td>5,000</td>
</tr>
<tr>
<td>1961</td>
<td>6,000</td>
</tr>
</tbody>
</table>

49 Niyi, al-Qiblad, Table 8, p. 95, and Table 28, p. 129. Either there has been an interruption in the rate of increase, possibly due to restrictions imposed after the Suez War of 1948 or Niyi's figures include more than Cairo registrations of vehicles. The latest issue of Annuaire Statistique, 1970/1971 (Government Printing Office, Cairo: 1973), p. 302, gave the following figures for licensed cars in Cairo in 1975 and 1966:
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While vehicular density may not appear particularly impressive to readers familiar with comparable figures for New York City, it takes on greater significance when one remembers that traffic in Cairo had to be concentrated within only a fraction of the city's total extent. First, the entire old city—with the exception of those few streets which had been virtually impassable—was closed to motor traffic. In addition, extreme income distribution and a concentration of the wealthier classes in just a few of the newer areas led to extremely heavy concentrations of private cars in selected sections of the city. What was true with respect to residential areas was even truer of the commercial zones. Although trucks serviced the newer "western" business district, they remained an irrelevant mode of transportation for the older commercial areas. Therefore, the vehicles reported above were all concentrated within a relatively small portion of the city, increasing the actual if not the statistical density of traffic to congestion heights.

Furthermore, most of these vehicles were likely to be out on the streets at the same time, since virtually no provisions had been made for off-street parking in the commercial zones and, until quite recently, almost no apartment buildings were constructed with subterranean garages.

In addition, just at the time when traffic was becoming more dense, the feasibility of widening existing ways or of cutting new arteries was diminishing. Methods of house construction had changed. Whereas low-value, replaceable mudbrick structures might have been built a century earlier, the new construction favored stone and reinforced poured concrete. These new buildings lined the roads, presenting a solid phalanx against the encroachment of potential thoroughfares. They sprang up along each new street, rigidifying the pattern before second thoughts could be entertained. It is perhaps a commentary on the mood of the time that, between 1957 and 1959, when the problem of circulation took on the character of a disaster, only four major roadways were added to the circulation system within the built-up portion of the city. Of these, two were dependent for their rights of way upon filled-in canal beds (the Shārī‘ al-Khalīfī, added before the turn of the century, and the [now] Shārī‘ Ramses, constructed during the second decade of the century along the course of the Ima‘āllīyah Canal), while the other two (Shārī‘ al-Jaysh and Shārī‘ al-Azhār) were both constructed in the late 1920s at the expense of and for the use of the Tramway Company.

In brief, an enormous backlog had accumulated by the 1950s and stragglng appeared imminent. When the revolutionary regime took over in 1952, it was faced not only with the problem of planning for future urban expansion but with a situation that had been allowed to accumulate over the preceding decades during which motor vehicles had finally come to dominate.

While a later section will describe the major street projects executed within the past decade in Cairo, it is significant that even before they were finished, the domestic ushārīs of the full half-century before. Between 1952 and 1959, some 5.5 million square meters of Cairo’s street system were paved, and among the more important thoroughfares added or enlarged were the Khalīfī, the Shārī‘ Ghamrāt (Shārī‘ Ramses), Shārī‘ Shubrai, al-Tur‘ at-al-Balā‘īy, the road to the pyramids, etc. It is virtually impossible to consider traffic movement within Cairo without reference to these essential thoroughfares. Much still remains to be done in untapped areas of Cairo's perfunctory traffic snarl, but there at least appears hope that the problem will receive the attention it deserves.

If automobiles introduced one new major problem, industrialization introduced the other. Although the modern, large-scale, assembly-line factory has just recently emerged as an eye-catching embellishment on the Egyptian landscape and small firms (employing under ten persons) still dominate the Cairo industrial picture, the gradual transition from tiny workshop to factory dictated rather dramatic alterations in the land use pattern of the city. Indeed, this trend is creating problems which are likely to be felt with increasing intensity as it gains momentum in the coming few decades.

The trend in itself is a composite of several types of changes. First the old ushārīs have been done in untapped areas of Cairo; there has been a noticeable shift from agriculture—as the source of livelihood for most of the population—to commerce and industry. It is important to recall that as late as 1877, when Ismā‘īl collected some "labor force" data in his Muqāllah survey, some 96.5 percent of the city's active labor force was still engaged in farming.83 Most of the land within the official city boundaries was used not for urban purposes but for agriculture. By 1959, primary production had been reduced to a minor element in the economic base of the community, both proportionately and numerically. According to the census of that year, only 25,444 persons (about 7 percent of the active labor force) were engaged in agriculture. By 1971, the percentage had dropped to six while the number of farmers remained constant.84 Since that time, there has been a

80 United Arab Republic, Ministry of Information, Al-Kīthī al-Mu‘jam al-Qāsim (Cairo, 1959), pp. 614-615. See also Ministry of Information, Al-Kīthī al-Mu‘jam 1962 (Cairo, 1963), p. 792, which reports that since 1951 some 25,500 people have been ex

81 Published from The Census of Egypt Taken in 1917, Vol

82 The source for this figure, which must be used with caution since adequate operational definitions are not given, is État de statistique générale de l'Egypte, années 1883 . . . 1877 (Im-

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force includes housewives, people in institutions, school children, and the like, I have excluded them to obtain an "active labor force" base comparable to that evidently used in the Muqāllah survey. The number of persons in agricultural employment was computed against this reduced base to derive the percentage in agriculture.

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88. Family-size industrial workshop in Būlāq, 1969

89. New iron and steel mill in Hālwan

To a population which took mixed land use for granted as an essential characteristic of urban life and which was well accustomed to a fairly high level of background noise, the existence of small repair and machine shops, of stores and service establishments stuffed throughout even daily residential areas was no cause for concern. Their distribution was dictated more by ecological convenience than regulation. Thus, concentrations of particular industries arose in districts occupied by ethnic groups engaged in special trades, i.e., machine shops in the Italian

steady decrease until, at present, under 3 percent of the Cairo labor force earns its living from full-time farming. Among the reasons for this steady increase in the size of commercial and industrial firms employing the nonfarming portion of the labor force. The typical firm, in nineteenth-century Cairo as well as in the preceding centuries, was a family-size enterprise; furthermore, many persons worked either without fixed premises ("entre-preneurs" offering itinerant services or engaged in small-scale distribution) or on premises which required less space than the average dwelling. With the exception of the slaughterhouses, the pottery kilas, the quarras, and a few of the specialized industries that had been commenced under Mu‘āammad ‘Alī, which required larger plots, there was no industry—even metal-working and prefabricating—that could not easily be fitted into small undifferentiated spaces as they became vacant. Except in the case of bakeries and baths, which required large fixed ovens, industry and commerce were highly mobile. Tools were portable and inventories virtually nonexistent. If firms tended to remain immobile, which they did, this was due to social rather than technological factors.

It was these characteristics that made possible the intimate intertwining of land uses that prevailed in Cairo from its earliest history up to the present century. As changes occurred, greater differentiation and specialization of land uses resulted, due both to the larger scale of enterprise and more elaborate capitalization. These increases in scale coincided with the expansion of the city from the original medieval nucleus to the regions both north and west of it. Since by this time the older commercial and industrial districts were fairly well saturated, and since, in any case, the newer forms could not be crowded into the tiny premises available there, it was inevitable that the commercial and industrial establishments being added to the city's economic base gravitated to the open land of the developing quarters. Initially, they were located within the central portions of the new city with as much residential intermission as prevailed in the medieval core. Commercial premises were slightly more commodious, to accommodate the larger inventories demanded by a "Westernized" clientele, and the modest production and repair centers that began to dot the newer quarters had to be somewhat larger to make room for "new-fangled" motor driven machines; but, still, the scale remained small.

Little if any attempt was made to segregate these uses. 

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588. Family-size industrial workshop in Būlāq, 1969

89. New iron and steel mill in Hālwan

To a population which took mixed land use for granted as an essential characteristic of urban life and which was well accustomed to a fairly high level of background noise, the existence of small repair and machine shops, of stores and service establishments stuffed throughout even daily residential areas was no cause for concern. Their distribution was dictated more by ecological convenience than regulation. Thus, concentrations of particular industries arose in districts occupied by ethnic groups engaged in special trades, i.e., machine shops in the Italian
While this vehicular density may not appear particularly impressive to readers familiar with comparable figures for New York City, it takes on greater significance when one remembers that traffic in Cairo had to be concentrated within only a fraction of the city's total extent. First, the entire old city—with the exception of those few streets which had been violently imposed—was closed to motor traffic. In addition, extremes of income distribution and a concentration of the wealthier classes in just a few of the newer areas led to extremely heavy concentrations of private cars in selected sections of the city. What was true with respect to residential areas was even truer of the commercial zones. Although trucks serviced the newer "western" business district, they remained an irrelevant mode of transportation for the older commercial areas. Therefore, the vehicles reported above were all concentrated within a relatively small portion of the city, increasing the actual if not the statistical density of traffic to congestion heights. Furthermore, most of these vehicles were likely to be out on the streets at the same time, since virtually no provisions had been made for off-street parking in the commercial zones and, until quite recently, almost no apartment buildings were constructed with underground garages.

In addition, just at the time when traffic was becoming more dense, the feasibility of widening existing ways or of cutting new arteries was diminishing. Methods of house construction had changed. Whereas low-value, replaceable mudbrick structures might have been built a century earlier, the new construction favored stone and reinforced poured concrete. These new buildings lined the roads, presenting a solid phalanx against the encroachments of potential thoroughfares. They sprang up along each new street, rigidifying the pattern before second thoughts could be entertained. It is perhaps a commentary on the situation that between 1957 and 1959, when the problem of circulation took on the character of a disaster, only four major roadways were added to the circulation system within the built-up portion of the city. Of these, two were dependent for their rights of way upon filled-in canal beds (the Shibli al-Khali), added before the turn of the century, and the [now] Shibli Ramses, constructed during the second decade of the century along the course of the Ima'ilsīyah Canal, while the other two (Shibli al-Jaysh and Shibli al-Aṣfar) were both constructed in the late 1930s at the expense of and for the use of the Tramway Company.

In brief, an enormous backlog had accumulated by the 1950's and strangulation appeared imminent. When the revolutionary regime took over in 1952, it was faced not only with the problem of planning for future urban expansion but with an area which had been allowed to accumulate over the preceding decades during which motor vehicles had finally come to dominate.

While a later section will describe the major street projects executed within the past decade in Cairo, it is significant to note that they fortunately coincided with the disengagement of the full-century half before. Between 1953 and 1958, some 5.5 million square meters of Cairo's street system were paved, and among the more important thoroughfares added or enlarged were: Suhayr, the Khalli, Tur'ah Ghamrah (Shibli Ramses), Shibli Shubra, al-Tur'a al-Bullāqiyyah, the road to the pyramids, etc. It is virtually impossible to consider traffic movement within Cairo without reference to these essential thoroughfares. Much still remains to be done to unburden Cairo's perpetual traffic snarl, but there at least appears hope that the problem will receive the attention it deserves.

If automobiles introduced one new major problem, industrialization introduced the other. Although the modern, large-scale, assembly-line factory has just recently emerged as an eye-captivating embellishment on the Egyptian landscape and small firms (employing under ten persons) still dominate the Cairo industrial picture, the gradual transition from tiny workshop to factory dictated rather dramatic alterations in the land use pattern of the city. Indeed, this trend is creating problems which are likely to be felt with increasing intensity as it gains momentum in the coming few decades.

The trend in itself is a composite of several types of changes. First, the concentration of industry is nowhere more obvious than in the Old City itself, where there has been a noticeable shift from agriculture—as the source of livelihood for most of the population—to commerce and industry. It is important to recall that as late as 1937, when Ima'il collected some "labor force" data in his Mubjotb survey, some 96.5 per cent of the city's active labor force was still engaged in farming. Most of the land within the official city boundaries was used not for urban purposes but for agriculture. By 1957, primary production had been reduced to a minor element in the economic base of the community, both proportionately and numerically. According to the census of that year, only 16,144 persons (about 7 per cent of the active labor force) were engaged in agriculture. By 1957, the percentage had dropped to six while the number of farmers remained constant. Since that time, there has been a new and more urban purpose to urban areas, and the land that had been devoted to agriculture has been taken over by factories, shops, and other commercial establishments.

82 United Arab Republic, Ministry of Information, al-Khitāb al-Samawi (Cairo, 1959), pp. 814-815. See also Ministry of Information, al-Khitāb al-Samawi (Cairo, 1962), p. 783, which reports that since 1953 some 5,800,000 have been expended on street paving and sidewalks in Cairo.

83 The source for this figure, which must be used with caution since adequate operational definitions are not given, is État de statistique générale de l'Egypte, année 1937 . . . 1937 (Imprimerie de l'État-Major Général Égyptien, Cairo, 1939), Tables Liv et liv, pp. 115-116.

84 Compiled from The Census of Egypt Taken in 1937, Vol-ume ii, Table ii, pp. 394-395. Since in this table the total labor force includes housewives, people in institutions, school children, and the like, I have excluded them to obtain an "active labor force" base comparable to that evidently used in the Mubjotb survey. The number of persons in agricultural employment was computed against this reduced base to derive the percentage in agriculture.
quarter, groceries and coffee shops in the Greek zone, ribbons and sewing findings in the Misrli. Those few developing industries that required larger sites and heavier installations, or whose raw materials and products were bulkier, tended to segregate themselves in the northern portion of Būlāq, not because they were relegated to this region by design or because they wished to isolate themselves, but simply because access to port facilities and later to the major rail sidings there (in Sābiyyah) gave this location its competitive advantage.

It was not until the 1920's, and even more in the decades that followed, that larger-scale commercial establishments began to be segregated in the central business district of Azhukūliyyah (including the first "department store"), and that certain new "factories," employing more than the traditional minimal labor force, began to seek peripheral locations where land costs were lower and where production lines could be spread out according to crude assembly-line principles. Even then, however, the general scale of both commercial and industrial plants remained small, not only in comparison with industrialized nations but even in comparison with rival Alexandria.

This situation, to a large extent, persists to the present. The overwhelming majority of Cairo's industrial and commercial firms are still extremely modest operations, which permits them a diffusion of location unanticipated in a modern city. According to a survey of 1929, 55 percent of the industrial labor force of Cairo was employed by the 5,750 percent of all firms consisting of four or less persons! One- and two-person businesses accounted for two-thirds of all industrial firms and employed almost one-third of the industrial labor force of the city. The average size of a firm was only 3.6 workers. The average size of commercial establishments was even smaller and, in addition, over one-fourth of the firms were engaged in "personal service" (many requiring no fixed premise) while more than half were retail stores, the majority of which occupied no more space than a one-car garage. Thus, even in the present era, the small size and lack of specialized requirements of non-residential premises permit a header intermixtude of land uses than could be tolerated in a Western city of comparable complexity.

Nevertheless, the very fact that there are now even a small number of industrial plants that employ over 500 workers indicates a new set of problems that are likely to grow more severe as these plants become not the exception but the rule under current programs of industrialization. During World War II and again after 1952, a substantial number of large factories were constructed on the periphery, chiefly in new industrial estates, first north (Shubra al-Khaymah) and then south (Hālwān) of the built-up city. While these modern establishments resemble those constructed elsewhere, the generate problems which are significantly different. The laborers they employ must either be housed adjacent to the plant, often on land better suited to agriculture or industry than to residence, or they must be transported by bus from distant points, often along routes which cannot sustain sufficient demand to warrant public service. The proliferation of the private automobile, which went hand in hand with industrial decentralization in the United States and upon which the labor forces of American factories often depend for their journey to work, is and for some time will remain unknown in Egypt. In some instances, firms must actually construct housing estates for their workers, estates which share the drawbacks of all company towns. This task has now fallen to the government since the factories, even those constructed originally by private enterprise, are administered under the nationalization program. In other instances, where the public transportation system has not yet been extended, special company buses must be used to transport workers.

In essence, the modern, large-scale, decentralized factory, introduced at this stage of Cairo's development, has imposed certain requirements which the society has not yet been able to meet. While from one standpoint this may be considered as a problem, from another it offers creative possibilities. One of the best proposals that has been very seriously entertained—and which figures prominently in the 1955 Master Plan—is that a series of satellite towns be constructed around these new industrial complexes. This solution would both relieve the factories of their present responsibility for providing housing or transport and, in addition, help relieve the central city of some of the environmental increments that otherwise threaten to strain its already overcrowded residential and transportation facilities.

Not only industry but another of Cairo's major economic bases, government, has experienced a dramatic shift in the scale of its operations in recent years. This expansion in the public sector has required a greater degree of land use specialization than was previously necessary. Again, the solution has been in the direction of the satellite town (this time adjacent, however, to built-up Cairo), within which the major government offices are to be concentrated, supplemented by residential and commercial quarters.

A number of problems have been raised in this section, for which no simple solutions exist. What is required is a balance between competing pressures. On the one hand, especially in the older quarters but also in the central portions of the newer quarters as well, the persistence of many small-scale enterprises has resulted in too much and too capricious an intermixing of land uses. On the other hand, too much rather than too little land use segregation is the critical problem on the periphery of the city, where a dramatic leap to very large-scale enterprises has created a reverse difficulty. If new and old quarters are to be fused into a unified urban community, policies to redevelop the older zones by sorting out land uses and assembling larger sites must go hand in hand with policies designed to provide the new peripheral zones with a fuller and more balanced complement of land uses. And these policies must, in turn, be related to plans for improvement in the circulation system itself. Opening access to the old city is just as essential as linking the new peripheral zones to the city core, if efficient land use patterns are to be encouraged.

One might with ease devote this entire volume to a study of contemporary Cairo's "social" problems, for they both allow and deserve such treatment. However, upon reflection it is apparent that they have always been present, in one form or another, throughout the city's history. Numerically they may loom larger by virtue of the heightened scale of urban concentration at Cairo, but the major difference is to be found not in scale but in the evolution of a philosophy of social welfare in which they have become identified as "problems" requiring solutions. This recognition of the "problems" is in itself, testimony to the modernization of the city.

The case of housing can be singled out as an illustration of the magnitude and complexity of some of these new problems. Isolation of this problem is virtually impossible, since rapid urban growth, inadequate employment opportunities, low incomes, and the lack of adequate housing are all linked together in a depressing but indivisible chain of causation. To really understand and evaluate Cairo's housing problem and its possible solution requires no less an understanding of Egypt's economic dilemma, which is again beyond the scope of our inquiry. Nevertheless, even a superficial discussion will alert the reader to the nature of the problem.

Throughout history Cairo has suffered from an inadequate supply of housing even by the most minimal standards. Some of the very earliest travel accounts remarked on the large numbers of city "residents" whose only bed was a doorway or street. Others noted the incredible densities at which Cairods were housed, 200 or more persons crowded into the cubicles of a single "apartment" hive. While these conditions are now exceptions, standards of adequacy have gone up faster than actual improvements could be made. And, in addition, the enormous number of urban newcomers that Cairo has been called upon to absorb during the present century would have presented a formidable challenge even if standards and expectations had not risen in the mean-
As modern standards of density have come to be accepted by Egypt's planners, the definition of the problem has been formulated in terms of a reduction in density. International comparisons may help to place this problem in context. In the United States in 1950, less than a percent of the dwelling units, urban and rural, were occupied at densities exceeding two persons per room, and even in urban Czechoslovakia, despite the enormous housing stock loss sustained in the war, only 28.6 percent of the dwelling units in that year were occupied so intensively.

Thus, what is now the exception in Western industrialized countries is still the rule in Cairo. Nevertheless, it would be both unrealistic and economically self-defeating to attempt any substantial reduction in Cairo densities. This must be accepted as a problem whose solution must be put off until some of the underlying causes of it have been approached.

In the meantime, however, it would be desirable to prevent a further deterioration in standards, and it is legitimate to ask whether additions to the Cairo housing stock are now being made at rates sufficient to replace units lost through demolition as well as to absorb, at standards not inferior to those already existing, the new population increments that inevitably flow into the city. Evidence indicates that this has not been taking place and that, in fact, the trend of deteriorating density conditions has persisted into the 1960's. This can be simply stated. In 1960, slightly under 2,000 building permits were issued in the Governorate of Cairo for the construction of an additional 48,550 rooms. In 1961, the comparable figures were 3,235 building permits for the construction of 93,930 rooms.

It is impossible to determine from these figures what proportion of the authorized rooms were designed for residential use and what proportion for industrial or commercial purposes, but even if we assume that all of them were actually built and all of them were for residential use (and neither is a valid assumption), their contribution to the housing stock would have been insufficient to absorb the new population added to the city in those two years, much less compensate for an unknown number of demolitions. Assuming a conservative population growth rate for Cairo of 4 percent per annum, some 156,000 additional residents in 1960 and another 149,000 residents in 1961 had to be absorbed.

This was equivalent, at an average family size of 4.8, to adding 28,000 and 29,000 families respectively in the two years. If we can, for the sake of argument only, conceive of these newcomers being housed in these new rooms, the density of occupancy would have been 3.7 persons per room, i.e., considerably higher than the already-existing densities of the city. The evidence thus leads to the conclusion that the housing shortage in Cairo has not only...
95. Workers’ City in Imbābi: Cairo’s first public housing

persists since World War II but has actually become worse.

To some significant extent, inadequate housing in Cairo must be traced to inadequate demand. Needs there may be, but economic demand there is not. Again, by way of illustration, sample family budgets may give the reader some sense of the magnitude of the problem. In 1958/59 the Egyptian government conducted a sample survey gathering detailed family budgets from 3,284 families.26 The results revealed that, for most urban families, food alone required so large a share of the family’s income that, once that need had been met, very little indeed was left to cover all other necessities of life, including housing. Within the entire urban sample, almost 56 percent of all expenditures was for food. And, as is true everywhere, the lower the income, the higher the proportion absorbed by this basic item (see Table 4). Given these patterns of expenditure, it would be unreasonable to apply the “Western” standard of expecting that a fifth to a fourth of family income will be allocated to rent. In Egypt, expenditures in the neighborhood of 5 to 10 percent are closer to reality. And this, in combination with the low incomes of most urbanites, means that,

Some of the results of this study, including the figures from which Table 4 has been constructed, appear in Annuaire Statistique, 1960/1961, p. 104. I have merely combined the percentages to obtain the food total. Unfortunately, the table does not show the distribution of the sample by income class nor does it show a specific breakdown for housing expenditures as distinct from other nondurable consumption items. Both of these would be needed to estimate housing demand for Cairo.

<table>
<thead>
<tr>
<th>Income Class (selected)</th>
<th>Percent Spent on Food</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under LE 25/annum</td>
<td>74.10 (primarily cereals)</td>
</tr>
<tr>
<td>LE 100-150/annum</td>
<td>69.67</td>
</tr>
<tr>
<td>LE 200-250/annum</td>
<td>62.51</td>
</tr>
<tr>
<td>LE 400-600/annum</td>
<td>51.41</td>
</tr>
<tr>
<td>LE 1,000 or more/annum</td>
<td>36.65</td>
</tr>
</tbody>
</table>

if adequate housing is to be provided for Cairo’s population, it cannot be left to the economic market place. Direct government subsidy is inevitable.

Recognition of the government’s responsibility in this area has appeared only very recently in Egypt’s long history. Prior to the Revolution of 1952, only one publicly subsidized low-rent housing project was constructed in Cairo, namely the “Workers’ City” in Imbābi, consisting of some 1,500 dwelling units. Since the Revolution, construction of “popular” housing has become an essential element of government policy, in which the Ministry of Housing and the Ministry of Waqf have been vitally involved. Housing units for the middle classes are also needed, and several projects have already been executed to provide reasonable housing for the “salaried middle class,” many of whom are government employees in Cairo. Whether these ventures will be sufficient to compensate for a reduction in housing offered through the private sector cannot be judged at this early date. Raising the housing standards of a minority of Cairo’s low-income families without substantially adding to the entire housing stock may benefit a small portion of the population without contributing to a rise in general standards.

The foregoing remarks are not to be taken as a definitive statement of the housing problem, but merely as an indication of the nature of the new social problems coming to the fore as Cairo enters its second millennium. Even as older problems have been “solved,” new ones have come to take their place which are, if anything, even more challenging than the once which have preceded them. But the reader will note that the new problem areas somehow appear more familiar to him, that they strike a responsive chord absent in, for example, a discussion of the role of the mut'a‘āžir or the awqaf. Cairo, as a contemporary city and the capital of an industrializing nation, now shares with other major cities throughout the world the pains and perplexities of the modern metropolis.

PART III · THE CONTEMPORARY METROPOLIS
An Epilogue and an Introduction

All the problems discussed in the preceding chapter had more than tangential significance in shaping the form Cairo was to take in the twentieth century. Each, either directly or, more commonly, by default, affected the differential rates of growth in various quarters of the city and, by influencing the types of residential facilities available or newly provided, helped to bring about concentrations of persons with varying social characteristics in one district or another. While natural topographic and man-made technological factors circumscribed and channeled the explosive growth of the twentieth century into specific reservoirs, the social history of the community and the existing types of institutional forms acted more directly to distribute population within the metropolis and to give to each quarter its own unique functions and its own characteristic inhabitants.

Thus, decisions made by the autonomous concessionaires who built the tramlines served to encourage urban development in certain directions while consigning land off the major routes to continued agricultural exploitation. In a similar manner, decisions made by other foreign companies concerning the extension of service utilities into certain quarters enhanced the attractiveness of those zones—but only for a special clientele. The uneasy developments in mortgage financing coupled with the specific values of the investors, in similar fashion, shaped the kinds of subdivisions that flourished in the newly opened zones, serving, with the sole exception of Helipolis, to fragment the newer additions to the city into tiny and uncoordinated patchworks of intensive construction. The small scale of private developments precluded coordination, a tendency that was compounded by the lack within the municipal superstructure of home rule and the attendant powers over land use necessary to guide development within an orderly pattern.

Lack of conscious control over development, however, did not mean capricious intermixing. In ways, the absence of planning allowed the subconscual forces full play, and from their operation evolved a pattern within the newer parts of the city which was nonetheless marked for having been unplanned and which was clearly related to the divisions and specializations within the urban structure that were already apparent at the turn of the century.

In the older portions of the city, as well, the factors we have called "problems" in the above discussion served as "forces" which molded these historic quarters, condemning some to stagnation and further decline, encouraging the metamorphosis of others into shoddily Western imitations. Even the housing problem, that is, the lack of residential facilities for many of the new migrants to the city, returned its own ingenious solution, namely the conversion of the cemetery zones into residential quarters, thus expanding the population of the living city into areas which no plan could have foreseen.

Most of these changes had an air of caprice about them. Here, a decision of the Tramway Company led to an upgrading of some small linear strip within the old city; there, the accidental distribution of swamp-encumbered property led to a further deterioration of another section; here a shift in the methods of production in a certain industry led to its relocation, while the persistence of traditional techniques in others left a residual concentration in an older quarter; sometimes a politically motivated expulsion or restriction of some ethnic group resulted in residential succession in one subarea but not in adjacent ones. These are only a few of the many types of random influences that played upon the structure of the old city during the fluid years of the twentieth century. But again, despite the unplanned nature of the changes and the often accidental impulses that activated them, the most impressive fact to be observed is that continuity far outweighed drastic shifts, and that a knowledge of an area's earlier history enables one to predict quite accurately the general direction of change. Only occasionally has that direction been altered by a more recent opposing force.

The essential purpose of this book thus far has been to provide the reader with sufficient background to understand the city of Cairo as it is today, to see each part of the city as a subarea sharing much in common with the rest of the city but also retaining with remarkable persistence its own distinguishing characteristics—characteristics that mark it off as a relatively independent "natural" area. The present structure of the city is so tied to its past historical development that, for any given subsection of the city, to know the period in which it was first settled and to know the social and ethnic characteristics of its earlier residents (or, in the case of the most recently settled zones, the social and ethnic characteristics of the older part of the city out of which it radiated) is to know a good deal about its present inhabitants, and to be able to predict quite accurately many elements of its physical appearance. In order to complete the prediction, however, one needs also to know the relationship of each subarea to the transportation network of the city and, further,
to know any special modifying or extenuating influences, particularly of an institutional nature, that made the area more or less responsive to the croscurrents of stability and change that operated within it.

While this has been, perhaps, a relatively long introduction to the central purpose of this volume, we are finally ready to proceed to an analysis of contemporary Cairo. In this analysis we shall be able to employ not the fragmentated verbal accounts of history—which often leave unanswered many of the most crucial questions—but the fuller, though still incomplete, records of the decennial censuses of Cairo. These records allow us to trace quite precisely the vicissitudes of the various quarters of the city and to measure growth and transformation in those peripheral areas of more recent settlement. Population figures, combined with an "imaginative reading" of specially computed indices of socio-economic status, of family life, of social organization or disorganization, and other indicators of differences in the way life is lived within the city's various quarters, can give us a new way of examining the complex structure of the modern city of Cairo and of abstracting from that complexity the underlying simplicities and patterns.

EPISODE AND INTRODUCTION

The Emergence of the Northern City: Comparative Growth Rates

Archaeologists have long used the strata of human and natural deposits to "peel the onion" of history and to align contemporaneously to items within the same stratum. I propose to use this same approach but to reverse the procedure by using known historic developments to separate the series of urban accretions that, in the aggregate, constitute the present city of Cairo. For, just as the dimension of depth lays bare to the archaeologist distinctive, successive stratas of time, so the horizontal dimension of surface space reveals to the urban ecologist the successive models of urbanism, each conditioned by roughly similar factors, that have followed one another in Cairo's progression from desert encampment to modern metropolis and which, to a limited extent, still stand side by side in the city of today.

We have already noted that, by the end of the nineteenth century, Cairo consisted in reality of two major subunits, more or less independent, plus a stillborn appendage to the south. By the middle of the twentieth century a third and new city had been added to the original complex, chiefly (but not exclusively, for here any simple scheme breaks down) to the north of the existing areas of settlement. Each of these cities was formed in the crucible of a different technology and was shaped by a different principle of social organization—which tended to confer upon each a fairly distinctive set of general characteristics. Thus, if the technological foundation of the first (the medieval core) was animate energy while that of the second (the colonial town) was steam, the energy that powered the third into existence was electricity. And if the organizing principle of the first had been religion and, within the Muslim majority, ethnicity, while that of the second had been the mutually repelling polarity between native Egyptian (Oriental) and foreigner (Occident), the principle which governed distribution of population within the third city was chiefly economic—with rich and poor increasingly segregated. In many ways, these three models of urbanism still coexist in the city of Cairo, supplemented by a rural infusion about which more will be said later. However, time and process have tended to blur the boundaries between the three and to secretive transitional strips where once there had been unbridgable barricades.

The three major geographic divisions of Cairo, then, constitute a basic framework within which the smaller subdivisions of the city fit (see Map XV). While to know the general character and historical development of these larger components is not to know, a priori, everything about the smaller quarters which comprise them, no understanding of the smaller "natural areas" can be gained in detail until the broader conditioning units have been understood.

The deepest stratum upon which today's city is built is the medieval. (As we have seen, settlements predating this period have disappeared, leaving as a crenatah only some unstable mounds and the refuse of generations.) This intensively developed medieval "core city" is what will be referred to hereafter as the Eastern City. It is chiefly the elongated irregular rectangle that stretches from the Husayniah projection just north of the Bāb al-Nasr and Būb al-Futūh southward to and including the Citadel and the Mosque of Ibn Tulun. On the west it is bounded roughly by the course of the Khāljī Street (for the canal is but a distant memory for the oldest inhabitants), while on the east it fades into the desert. Included also in this zone is the projection west of the Khāljī that encompasses the area originally occupied by the Fātimid port of al-Ma'ṣa and, with a leap and a break in continuity, the former port of Būbāq, no longer literally but still figuratively an island with social and historic affinities to the Eastern City.

The ʿaqām (districts) of Cairo that comprise the Eastern City are: al-Jamāliyyah, al-Dargh al-Atār, the northern portion of al-Khalīfah, the southern port of Būb al-Ṣabrīyyah, and the eastern bank of Būbāq. Because these districts cannot easily be subdivided in the early censuses, the totals for each ʿaqām (district) will be combined to trace the growth of the Eastern City. However, it should be borne in mind that, as the recent period is approached, some of the totals are deceptively large since they begin to include portions of the nonmedieval fringe, i.e., the cemetery quarters to the east and south whose growth as residential zones dates essentially from the twentieth century. In a later analysis these developments will be treated separately.

Just west of the Khāljī begins the neo-medieval stratum, a narrow transitional belt parallel to the Eastern City. While it was originally settled in premodern times, its development was so impermanent and spotty that it was easily transformed into a more modern type of urban quarter when the need arose. Its transformation was facilitated by the ease with which older buildings could be displaced or supplemented by new additions dating from the last century. The ʿaqām of al-Mūsākī lies entirely

XV. The three major geographic divisions of Cairo
within this belt, as do the easternmost portions of 'Abdīn and Saydīyah Zaynab, their combined extent comprising three-fifths of the total land area of the province and two-fifths of the population.

The heart of the Western City, or what might be termed the post-Renaissance or Baroque stratum, occupies the land west of this transitional belt, almost to the river's edge. Its core—the Tilh al-Qasr al-'Ayni, the major route leading to Mīr al-Qadīmah, which was the westernmost street laid out in Ismā'īl's addition to the city. Beyond this core—along the riverfront looking back at the remnants of Rawdah and al-Jazīrah in the center of the stream, and beyond, along the shoreline of the river's west bank—lies a final addition to the Western City which dates from the twentieth century. At this point in the analysis the transitional belt, the Baroque strip, and the modern quarter will be combined and treated as parts of the Western City, although in a later analysis these substrata will be distinguished more carefully. Thus, in addition to the square listed above (al-Mundīk, 'Abdīn, and Saydīyah Zaynab), the districts of Ashabīyah, Qasr al-Nil, as well as the western shore of Būlāq, are combined into this unit referred to as the Western City.

This rather simple division of the central portion of contemporary Cairo into two lateral halves, an eastern and a western, accounts effectively for all parts of that zone except the two discrete medieval ports of Būlāq and al-Jazīrah. Al-Jazīrah has already been assigned to the medieval stratum and so perhaps should Mīr al-Qadīmah. However, the isolation, until very recently, of the latter and its combination with the agricultural zone south of the river is a way of recognizing that it be treated separately as an abortive Southern City.

The third major division of contemporary Cairo is the Northern City, a vast sprawling district extending eight kilometers in width from the old Rawdah al-Faraj to the sharply delineated desert edge beyond Helipolis. To the south it is bounded by the Eastern and Western cities on a line that passes through the rail terminal of Bīkh al-Jalīl. On the north it is bordered by highly irregular fashion by the mostly artificial margin of the Delta, into which it continues to make inroads. This city dates, almost exclusively, from the twentieth century, although in the path of its phenomenal tidal surge of expansion were isolated clusters of dwellings and even whole villages that were drawn into the stream of modernization.

density, not, however, without deflecting its course here and there or without leaving small residual islands of resistance to the incursions of the new and piling up upon its banks. Moderate growth was registered in the Western City, where the population increased to almost 160,000 (17 percent of the total), despite the proliferation of commercial uses that added to the already congested population. Even in Mīr al-Qadīmah some small increase was also experienced, testimony to the general rise of the impetus of urban growth then making itself felt.

But it is in the north that the first glimmerings began to appear of what was to be confirmed in the next decade as a transformation in the city's ecology. That region doubled its admittedly negligible population between the two censuses, reaching in excess of 7,000 inhabitants by 1875. At that time the district of al-Wāliyī included what was later to be designated Mīr al-Jalīl-Tabīl (still a thought, not a reality), while contained within the qīnūm of Shubra was the entire area later to be divided between Shubra and Rawdah al-Faraj.

The decade that bridged the turn of the century was also the decade that clearly signaled a basic shift in this balance between the old and new quarters. The Eastern City, although far from static (having increased in population by some 25,000), grew more slowly than the city as a whole, so that by the end of the decade it accounted for barely half of the city's dwellers. The Western City on the other hand, gained population at a rate commensurate with the whole; by 1907 it still contained the same 27 percent of the city's then-larger population as it had in 1875. It was thus in the newly settling Western City that the greatest changes were to be observed. By then, population had mounted to over 112,000, constituting 18 percent of Cairo's 680,000 inhabitants. Virtually no growth at all had occurred for Mīr al-Qadīmah, despite an extension of the southern limits of the city to include the distant suburbs of Ma'dīl and al-Halwa.

These same trends continued into the next decade of growth, as Cairo's population approached 800,000. The Eastern City added little population, except in the two southern zones flanking the western business district at Ashabīyah. These low-income zones of Būlāq and Bīkh al-Shārīyah are still among the most densely packed quarters of today's city. Thus, the proportion residing in the medieval quarters declined again, down to only 47 percent of the total, while the Western City barely held its own, containing by 1917 some 27 percent of the city's total, a share that had remained remarkably constant for twenty years. The rate of growth in the Northern City continued to gain momentum. By 1917, just prior to the urban boom decade that was to follow, the new "city" contained over 170,000 residents or one out of every five Cairenes. The

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Southern City remained stillborn, registering no negligible increase that it could easily have been accounted for by the increased birth rate due to the war.²

As migrants poured into the city during World War I and the years immediately following, there was a dramatic expansion in every part of the city and a degree of residential mobility perhaps never before matched in Cairo's history. Between 1917 and 1924 a new rapid rate of natural increase that also contributed to urban growth. Migrants were drawn from all parts of Egypt and from abroad, but particularly attracted to the city at that time were numerous villagers who were already feeling the tightening man-land squeeze created by demographic pressures.

The mechanisms of absorption were twofold. First, the settled quarters of the Eastern City, while enjoying little new construction, were able nevertheless to crowd many of the new migrants into existing structures, raising both the area and room densities to levels then deemed as excessive, although they have since doubled! And second, people flocked to the riverfront, creating the riverine portions of the Western City and even more on the expanding frontier of the Northern City. While some of the settlers in these newly subdivided areas were recent arrivals from 1914, either foreigners from abroad or, less commonly, Egyptians of rural origin, most were drawn from more interior portions of the city itself. The dwellings they vacated absorbed new inhabitants at densities far higher than in the previous occupancy, which permitted all districts to contribute their share toward relieving the pressures caused by massive migration. Even the Eastern City, out of dire necessity, created its own frontier, namely, the adjacent funeral quarters whose tombs and hastily assembled mudbrick shanties gave shelter to thousands of the city's exiles.

² Note must be taken here of a major change in the boundary of Cairo and also of certain discrepancies in the reports of various censuses. Between 1907 and 1917 a large portion of the land on the western bank of the Nile was added to the city's jurisdiction, increasing its area from about 100 square kilometers to over 180 square kilometers. The increase in population that occurred, however, was far less than the increase in land, since the sections added to the city were then sparsely settled and still largely devoted to agricultural use. In other words, the city's administrative area (which excludes this zone) the al-qā'im of 'Abdīn, which gained the Jewish and some sections of the west bank, and Būlāq, which absorbed the settlement of Imbīlah and its surrounding rural fringe, also on the west bank, benefited from this newly annexed territory. We may also reckon that the area that was left to the city was inflayed by about 12,000-15,000 new residents by the terri-}
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In contrast to the Eastern City's stagnation, the Western City continued as before to enjoy healthy growth, while the expansion on the Northern City's fringes was spectacular. The population of the former grew to almost 350,000, while that of the latter approached 450,000, almost equaling the population of the Eastern City. Modest growth was recorded in the downtown core, but this was due not to indigenous factors but to the expansion of physically discrete suburbs whose development was tied to the new "commuter" train connections provided by the Cairo-Suez railway. The year 1937 marks a watershed in the internal pattern of shifting dominance, as can be seen in Charts 11

The decade including World War II ushered in a city much altered in scale and quality. As the decade spanning the turn of the century marked one critical moment of discontinuity, certainly the decades at midcentury witnessed an even more profound alteration in the nature of the community. The change in scale is perhaps the most easily perceived transformation. By 1947 Cairo contained more than 2 million inhabitants, having added within the preceding decade of unprecedented expansion close to 350,000 persons. This increment alone was roughly equivalent to the aggregate of all of Port Said, Tanta, Mahallah al-Khuna, Suza, Manshiya, Asyût, and Damàh, the third through ninth largest cities in the country in that order.

Where could this population go? Given the wartime restrictions on construction, it was perhaps inevitable that many of the newcomers should find their way into already densely settled areas where housing was, if not inadequate, at least cheap. By the end of the decade, close to 600,000 persons were living in the old Eastern City where previously only 450,000 had lived, already tightly packed, at the beginning. Furthermore, this population had pushed or been expelled into the southern and eastern cemetery zones which, despite their lack of water and sewage systems—not to mention such "luxurious" community facilities as schools and medical treatment centers—gave shelter to almost 500,000"marginal" inhabitants.

In the Western City a similar intensification of land use and occupancy permitted 512,000 residents to live where only 350,000 had been ten years earlier. While some of this increase represented a "conversion of the river into the overflow basin of the western bank, most was achieved either through the construction of taller apartment houses on the eastern shore and on the islands through flat-occupied areas. The latter phenomenon resulted in rapid deterioration, especially in the zone just east of the Shàri‘ al-Qaṣr al-A‘yān, which increasingly began to mark a critical boundary between status zones.

Most of the new construction, however, was concentrated as before in the Northern City, which also began at
this time to share some of the high density conditions that plagued the rest of the city. By 1947 this city contained close to 800,000 persons, an increment of almost 350,000 during the decade. Not only in density but in other characteristics, too, the Nile Valley began to lose some of its uniqueness. When the area had first been developed, it attracted a diverse but highly atypical population. For example, in 1937 only 70 percent of its residents were native Egyptians, while the rest were agriculturalists, the urban population consisted disproportionately of native Christians (Copts) and of foreigners. By 1947, due to an influx of newcomers, many of them rural migrants who differed in income and ethnic

![Chart III. Population Growth of Cairo and her Component “Cities,” 1882-1960 (semilog projection)](chart.png)

### Chart III. Population Growth of Cairo and her Component “Cities,” 1882-1960 (semilog projection)

1. The outward movement of Copts from the center of the city coincides with the early expansion of the Northern tier, particularly within the district of Shubra. For example, in 1907, Copts were still largely concentrated in the region just north and west of the Askhyah Gardens, which had been identified in the Napoleononic Expedition as the Christian quarter. Over 20,000 Egyptian Copts lived there, as contrasted with only 7,000 in all of the yet-undeveloped Northern City. By 1937, however, the Northern City had become the clearly preferred residential area for Copts. While their numbers had increased somewhat in the center of the city as well (up to 25,000 by 1957), this older concentration was already dwarfed by the close to 40,000 Copts residing in the Northern City. My estimates are based upon manipulation of data contained in Clerge, Le Caire, 12, Appendix B, Table vi, ing the major area of Coptic residence, contained over 75 percent native Muslims and was no longer the exclusive if unevenly shared domain of middle-class urbanites (largely Christian) and poor farmers (almost totally Muslim); a substantial urban proletariat had been added. Increasingly, also, ecological subdivisions within the vast region were becoming more pronounced. Differentiated were the low-income proletarian quarters concentration along the Sadb (shore of the Nile) and in the area adjacent to the industrial-rail district of al-Subţiyah. These zones took on more of the character of Būlqīq, their shanty neighbor to the south, from whose overcrowded buildings some of the newer residents were drawn. Rural migrants from Delta villages settled in the side streets of Shubra, interspersed with or displacing the Copts who had formerly preempted much of that district. Families drawn from middle- and low-income levels divided the qanîn of al-Wâlîyâ into a checkerboard of small neighborhoods whose quality might vary with each block. An insipid upper-middle and native elite was clearly segregating itself in Heliopolis while, across the great divide of the major transportation axis that linked Heliopolis to the city, the area of Zaytûn contained a less exclusive and pretentious indigenous population. Despite the inroads into the countryside that had been made by the proliferation of urban structures, all along the periphery of the built-up edge of the city there still remained rural residuals. Villagers retained their claims in fringe areas that dipped, in some cases surprisingly deeply, into the very heart of the expanding city. The amorphous northern zone, which had previously spread like a protozoan across the width of the region, was coming into more concrete focus, revealing features and forms representing a wide variety of urban types.

Such phenomenal growth could not help but transform the physiognomy of the city. By 1947 the relative positions of the three component cities had clearly been reversed. The Eastern City, despite its heroic efforts and its bulge

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...ing seams, was able to accommodate no more than 32 percent of the total population. The Western City, despite vigorous development along both shores of the Nile and on the islands, accounted for less than a quarter of the city's inhabitants. The aborted Southern City still contained the same minor 6 percent of the total she had housed in earlier decades. But the Northern City showed continued and growing strength. By then, some 38 percent of all Cairenes were living in these new quarters. Thus, the downstream movement of Cairo—which first began when Babylon-Fustat supplanted Memphis and which continued throughout the centuries during which al-'Askâr, al-Qarâ‘y, and finally al-Qibârah were added on the north—found its ultimate expression in this final thrust into the fertile Delta—the Northern City.

The same trends continued unabated during the thirteen years between the censuses of 1947 and 1960. Although population expanded at a somewhat slower rate than it had during the war-boom years, in terms of absolute numbers the growth of the city was even more impressive. Almost 1,900,000 new urbanites were added to Cairo's population in the interim. By 1960, if we adjust the city's boundaries to be comparable to those that obtained in 1947, 3.5 million persons living in the same area where 2 million had lived in 1947.

Scarce any of that growth could be absorbed into the Eastern City, which was already preciously overcrowded. It is perhaps a tragic tribute to her elasticity that she was able to give refuge to over 100,000 additional residents, but by then this included almost 80,000 who were living, legally or illegally, in a submerged, in the cemetery zones which, in a surrealistic response to population pressure, had begun to develop small commercial nodes near the points of "highest pedestrian count," the few communal water taps upon which all were dependent in this desert-dry city. But even that growth, which would have been significant during earlier periods of the city's history, could not assure the Eastern City of its continued importance...
in the expanding metropolis. By 1960, the proportion of Cairo's residents living in the medieval stratum and itsFunerel shadow city had dropped to less than one-fourth. And it had become clear that this would decline inevitably and even more precipitously in the years to come, unless the cemetery zones that continued to block physical expansion into the desert could be removed.

By this time the Western City also appeared to be approaching saturation point. No longer were there large undeveloped parcels that could easily be crowned with bustling apartment towers. Even the lushly gardened villas, which hitherto had been methodically replaced by skyscrapers, especially in the region fronting the Nile, were virtually gone. And as the central business districts of al-Azākiyyah (for those with Western tastes) and al-Muṣki (for those with bolsa, traditional, purist) became more exclusively commercial—business firms preeminent not only the street floors that had always been devoted to shops but the upper stories which had once been residential—they were less able to absorb additional residents.

What growth there was in the Western City came from only two sources: the piling up of densities (causing subsequent deterioration) in the southernmost and lower status areas of Sayyādīyya Zaynab and even eastern 'Abdīn; and second, the conversion to urban uses of the agricultural lands on the island of Rawdah and those across the Nile on the western bank. The population residing on the western bank across from the city increased almost sixfold in the thirteen years between censuses, while the island of Rawdah (illogically still linked administratively, although no longer functionally, with Miṣr al-Qadīm) was virtually transformed from a rather bucolic refuge for some 22,000 residents into an urban forest of tall apartment houses that contained over 36,000 inhabitants in 1960. The air on the island still reverberates from the ubiquitous pile drivers that will give homes for at least twice that many by 1970.

Nevertheless, despite this healthy expansion on the offshore islands and on the west bank, the Western City experienced a loss in relative importance almost as great as that suffered by the Eastern City. By 1960 no more than 23 percent of Cairo's population resided in the Western City, including the west bank, and the number of inhabitants scarcely exceeded those in the medieval core. Even with the new and projected housing projects that daily take on more concrete form in the residual urban fringe o the west, this city has a limited future role in the ecology of Cairo.

In marked contrast to the relative decline of the two older cities was the continued growth of the Northern City, which, by 1960, could claim with a fair degree of accuracy to have become the real Cairo, even though her distinguished architecture and nondescript streets kept her still virtually invisible and off the beaten track for most outsiders. Ask any visitor to Cairo today to describe the city and he will tell you in great detail of the Western City that fulfills most of its commercial and residential needs, and of the Eastern City that fulfills its equally compelling cravings for the exotic Orient; he will probably forget even to mention the Northern City, despite the fact that by 1960 it already contained close to half of the total population of the city, a lead which continues to increase!

The expansion of this zone in only the past few decades represents a truly remarkable transformation in the ecology of the city for which none of our earlier incursions into history has prepared us. The region doubled in population in only seventeen years, increasing from a little under 50,000 in 1947 to in excess of 1,600,000 in 1960, and its growth seems only to have begun. To the north of the settled sections are located some of Egypt's most advanced and largest industrial establishments, many of them clamoring for additional subsidized low-income housing for their growing labor forces. At the edge of the eastern desert, in the vacuum between 'Abbāsīyyah and Helēpolis, the new town of Naṣr City is being constructed which, when completed, will contain dwellings for half a million inhabitants as well as most of the government ministries, a vast commercial and recreational core, a new campus for al-Azhar University, and a zone for industrial development.

Recent building permits can be used to estimate relative growth rates since the Census of 1960 (see Table 6). Of the nearly 7,000 structures authorized by the Governor of Cairo between July 1961 and April 1965; only about 490 were slated for the central zone of the city, both east and west, while another 835 were for structures in the newly revived Southern City at Miṣr al-Qadīm. The fast-growing southern satellites of Miṣrīd and Halwâna were the location of another 1,325 of the building permit applications. The remaining 4,575, or fully two-thirds of all permits issued, were for apartment houses, villas, shops, and factories to be located in the Northern City—persuasive proof that the trend of northern expansion remains strong.
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Northern City contains a population that spans almost the entire spectrum of Egyptian urban types and shelters within it a vast variety of neighborhoods characterized by distinctive life styles. Stretching northward from the center of the city are at least five sectors, each completely different from the other, reflecting the contrasting worlds of contemporary Cairo. Furthermore, despite the surface architectural resemblance of this new city to metropolitan communities elsewhere, the impress of culture has been deep. The Northern City, while perhaps lacking the exoticism of the medieval core and the déclassé elegance of the Westernized central business district, remains nevertheless distinctively Egyptian. It represents, however, as we shall see in the next chapter, an Egypt newly emergent rather than the Egypt of the past which has been the object of our study thus far.

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XVI. Segments of the city developed at stages of growth
Given what we know concerning the ways people "divide up" cities, our knowledge of Egypt's present diversity should prepare us to expect the coexistence of many very different "cities within the city." This theoretical expectation is easily confirmed visually, for even the most uninitiated and casual visitor to the city cannot help but be struck by the rapid succession of urban neighborhoods that meet his eye as he traverses the city. It is a simple matter to acknowledge the existence of a Cairo mosaic; it is, however, a far more complex operation to summarize it by objective methods and to set forth the essential characteristics that distinguish the parts from one another. This, however, must be done if the city is to be understood.

A DIGRESSION ON METHOD AND MEANING

There are a number of equally valid ways to dissect a city and to subdivide it according to varying sets of criteria. The method ultimately selected depends essentially on the goal or goals of the investigator. For examples, geographers conventionally classify subareas within the city according to the dominant uses of land; sociologists, on the other hand, are concerned with the social organization of the city rather than its physical plan and prefer to classify areas according to the dominant or "typical" characteristics of their residents. I have adopted the latter approach since my ultimate goal has been to identify those large segments of Cairo where residents share common social characteristics and follow particular lifestyle patterns that mark them off from residents of neighboring communities, with whom they seldom interact. Within these "social worlds" there may be a wide variety of land uses which further subdivide the communities into smaller, more specialized quarters.

Just as there is nothing especially sacrosanct about the method and approach selected, there is nothing mystical or invariant about the final divisions. An investigator whose goal is to subdivide the metropolis into as many small, homogeneous and cohesive neighborhoods as are subjectively perceived by their residents might need to distinguish literally hundreds of subareas in order to describe adequately the social worlds of Cairo. My goal has been a different one. It has been to synthesize out of the multitude of the city's tiny cells and quarters the minimal number of major communities necessary to account for basic social divisions within the city. The purpose in so doing is to relate these divisions to past patterns of growth and to suggest the direction of future changes in the metropolis. For this goal, the thirteen "cities within the city" which I have differentiated statistically represent a compromise between the infinite fragmentation that would have resulted, had every minor variation within the city been retained, and the too-gross generalization that would have resulted from treating Cairo as if the city were a unified or undifferentiated whole.

Because I believe so strongly that the product of an ecological "dissection" cannot be understood, much less evaluated and used, without reference to the methods that have been employed to arrive at it, I must begin by presenting the results and their interpretation, digress a bit to describe briefly the techniques used to identify and locate the thirteen subdistricts of contemporary Cairo. Technical considerations, however, take place here. The reader interested in the details of the statistical procedures or in the raw and processed data themselves is referred to the Methodological Appendix to this volume and to the fuller exposition available in another work.3

My first attempt to investigate the ecological organization of Cairo began in 1958 and was based upon the returns from the then-current Census of Egypt, 1947. Volume Fifteen of the series contained data for the Governorate of Cairo, including, in addition to the summary tables, four highly complex sets cross-tabulating a limited number of variables (such as age and sex, marital status, education, employment, family size, etc.) by the 166 census tracts into which the city was administratively divided.4 A set of summary statistical measures (or indices) was devised, utilizing data contained in these tables, to capture significant dimensions of social differentiation within various quarters of the city. The results of this early study, including the statistical data processed for each census tract, maps showing the distribution of each variable in terms of the urban pattern, and computational formulas and explanatory notes for each of the


4 The source volume for all 1947 data is the Arabic edition of Kingdom of Egypt, Ministry of Finance and Economy, Census of Egypt, 1947, Volume 15, Governorate of Cairo (Government Printing Office, Cairo: 1953). The four relevant tables cross-tabulating the city population and census tracts to be the primary source for the maps were found on pp. 568-569. Administratively, the city of Cairo is divided into districts (wilayat, pl. wilayat) which are further subdivided into tracts (shiyakhah, pl. shiyakhah). These roughly correspond to administrative functions to the wards and precincts of an American city and are the units of political representation and police protection. They differ from American census tracts in that they are usually more than statistical units. Some, especially in the oldest quarters of the city, are physically and functionally derived from the ancient burd and davah which have had a long tradition of social cohesion.
indices employed, were published in the Cairo Fact Book5 to which the reader may refer for additional details.

In 1957, the government conducted a regular decennial census, and it was my intention to replicate the analysis that had been made of the 1937 data and to compare findings from the two years. Unfortunately, however, the methods that we had used to arrive at the conclusions of the 1937 analysis had to be revised and, after the first flurry of releases, no subsequent data were forthcoming. Instead, the census year was postponed until 1960. In that year a new census was conducted, and when the results became available in 1962, including a separate volume presenting data for the Governorate of Cairo, it became possible to resume the study. Certain fundamental revisions, however, were required to maximize comparability between data from the two census years.

For one thing, between the two census dates the boundaries of the city as a whole and of some of its constituent census tracts had been altered. Thus, it became necessary to make adjustments. Some adjacent tracts had to be combined in one year or the other; certain peripheral tracts added to Cairo's jurisdiction after 1947 were eliminated while others, originally included with Cairo but later added to the province of Dhahab, had to be recovered and included. These adjustments made it possible to retain for final and comparative analysis 206 census tracts whose individual boundaries were comparable for the seven-year span and which, combined, accounted for virtually the entire official area of Cairo as it had been defined in 1947. Only a handful of peripheral tracts, whose boundaries either could not be determined or could not be made comparable, were actually eliminated from the study.

Not only the boundary and data units but the statistical indicators themselves had to be modified somewhat to make them comparable. While the data were reported, the categories retained for their presentation, and even specific items of information were not uniform in the two census reports. Indices which the 1947 analysis had suggested were relatively meaningless or for which no information was available in 1960 were dropped or equivalent measures, after testing, substituted. For the final analysis some thirteen replicated variables were retained, most of which proved to be measuring the "same reality" in the two data years.

The major difference between the present study and the earlier one, however, was a radical improvement in the techniques employed. In the period between its publication and the present work, I had followed conventional procedures by preparing separate maps showing the geographic distribution of each of the variables, as if they were independent of one another. These were to be visually superimposed in order to abstract from the congruences those sections of the city (usually misnamed "natural areas") which appeared to contain populations with similar characteristics. Con
tiguous census tracts of roughly comparable "quality" were to be grouped together and distinguished from adjacent zones where populations with different characteristics appeared to be living. This was a time-honored method that had been used in virtually all prior ecological analyses employing census data.

For many years urban sociologists had been aware of certain defects inherent in this method but had been unable to devise a satisfactory alternative. It was rec
ognized, for example, that subjective judgment was called upon to play too large a role in the determination of the number of districts and their boundaries, and that two investigators inspecting the same set of maps might reach quite different conclusions concerning the number and location of the subareas. Furthermore, stimulated by the formulations of the social area analysts after 1955, several empirical studies had been made in American cities which indicated that the perception of a "structure" for the city might be devised, depending upon which clusters of variables were selected for mapping. At least three separate clusters or dimensions had been identified—social class, race, family, and ethnic composition—each of which appeared in American cities to yield its own typical pattern of geographic distribution. Earlier methods had assumed unidimensionality.

In the present study an attempt was made to combine with conventional ecological techniques was the development of an alternative approach which appeared to meet some of the objections concerning subjectivity and multidimensionality. This was factor analysis, which received its first successful application in the social sciences in the 1930's by L. Thurstone's investigation of mental capacities. Although as early as 1941 this technique had been adapted to the ecological problem of delimiting homogeneous ecological zones in a state, the suggestion that it might prove equally valuable in analyzing the ecology of urban areas was not followed until almost twenty years later, after the social area analysts had thrown into serious question the assumptions underlying more conventional methods. The present article will show that the technique has the method of factor analysis been used to analyze the ecological structure of cities outside the United States, of which Frank Swezey's study of Helsinki6 and mine of Cairo are among the first. Quite comparable methods were independently developed by several investigators.

In brief, factor analysis identifies mathematical vectors capable of accounting parsimoniously for the relationships and independencies observed among many simpler variables. A factor is, therefore, a hypothetical "force" underlying and presumably accounting for the variance common to several variables which are highly intercor
celated. A separate general or group factor is hypoth
esized to account for each relatively independent cluster of intercorrelated variables.

When this technique is adapted to ecological research, each census tract is treated as an individual having certain characteristics measured by the indices. Correlation coefficients are computed between each and every index, yielding a matrix from which factors are extracted seri
ally, each factor "removing" a measurable amount of the matrix's variance. The factors so extracted represent inde
pendent (orthogonal) forces but the analyst may choose to manipulate (rotate) their location in conceptual space in order to improve the usefulness of his factor solution. In no instance was the city divided into the city of Cairo into thirteen subdistricts.

The results of the analysis are presented in the form of a table giving the "factor weights" (which may be thought of as the degree to which the separate variables correlate with the posited factor) of each separate em
triajectory. This table also gives the cumulative factor in the manipulation of these entries and those contained in the original correlation matrix yields a method for weighting the value of variables in the individual census tracts in order to score each tract on each factor. These scores are standardized, i.e., expressed as ratios to the standard deviation of the distribution around the mean for all census tracts in a city, a technique which permits rather precise comparisons between census tracts in a city within the city itself. Since most of the indices used were collected during 1945-1956, so that Swezey's work came too late to offer material assistance.
had their roots in the nineteenth-century cultural bifurcation and even more in the insolation of the colonial period, a larger percentage of these residents than would be expected by chance alone carried passports or professed a religion other than Islam. However, since the Revolution of 1952 and the sizeable exodus of foreigners in 1956 as an aftermath of the Suez War, these zones have become more properly the domain of the indigenous upper and middle classes of the city.

At the opposite end of the scale are those census tracts, and the composite suburbs to which they belong, with extremely low Factor 1 scores. By maps one can determine that these are located almost exclusively at the urban periphery of the metropolis; by reconnaissance one notes that they are more rural than urban in their appearance. Instead of the steel-girded cement apartment buildings characteristic of the modern quarters, one finds lower, mudbrick or crudely fired brick dwellings, occasionally plastered over, gathered into small village-like clusters whose appearance is more reminiscent of rural settlements in the hinterlands than of any city, whether medieval or modern. Within the dwellings, furnishings are minimal—a few mattresses and quilts, some cooking pots, several glasses for tea, perhaps a trunk or two. Space is too valuable to be wasted in storage, for often one or two rooms must accommodate a family of ten or more. Commercial premises are infrequent and minimal, confined to providing the narrow range of necessities that corresponds to the limited buying power of the focal residents who exist near marginal subsistence levels. The women in these zones, almost without exception, are attired in the same long black gowns, bright head kerchiefs and supplemental inkly shawls that adorn their country cousins. The men still wear the flowing jalabyah during leisure, even those who strip to undergarments to work in the fields or who may be required to wear uniforms or wrinkled trousers for more urban work. Only a minor percentage of these men can read and write, and it is a rarer handful per hundred among the women who can do even this much. With little or no formal schooling to interfere with other life plans, men and women marry young, most of the men by the time they are twenty, virtually all of the girls by the age of sixteen. Early and sustained childbearing preoccupies the women, as attested by the extremely high fertility ratios in these zones— even higher than in the villages of the hinterlands, thanks to the greater availability of medical facilities in the metropolis. The men work at low-paid diverse jobs requiring little skill; only a few still farm full time, though some may supplement insecure employment by part-time farming. Until recently it was a rare child who attended school, and even now with the new compulsory education laws the frequency with which girls are "overlooked" and the early ages at which most children disappear from the school system means a very low rate of school enrollment. The style of life in these quarters, then, despite their location within the urban boundaries of Cairo and despite the fact that farming no longer offers a livelihood to many residents, remains close to the rural model.

Between these two extremes are ranged most of the other variations within the city. Toward the bottom of the scale, although considerably above the rural fringe, are those areas nearer to the center of the city in which one still catches glimpses of a traditional style of urban living linearly descended from medieval Cairo, sustained by a dying economy based upon hand production, tiny scale of enterprise and inventory, and highly personalized relationships between proprietor and client. Toward the midpoint of the scale are areas of more modernized proletarian character, whose residents are moving into the wider realms of complex technology and industrial organization while still clinging to more traditional patterns in their homes and families. Somewhat above them socially are areas that help further to bridge the
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The contemporary metropolis is a living organism that thrives on a daily basis. It is a place where millions of people converge to work, live, and play. The city is a reflection of the diversity and complexity of human existence, with its ever-changing landscapes and structures.

1.01.1. The Contemporary Metropolis

The contemporary metropolis is a place where millions of people converge to work, live, and play. It is a reflection of the diversity and complexity of human existence, with its ever-changing landscapes and structures. The city is a living organism that thrives on a daily basis, adapting and evolving to meet the needs of its inhabitants.

1.01.2. The Impacts of Urbanization

The growth of cities has had a profound impact on the environment, society, and the economy. Urbanization has led to the destruction of natural habitats, increased pollution, and a strain on resources. However, it has also brought about technological advancements, increased economic opportunities, and improved living standards for many.

1.01.3. The Challenges of Urbanization

The challenges of urbanization are numerous and multifaceted. They include issues such as housing, education, healthcare, and transportation. The city must work to address these challenges to ensure a sustainable future for its residents.

1.01.4. The Promise of Urbanization

Despite the challenges, urbanization offers significant opportunities for growth and development. With the right policies and investments, cities can become centers of innovation and progress, improving the lives of their inhabitants and contributing to global prosperity.

1.01.5. The Role of Government

Government plays a crucial role in shaping the future of the contemporary metropolis. It must work to create a framework that supports sustainable development, while also responding to the needs of its citizens.

1.01.6. The Role of Society

Society also has a role to play in the development of the contemporary metropolis. It must work to create a sense of community and responsibility among its members, while also ensuring that everyone has an equal voice in the shaping of the city.

1.01.7. The Role of Technology

Technology is an essential component of the contemporary metropolis. It offers solutions to many of the challenges faced by cities, from improving transportation to enhancing education and healthcare.

1.01.8. The Future of the Contemporary Metropolis

The future of the contemporary metropolis is uncertain, but it is clear that it will continue to evolve and adapt. The city must work to ensure that it remains a place where people can thrive, where they can find opportunities, and where they can live in peace and harmony.

1.01.9. Conclusion

In conclusion, the contemporary metropolis is a complex and dynamic place. It offers both opportunities and challenges, and it is up to us to ensure that it remains a place of progress and prosperity for all its inhabitants.
mad 'Ali and completed by Ismail, a raucous, halalii12 but far from medieval street whose paved surface is all but obscured by the pedestrians and the dusty carts, carriages, and taxis fanned into this one of few passable (?) streets in the old quarter. Then, after the myriad odors and noise from the spice, perfumes, and cloth markets, comes a second latitudinal thoroughfare, the Shari‘ al-Azhar, an even wider traffic and tramcar gash made in the 1920’s to link the terminal at al-'Atabah al-Khadri‘ on the west behind the Opera House with the tenth-century (much rebuilt) Mosque of al-Azhar, still visible, together with its University additions, near the edge of the desert to the east. These two intersections symbolize the symbiotic connection between the medieval city of Community X and the transitional and Westernized cities (Communities XI and VII) to the west, for they bring deep into the heart of the former the modern apartment structures, offices, and commerce of the latter.

The intrusion is but a narrow and shallow wedge, however. If one crosses the street, dodging careening taxis, lumbering carts, and clanging tramcars, one sees the al-Ghuri Mosque and awkabah at the corners. Passing between them, one enters the medieval street and the life of Community X. Flanked by blanketa and leather goods, one proceeds southward amid a thicker and more halali crowd. Almost too soon one reaches the Bab Zuwailah, above which once impaled the heads of deposed amirs. This gate signals the terminus of the walled city but not the end of Community X. The narrow cross street, Talt al-Rabb (Beneath the Apartments—one wonders whose), houses the ironmongers who once specialized in trappings for the elegantly armored horses of proud Mamluks; today their descendants (?) forge less sumptuous charcoal burners, horseshoes, and tools. Some houses, with overhanging and almost touching balconies completely enclosed in delicate madrashiyah screenings, pull one southward, past the quiet of old but solid residences and late Turkish mosques and the ghost zay of the sword-makers toward the Citadel. Decay, decline, and a thinning out of commercial uses are the dominant features, but these are suddenly exchanged for openness and activity as one enters the large modern maydan, into which the Muhammed 'Ali Boulevard and half a dozen other streets converge near the site of the old hippodrome (qarawiyah) where the Mamluk cavalry once wheeled and pranced to display its skill. Contemporary drivers need equal skill for their maneuvers. Skirting the unequal balance of the glorious Sultan Hasun Mosque and an un-

THE CONTEMPORARY METROPOLIS

Wide square with al-Hākim Mosque at left

Entering by way of the imposing gate, one passes first the crenelated walls and minaret towers of the Mosque of Hākim (turn of the eleventh century) but also the more contemporary reminders of almost a millennium later, ragged and exuberant children, ubiquitous donkeys and some few camels (for here cars are useless), the open stalls with their woven straw containers overflowing with fruit depending upon the season—olives, dates, watermelons, or other bulk foods. Proceeding, one passes the Mosque of Aqsun (early twelfth century) and notices that the present congestion has increased. The road is mud where someone has emptied a pail of water, dry dust where no one has sprinkled. The unsanctified architecture is mudbrick, two-storied, and suggestive of a mud-colored Elizabethan street scene, with some projecting logs hinting at the timbered construction to shoot up a past mistake. Occasionally one reads in the newspaper of the collapse of a building; its address is generally somewhere in Community X.

Farther along, two conflicting stimuli impinge almost simultaneously: on the right the breathtaking twin mosques of Sultan Qalawun and al-Nasir Muhammad; on the left and a little ahead, the pounding tones of metal upon metal that herald the beginning of Sīq al-Nahṣīn (the Market of the Brassworkers). Traffic now thickens—black-robed women, men in white and blue jallābeyyaj, and darting children in striped cotton nightshirts and pajamas. Everyone seems to be carrying something from somewhere to somewhere else, for the human head is the major delivery van in this zone.

The quality of the buildings becomes more substantial as the density of the foot traffic increases, indicating that one is approaching the zone of highest value in this hid-
Three main observations can be abstracted from these kaleidoscopic impressions. First, the district is poor, a slum not only by Western but by Egyptian standards as well. Second, the area is traditional but it is also un-
deniably urban, albeit in a non-Occidental fashion. Resid-
uals from urban life in the Middle Ages there may be, but residuals of rural life cannot be found. Third, the
area is a vital complex of work and residence, sales and
consumption, but its industry and commerce are molded
on some preindustrial pattern of small scale, low mechani-
ization, product but not division-of-labor specialization,
frequent turnover but tiny inventories, personal rather
than contracted negotiations. It is difficult to suppress the
persistent, whispered thought, “Here is an anachro-
nism.” One suspects that, for all the vitality of the area,
it is living on borrowed time. The insidious fact that the
municipality of Cairo has recently enacted an “architec-
tural control ordinance” designed to conserve and restore
the historic character of the area suggests that artificial
means may be required to prevent the borrowed time from
running out.

In 1947 slightly under 240,000 persons inhabited Com-
1
munity X. By 1960 this population had risen slightly to
475,000. While such an increase is not insubstantial, es-
pecially considering the saturated level of physical de-
velopment, it should be noted that of all the suburbs in
 Cairo this one grew least, proportionately. In a metropolis
that adds some 4 to 5 percent annually, both from migra-
tion and natural increase, to grow at so slow a rate is
tantamount to decline. In 1947 almost one in five Cairo-
nes lived in this city of the past; by 1960 it was only one in
seven, and the proportion continues to grow smaller.

The Factor I scores of the fifty census tracts in Com-
munity X reflect the cross-product of poverty and urban-
ism. In 1947, the average Factor I score was —0.58;12
some thirteen years later it was an almost identical —0.57,
indicating that the relative position of the zone had not
changed in the interim, despite its improvements in
literacy and prosperity. Factor II scores, indicating the
presence of many single males, were highest in the tracts
that straddle the semi-modern business incursion along
Shari‘ Al-Azhar and in the Azhar University quarters
favored by students. Typically, the tracts in this com-

munity also had high scores on Factor III (indicating
social disorganization) which identifies this zone as
selectively attractive to the handicapped, the socially
stigmatized, and those with no or illegitimate profes-

sions. Commerce, industry, and services dominate the em-
ployment picture, but the future is bleak for the trades
that have hitherto sustained the district. As recently as
1937 the zone still contained the heaviest concentration
of industrial workers; however, since the competitive

growth of modern industry and its final surge to dom-
inance within the past few decades, this is no longer true.
The older craftsmen may continue to live and work in
al-Jam’iyat al-Darb al-Ahmar, but the new gener-

ation knows that the jobs of the future lie in the modern
factories. As the clientele of this business zone, drawn
to it even now from other parts of the city, becomes
more modern in its tastes and more secure in its finances,
this economic avenue will also dry. The zone has shown

a remarkable capacity for survival and a thousand years
of history have not defeated it; possibly it will find some
new support and survive yet a little while longer.

Community IX—The Funeral Quarters of the
Eastern Fringe

If there is any section of Cairo that bears resemblance
to the famous bidonvilles or shanty towns surrounding
North African cities or the squatters’ favelas that ring
South American centers, it is the cemetery cities that
stretch in clustered concentrations along the eastern edge
of the metropolis, all the way from Burj al-Zafar on the
north to the tip of al-Khalifa on the south. But whatever
parallels the reader may attempt to construct in order to
visualize this unique zone will be incorrect. Neither the
image of a European-American cemetery (or even one in
Turkey or the Fertile Crescent) nor of a bidonville will
set one on the right track. There is literally no precedent
—at least for its appearance and multiple functions, al-

though there may be many legitimate precedents for its
inhabitants and their problems. It is perhaps best, then, to
empty one’s mind totally and take a tour through the
streets and perhaps a detour into history.

From the air the funereal fringe demonstrates a fa-
miliar rectangular and regular street plan with what

appears to be an orderly procession of detached but
roofless bungalows, a travesty on suburbia. Its openness

110-111. Aerial views of the tomb cities of Community IX

108. Mosques and minarets dominate the skyline of the
evil city

109. Underneath the history, a residential slum

12 In averaging the scores for 1947, N=48, since two tracts
with high deviant scores on Factor I were omitted. These con-
stituted the heart of the ancient Jewish ghetto of Cairo. The ratio-

nus of a large majority of Cairo’s Jews began to occur in 1936 and
was virtually complete by 1955. By that year, the two tracts had
Factor I scores close to the average level of Community X and
could be included in computing that average. Thus, in 1960,
N=50.
in, he enters the parody of an ordinary house—two adjoining rooms, dust-carpeted, in each an oblong shape of stone or plaster. Under one floor lie the male members of the family; segregated in death in the adjoining cell are the women.  

Remarkable as this description is, it misses the most surrealistic element of the scene, namely, that within this linear necropolis live perhaps 100,000 contemporary residents, not as bones in the cellar but as full-blooded if marginal inhabitants of a great living metropolis. Within this vast dusty quarter, wedged between the windmill hills that isolate it from the live city and the barren rockiness of the Mokattam chain of hills separating it from the eastern desert proper, unserved by municipal utilities, dependent upon a scattering of communal water taps, totally devoid of plumbing and sewers, largely unconnected, except illegally, to the electricity network, is a large resident population, some legitimately inhabiting the tomb-houses for which they bear custodial responsibility, others squatting in less-acknowledged state within other tomb buildings, still others inhabiting a multitude of jerry-built rural structures, some of which are taking on an air of substantial permanence. Here and there are commercial nodes—a small grocery stall, a barber, perhaps even an open-air “café”—all designed to mitigate the hard task of adapting a city of the dead to the needs of the living.

This linear city breaks down, in reality, into a number of suburbs which constitute the functional areas of a residential neighborhood. The northernmost concentration lies due east of the medieval core city and is most often referred to as the Qayt Bay cemetery, after the Mamluk Sultan whose tomb-mosque is found there, together with those of Baraqqa, Izz, and others who followed al-Nasir Faraj, the first to build in this zone. Farther south, approaching the sharp rise at the Citadel which divides the eastern from the southern cemeteries, is the subarea known as the Bib al-Wazine necropolis, deriving its name from a gate to Salih al-Din’s wall extension, formerly there. Beyond the Citadel, entered through the ghost portals of yet another of Salih al-Din’s additions (the Bib al-Qurifah or the Gate to the Tombs), is the so-called Great Qurifah or the Tombs of the Caliphs (from which the quarter’s name, al-Khaliqah, is derived) which stretches southward in a long lobe some two kilometers long and one kilometer wide, its outer limits described by the loop of a railroad line. The heart of this largest of all cemetery zones is the almost urban quarter around the shrine-mosque of Imám Shafi’, to which Muslim pilgrims have been drawn for well over a thousand years. South of this dense concentration both

Densely settled urban quarter near the Imam Shafi'i oceum today

the tombs and the residents are distributed more sparsely. Who lives in these necropolises and why? I must confess ignorance, for to fathom the motives and adjustments of their residents would require a field study to supplement the statistical analysis. Some inferences, however, can be drawn even from the sparse statistics. First, it is possible to establish the general fact that until fairly recently the resident population of this enormous quarter was quite small and had fairly legitimate reasons for being there. In the Middle Ages, here were the zawiyahs which offered hostel accommodations to pilgrims and 'ish' mystics and, even then, the role of tomb custodian was known. Whole families might repair to the cemetery for a day or week to visit and commemorate their buried ancestors. On sacred holidays the cemeteries took on the air of a convivial community picnic, with vendors hawking edibles and sweets, children playing in the open spaces, their elders sociable and probably noisy. While the resident mystics have long since disappeared, the tomb custodians remain and have grown more numerous. Their ranks were supplemented in the early twentieth century by men employed in the lime kilns (in the northern portion) and the limestone quarries (in the south). Only a slight and gradual increase could be noted during the few decades following 1947, suggesting that the dynamics of the zone’s settlement and its functions did not alter radically.

However, by 1947 population had mounted to over 50,000, indicating that the overcrowding and housing shortage induced during the war years had forced some Cairenes (or recent migrants to the city—I do not know which) to seek cheap or free housing in this peripheral zone, even if their employment did not require location there. Mining and quarrying still accounted for the largest proportion of employed males in each and every tract in the district, with services (presumably custodial care of the tombs) also important in the larger cemeteries; but employment was far more diversified than before and could not be adequately accounted for by the limited opportunities in the local vicinity. Men were engaged in transportation, trade, in construction, and even in personal services. The evidence points unequivocally to the arrival of squatters uninvited in the traditional economic base of the immediate district. Complete rural villages were constructed on open sites. As recently as 1959 such a squatters’ village could be seen in sites just beyond the Mosque of al-Azhar at the edge of the Qaṣr Bay cemetery, although their mud huts were later forcibly removed by the government to make room for the major al-Qadii Shihab Highway that now traverses what had been a totally rural setting. By 1950, with population up to 82,000-90,000, specialization of the labor force had virtually disappeared. No longer could the presence of local resources (tombs and quarries) account for the employment of more than an insignificant minority of the breadwinners. The zone had become just another place to live, “selected” only by those who had no alternative.

This change can be seen quite clearly in the relative decline of all census tracts in this subcity on Factor I between 1947 and 1960. The average Factor I score of tracts in Community IX during the earlier year had been −0.57, indicating a low status but not necessarily a rural-type population. On the contrary, there is reason to believe that this zone, unlike the other fringe areas, contained a population long adjusted to urban life and quasi-industrial employment. But by 1960 this score had dropped drastically to −1.154 (or one and a half standard deviations below the city’s average), placing the cemetery zone on a par with the remaining rural fringe areas. It can be surmised, then, that the newer arrivals who swelled the resident population of the funeral cities between 1947 and 1960 were quite different from the original inhabitants. They must have been predominantly illiterate, poorer, and probably less well integrated into the urban economy; in addition, they had the family patterns of early marriage and high fecundity that beclouded their cultural affinity with rural Egypt, from which perhaps a great many had recently come.

The future of this city is moot. Cairo’s planners eye the district covetously but in secret, for here is a logical direction into which the cramped city might expand, if only the tombs could be removed! But the sheer size of the zone and the permanence of many of the tomb structures, as well as their high artistic merits, defy simple clearance, even if the evulsion against disturbing the dead could be overcome. On the other hand, there is the problem of the already-entrenched residents, as well as the new ones who have been added since the 1967 war, who live under conditions that cry for improved urban services. But if urban utilities are extended into the district to alleviate some of the real hardships, this cannot help but encourage further residential development, a prospect with dubious health consequences. To outlaw further settlement is extremely difficult, for so long as the metropolis remains severely overcrowded in its poorer districts, it is inevitable that some of her citizens will prefer the air and openness of the city of the dead to the oppressive crush in the cities of the living.

Community I—the Baladi Slum of Bii'liq

Bounded on the south by the major traffic artery that still insulates the former island from its physical but not social neighbor, the rocco “Gold Coast,” truncated sharply on the west by the Nile that prevents contact with the lush island of Zamālik offshore, and attenuating northward along the coast of the Siḥil, still a sometime riverport for small sailing vessels, is another urban slum of contemporary Cairo, Bii’liq. Although lacking the venerable patina of the medieval city, Bii’liq is nevertheless more comparable, in quality if not in age, to the old city whose port she originally was than to the rural or cemetery slums at the city’s edge. Physically, her buildings are far superior to village-type constructions, for they are mostly made of cement and concrete rather than sun-dried mudbrick, and the zone contains a wide variety of industrial as well as commercial installations. Socially, too, poverty of the extreme type found in Egyptian villages or in Cairo zones of true marginal subsistence only temporarily connected with the urban economy is not marked here. Nevertheless, the qualities that undeniable make Bii’liq an urban slum are those that define such districts elsewhere, albeit according to different sets of standards.

The urban character of Bii’liq’s slum state is seen most clearly in its density, for here, despite the generally unimpressive height of the buildings (two stories to four stories for the most part), are crammed one-tenth of the entire population of the city. In 1947, the 23 census tracts comprising this subcommunity contained over 267,000 persons, a figure that had increased to over 350,000 by 1960. Since the total area of the district amounts to only 1.5 square kilometers, the overall density was almost 60,000 persons per square kilometer in 1947 and an astronomical 77,000 persons per square kilometer in 1960. (This is about four to five times higher than the density of big-city slums in the U.S.) While this is the overall density, when one takes into account that a large portion of Bii’liq’s land is for industrial, transport, or wholesale use,
in this area, it is to be expected that Būliaq should suffer from extreme room-overcrowding. Indeed, here is a quarter in which whole families of twelve or even more members may sometimes be compressed into a single room; and here is a quarter in which the people, of necessity, must overflow onto the streets to carry out in public many of the functions that are generally confined in a Western city to the privacy of the dwelling unit.

Along the main artery of the quarter, the wide street of Shīrīn Sittā-wa-isḥārin Yūlūy, which is used by the bourses, streetcars, and automobiles that must traverse the district in order to link the main Westernized shopping center of Azbakīyah with the island of Zamālik and the western shore of 'Ajīzah, this overflow often obstructs traffic. There is a constant ebb and flow of children—both ragged urban and neat, tunic-clad school children; of women, almost uniformly in traditional black gown and veil but now often wearing more Western-style house- dresses under their outer robes, carrying on head, shoulder, or hip a varied assortment of burdens ranging from laundry to edibles for infants; and of men, showing signs of increased urbanization—some still attired in the traditional garb of long, full jallābīyah and skullcap or turban but others in the white shirt and wrinkled trousers of the farānī (the foreigner). They gather in close to gossip; they gather in the fly-specked coffee shops (for men only) that dot the area to while away the steaming hours over a small glass of tão sāw and almost black tea, a newspaper (if they can read), or a slow game of backgammon; they gather to quarrel, with vigorous gestures and loud imprecations but rarely with physical force if among equals, or merely to watch the outcome of another’s quarrels; they gather to haggle over a small purchase from a pushcart or to watch others. One senses that all these gatherings are fostered not so much by the typical inquisitiveness as by the sheer pressures of this people in space, making crowds even where crowds are not sought.

Off the main thoroughfare, in the tiny streets that take a labyrinthine and unpaved course to give access to the stores, dwellings, and tiny industrial shops that are freely intermixed in the quarter, the mass of humanity may thin out some. But it is here that the old men, circling with the sun in winter and the shade in summer in a slow progression of seats, the barefoot children, and the occasional tethered (or free-roaming) sheep or goat, are sufficient to remind one that, although they now live in an urban slum, many of Būliaq’s residents have come from rural villages and have only recently begun the process of adapting to city ways. The major rural influx into the quarter dates from the years of World War II, and in 1947 the characteristics of the residents still reflected quite vividly the recent arrival of many of them. Since 1947, however, the process of cultural assimilation to urban ways has had a chance to blend in some of the more extreme rural types and, statistically speaking, to raise the relatively low-economic score of the district to within the urban range.

In 1947, the average score on Factor I of the 23 census tracts comprising the subcity of Būliaq was —70, considerably below the theoretical "norm" for the city as a whole. By 1960 this score, while still in the lower portion of the distribution, had improved to —35. What do these scores tell us about the kinds of people living in Būliaq?

For one thing, they tell us that a large proportion of the men and an even more substantial proportion of the women are illiterate. Their children, numerous indeed as indicated by the universally high fertility ratios in the quarter, are likely to be somewhat better prepared for participation in the modern sector of the economy than are their parents, for many of them are enrolled in school and will complete at least the primary stage (six years), unless the loss of their parents or a complete catastrophe forces them onto the streets and into the army of unskilled boys prematurely "in the labor force." The girls are less likely than their brothers to be able to take advantage of the free public schools, for they are frequently needed at home to care for younger siblings and to relieve an overburdened mother. Some are entrusted as domestic servants in the households of the middle- and upper-class residents in the adjacent districts, where their youth limits their usefulness but where their jobs at least provide better food and lodgings than can be offered in their own homes. Their small wages are frequently paid directly to their families and some may be set aside to provide the girl with her basic dowry of bed quilts, cooking pots, and a personal wardrobe. Younger marriage is typical in this area, the predilections to long years of almost constant pregnancy and childbearing, unless the alternate fate of divorce, unfortunately not uncommon in this district, befalls her.

Occupationally the residents of Būliaq do not rise above the semi-skilled level and most remain in the unskilled, brute force occupations. Men work in domestic service as cooks and waiters; work, often under Italian or Greek supervisors, in the small machine shops and automobile repair garages that are concentrated in the southern triangle of the zone; work as janitors in government or private office buildings, or in jobs associated with the wholesale warehouses, open storage yards, and transportation terminals also concentrated in the district. Local commercial establishments offering services to a local clientele probably also provide employment for some men in the quarter. Even so, there are many more people than there are jobs, and the district harbors a fairly substantial number of unemployed and "nominally employed" men, easily rounded up for emergency work on the Nile embankments when the river threatens to rise above normal, or for participation in a political demonstration when the government wishes to assemble an impressively large crowd to hail a visiting African statesman or to march on the embassy of an unfriendly power.

The district is almost exclusively Muslim in its religious persuasion, with the exception of one tiny enclave at an old Italian Catholic school (census tract No. 126 on the key, in 1960 no longer significantly different from its neighbors as it had been in 1947), and the southernmost tip to which automobile repair shops, with their distinctive Italian and Greek mechanics, had gravitated. Few Egyptian Copts, even of lowest socio-economic status, have found this zone congenial, and its public edifices are almost exclusively mosques, including the shrine-mosque of Aḥī al-‘All and the multi-domed Turkish-style mosque of Sīnān Pasha (late fifteenth and sixteenth centuries respectively). Almost nothing remains of later public uses, for the port has long since disappeared and even the Museum of Antiquities, originally located in Būliaq, has been twice removed to its present site near the Hilton Hotel in the "Gold Coast." A few of Muhammad ‘All’s industrial establishments still retain their original locations in Būliaq (most notably the Government Printing Office) although the plants have been renovated. Būliaq is a slum because it is an old area, but it retains little of historic interest or antiquarian charm.
THE QUARTERS OF THE SOUTHERN CITY

Community XII—The Old Miṣr (Miṣr al-Qaldimah)

The reader will recall that, according to the Napoleonic map drafted at the turn of the nineteenth century, the urban region of Cairo consisted of the medieval nucleus somewhat expanded to include Birkat al-Aszâkiyâh, and the town's two distant and discrete port suburbs, Bâllíq and Miṣr al-Qaldimah. One of these port suburbs has already been identified as an interior slum of contemporary Cairo: the second, which experienced a different but parallel evolution from its historic beginnings, is a zone of similarly depressed status. In a manner remarkable to observe, Cairo's premodern heritage surfaces sporadically in the three interior slum districts of al-Qhâiriyyâ, Bâllíq, and Miṣr al-Qaldimah. Without a knowledge of the city's history, one could never account for the geographic distribution of these present-day slums.

127. The backyard of Miṣr al-Qaldimah next to the Mosque of 'Amr

Similar to the other major slums of the city, this zone, known as the "Old Cairo," owes its low state in part to its age, even though few of the buildings can trace a specific lineage in distant history. Only a tiny belt at the edge of the khârâb covering Fustâth is old, including the walled enclave of churches and copses, synagogues and, formerly, Jews that make up the present complex at Babylon, and the Mosque of 'Amr, which retains the site if not the architecture of the first mosque to be built in Africa after the Arab invasion. The remainder of the district, between this eastern limit and the river's bank, was constructed on land that had been added centuries after the founding of Fustâth. Nevertheless, later growth could not shake off the stigma of birth and tended to take on the character of existing uses. In 1800 this community was a separate "suburb" containing only 10,000 residents, many of whom were Egyptian Christians and Jews. A number of the more noxious industries of the metropolis were segregated there and, indeed, still are, including the abattoirs and the pottery kilns, although the latter no longer produce the lustre glass for which Fustâth was justly renowned. As urban expansion eventually engulfed the original nucleus and made it contiguous with the developments to its north, the district added population—but failed to better its degraded status.

The eight census districts that comprise this southern-situated slum contained a little more than 100,000 inhabitants in 1945, a number which had increased to 158,000 by 1960. Between the two census dates there occurred not only a marginal addition of population but also a replacement, with the departing Jewish community and foreign religious personnel more than compensated for by newcomers from lower educational and social levels. Excluding the tract that, due to its religious personnel, ranked far above the norm for the district in 1945, the average Factor I score for the seven remaining tracts was -0.45, placing the district on a par with the other two slum zones. After population replacement and new growth, however, the average of all eight tracts (for the one deviant had found its level) in 1960 had dropped to -0.04, making it by that year the most depressed of the three urban slum districts.

The many Cairoines who believe that Miṣr al-Qaldimah is still largely Coptic are carrying over from the past history of the district an anachronistic impression of its present character. Actually, only 8 percent of the population in 1945 was non-Muslim and this had dropped to 6 percent by 1960. Nevertheless, it is true that if there are Copts in the city who have failed to become absorbed into the educational and occupational modernization of Cairo, they are to be found concentrated in this zone from which the more upward mobile have departed. They can often be identified by their proud "budge" of...
of the zone is chiefly rural. It is these portions that I have delineated as Community XIII.

As late as 1910, this zone of almost pure rural character had been bypassed in the process of urban expansion to the southernmost node of industrialization growing up at Halwan. This can not long remain the case, however, for fingers of industrial development already stretch up from Halwan, and cement factories, thermo-electric plants, and workers' compounds now abut alluvial fields still cultivated by f’alalbin and irrigated by the water buffalo-powered akhiyah (water wheel). Nevertheless, between 1910 and 1916 one would be hard pressed to discover any great evidence of the transformation or urbanization of the district. On the contrary, the average Factor 1 score of census tracts in this rural residual actually declined from -1.25 in the earlier year to -1.64 in the later year, placing the district below all other fringe areas.

On the other hand, direct preoccupation with farming and quarrying, formerly the dominant economic activities in these tracts, has tended to decrease markedly since 1947, indicating that, although life styles have altered little in the direction of either skill-improvement through literacy or increased equality between the sexes, the men at least are being drawn into urban service and industrial employment, albeit slowly and at the lowest paid and least skilled levels. This is a movement which cannot help but expose them eventually to the winds of change.

What influences are not introduced by this exposure will undoubtedly force their way into the zone by more direct means, namely, by the location of industrial plants there. The strips bordering the railway and the newly improved highway that link Cairo with Halwan are bound to become increasingly attractive to industrial uses which are already making their appearance. As this trend continues, one can expect a further influx of industrial workers, on the one hand, and the absorption of the resident labor force into the modern economy, on the other hand. When this happens, the Factor 1 scores of census tracts here will undoubtedly begin to rise to within the urban range. Other rural fringe areas may have their frontiers pushed back farther, but the southern fringe will probably become extinct.

THE QUARTERS OF THE WESTERN CITY

Virtually encircled on three sides by the ring of interior slums formed by the oldest quarters of al-Qahirah, Būlāq, and Miṣr al-Qadīmat, the city which grew up in the early modern era as a counterthread to mediolaxis could expand in only one direction—northward, then into, then beyond the Nile. Each successive thrust left a vertical striation in the social mosaic of Cairo. Closest to the medieval edge both physically and socially is Comm-

unity XI, the transitional belt; then comes the Gold Coast, heart and façade of modern Cairo, denoted on Map XVII as Community VIII; beyond it lies the Silver Coast of Community VII, while still farther to the west remains an area just now being converted from rural to urban uses, the fringe area of Community VI. These four communities make up the Western City and are integrally and functionally linked in their development.

The epitome of this city is the Gold Coast. Therefore, although it postdates the transitional belt in time of settlement, it deserves our attention first.

Community VIII—The Gold Coast

In the space of less than 3/4 square kilometers of the most valuable land right in or adjacent to the center of the city is concentrated a significant proportion of Cairo’s wealthiest and most Westernized residents. Once the careless domain of the “colonial” foreigner and the francophile Egyptian elite, this zone has obviously undergone a dramatic transformation since the Revolution of 1952 and the foreign exodus of 1956. But despite these changes, it still ranks considerably above all other parts of the city and is both the scullery of Cairo most visible to foreign visitors and the district most frequently pictured on postcards and brochures designed to display Cairo’s luxurious façade. Along the broad and fabled river, metallic green-blue under the winter sun, turbulently breasting through the summer swell that marks a flood season now scientifically controlled and modulated, rise the glistening white piers of sleek apartment buildings and new hotels. Set amid lush tropical trees, the buildings are placed neatly into regular blocks and triangles defined by wide, paved, swept, and sidewalked streets. Taxis cruise the Corniche, the broad thoroughfare bordering the Nile (the revolutionary regime’s first contribution to a Cairo yet to be), heading well-dressed clients—domestic or from abroad—heading for the department stores and specialty shops “downtown,” the plush cinema palaces, the Victorian ice cream parlors of Groppi, the Sporting Club or the races on the Jazīrā, or the “little” dressmakers and redolent, unbelievably numerous beauty salons upon which depends the superb grooming of Cairo’s largest leisure class—the upper- and upper-middle-class matrons and their unemployed daughters being primed for marriage. Nannies, marooned in blue or white uniforms, amble along in their backyard slippers (the Achilles’ heel that betrays proletarian origin), shepherding plump children in starched playclothes, perhaps as their grandmothers once minded the sheeps and goats that still make an unexpected and incongruous appearance in the zone. Little boys dart hazardously out of the steamy tiny laundries that dot the area, balancing piles of freshly ironed sheets and linens on one palm,
134. The Corniche Drive in front of the Semiramis Hotel

135. Apartment houses replace villas on the Jazirah showed the signs of neglect that presage a land use conversion.

No Cairo resident uses the term "Gold Coast" to describe this quarter. However, ordinary Cairo residents carry within themselves a stereotype and an ambivalence toward the sections known as Azbakiyah, Sualyamn Pasha, Qay al-DimMaerah, Garden City, Qay al-Nil, and Zamalk that is unequivocally quite close to how Chicagoans of all classes view their North Shore Gold Coast. But unlike Chicago, where the slum symbolized the ethnic alien counterpoised against the white Protestant native aristocracy of the Gold Coast, in Cairo the Gold Coast is the "alien body" to which the native city has played exploited host (and reluctant beneficiary as well, for this is the quarter which employs a large minority in servile capacities).

In its insular days as a "colonial" city, about the turn of the century, the district was largely inhabited by foreigners and Christians, particularly in its most heavily developed commercial core at the Azbakiyah. Its slow expansion along the Nile shore and across the bridges onto the Jazirah took place without disturbing either the dominant or the taste-setting role of the alien elements, although at least demographically this concentration was inevitably diluted as the district expanded and attracted followers of the twin and intertwined magnets of royalty and colonial agents. By about 1957, Egyptian Muslims accounted for less than half of the population of the district, despite their presence in large numbers as a resident service population. By 1957, Muslim Egyptians constituted over 57 percent of the population but, of those who were in the district not as domestic servants but as fellow residents, many spoke French among themselves and patterned their values and way of life as closely as they could on their perhaps distorted image of a sophisticated and even parasitic West.

With the Revolution and then the aftermath of the Suez Crisis (1956), however, the district underwent a rapid population succession. In 1957 a high vacancy rate, brought about by the departure of significant numbers of foreign nationals, permitted the influx of many upwardly-mobile technocrats of the new regime, although some still shied away from the zone because of earlier antagonists, preferring the more familiar quarters of Helopolis and the Silver Coast. As a result, the ethnic composition of the Gold Coast's population altered radically in the direction of indigeneration. By 1960, Egyptian Muslims constituted almost three-fourths of the population of Community VII, reflecting a new unification between elite and mass and a final extinction of the more glaring aspects of alienism in the city. Arabic soon supplanted French on the streets and in the stores; even the once exclusive Jazirah Sporting Club (island companion to the Turf Club that had been based in a studio in the street upstairs in 1952 along with the old Shepheard's Hotel), the ultimate foreign citadel, bowed to its inevitable future as a recreational facility for Egyptians. The alterations within the residential sections were paralleled by a similar metamorphosis in the "Westernized" central business district that included the census tracts of al-Tawfiqiyah, al-Azbakiyah, and its southern extension to Bib al-Luq (the notorious home of thieves and escaped prisoners in medieval times). In the shops, as a reflection of the changed nature of the clientele and often a changed ownership as well (some of the major ones sequartered by the government had been owned by prominent French-Jewish families), the alien goods, patterns, and prices that had discouraged the nonaristocracy from venturing into the shops gradually were removed and in their place were substitute items and actions desired to attract a less exclusive but also more typical class of buyers, Black-owned or -controlled shops from the Eastern and Northern cities dared to windowshop along Shar/i Sualyamn Pasha, and aspiring girls and boys from lower-middle-class zones tried on new clothes in

136. Shari'a Qasr al-Nil's shops shuttered for siesta formerly August settings or tried on new personalities in the somewhat less well-tended premises of sequestered Groppi's. Recreational facilities also underwent a similar change, with movie houses that had formerly specialized in foreign films being converted to Arabic productions or to an expanding number of stages for the legitimate Arabic theater. Even the Opera House, last stronghold of Europe, billed fewer and fewer operatic and symphonic performances, more folk ballets and popular singers. The leisurely and/or moneyed class had become both smaller and more broadly based in the new society.

Despite these radical changes, the relative position of the Gold Coast within the urban status pattern was sustained. In 1957, census tracts in this subcity had an average score on Factor I of +2.8, by far the highest of all subcommunities in Cairo. Even after the disappearance of the long upper tail of the distribution (which had been associated with European residents), the average in 1960 was still close to two standard deviations above the "norm" for the city, being +1.97 in that year, and was still substantially above the average for the second rank subcity of Helopolis.

This high score, reflecting almost universal literacy, high rates of school attendance, delayed marriages and smaller families, expansive living quarters, and the host of related characteristics that help to define the degree to which residents of this zone are oriented toward the modern rather than the traditional patterns of evolving Egyptian life, can no longer be attributed merely to the presence of a polyglot foreign community. Statistically, this latter community has become less significant numerically and more diversified socially (for it now includes embassy personnel of a variety of African and Asian powers as well as Europeans). In terms of its influence it no longer constitutes a closed social body dictating the terms of admission to aspirant Egyptians; rather, foreigners now adjust to or simply spawn the dominant community of upper- and upper-middle-class Egyptians who chiefly command this subcity.

137. Apartments replace grazing land on the ancient island of Rawih in the Silver Coast

Community VIII—A Parallel "Silver Coast"

If the Gold Coast preempts the central part of the east bank together with the island of the Jazirah, a lesser metal, perhaps silver, occupies the western bank and the southern island of Rawih. Of later origin, reflecting the tardy appearance and uncertain growth of a mediating middle class in Cairo, it has been growing in the quarters of Aljizah,Dougqji, Jizah (not the separate town but the zone near Cairo University and the Zoological Gardens), and Rawih in a manner that parallels the other middle-class zone at Helopolis (Community V in the Northern City), namely, through land reclamation. However, while the northeastern middle-class city was carved out of the desert's border, this southwestern counterpart has gradually been encroaching upon the urban region's fertile green hinterland in its fight for lebensraum.

As recently as the late 1920's, the island of Rawih and the entire area on the west bank of the Nile, despite the existence of bridges crossing the waterway and the tramcar service that had been extended as far as the pyramids, was still being used primarily for agriculture. In this zone were some of Cairo's most prosperous and productive "itask" (pl. for "itaskh, a large, single-ownership "farm" including villagers who supplied the labor for generally absent owners), some held by members of the royal family, some by important "pashas," others in "itaskh." Only a few isolated clusters of urban uses were evident: the small village settlements at Tushkhy (Meskhal of medieval manuscripts and later the site of the Mamluks' defeat at the hands of Napoleon), Mit Kardak, Kafar al-Shawwa, and Kafar Shabqayt farm; the similarly rustic concentrations of M't, "Ugbah, "Aljizah, Dougji, and Mhabbalt B'dik al-Dakrur. A handful of villas pressed themselves between the natural barriers of the river's shore and the tramcar line just a block to the rear. In
addition, there were a few recreational and institutional uses, generally occupying old palaces, including an Agricultural College, the faculties of Law and Engineering of the newly relocated Cairo University, a Shooting Club, the Zoo, etc.

Particularly since the 1960's, large sections of this formerly bucolic expanse have been converted to urban quarters capable of absorbing a growing proportion of Cairo's overflow population. Even Rawdah, site of the ancient Nilometer, which had remained incongruously rural until very recently, has been the center of one of Cairo's most active building booms. The old villages are being displaced by dense arrays of elevator apartment houses; the flocks of black goats and grey sheep are disappearing. In place of corn crops, pile drivers are planting new steel foundations. Today, there are still sharp contrasts where the new has not yet totally supplanted the old, but one can safely predict that it will become increasingly difficult to locate such anomalies as the area completes its transformation.

In 1947, despite its vast area, there were fewer than 55,000 residents in the area delimited as Community VIII, including the student population around the Jizah campus of Cairo University. Represented were such diverse elements as the fishermen squatters on the 'awqaf-encumbered land at al-Horty, the scattered agriculturalists awaiting displacement, the urban aristocratic residents of the narrow riverfront at Jizah—whose expectations that the west bank also would become a Gold Coast had been foiled—and a large mass of lower-middle- and middle-class Egyptians attracted to the zone by its combination of locational convenience and moderate rents.

Some scant thirteen years later this population had quadrupled, reaching 220,000 according to the Census of 1960. Of all thirteen suburbs of Cairo, then, Community VIII experienced the highest rate of demographic growth—most of it coming from an influx of Cairenes from across the river. The invading population resembled the middle-class Egyptians already in the district much more than they resembled either the defunct aristocracy (whose confiscated 'awqah provided the building sites for many of the new developments) or the displaced villagers. Favored by the upper-middle-class newcomers were the often elegant apartment houses close to the Nile at 'Ajyazah and near the Zoological Gardens in Jizah; the remainder were content with the less commodious dwellings that lined and radiated out from the major highway to the pyramids.

The Factor I scores of census tracts in the community between 1947 and 1960 have been upgraded, reflecting the rapid conversion from semi-rural to urban and from poor to moderate and good residential uses. The average score on Factor I of the census tracts in Community VIII in 1947 was +0.68, which placed it considerably below the more established middle-class zone around Heliopolis, and put it roughly on a par with Shubra from which it differed primarily in terms of ethnic composition rather than social prestige. Whereas Shubra's distinguishing characteristic was its selective attractiveness to Egyptian Copts, the settlements on Rawdah and the west bank were almost exclusively Muslim.

Community VIII maintained this characteristic feature through the post-1947 growth period. Even in 1960, when the average Factor I score of the tracts in the zone had increased to +1.13, some 99 percent of its residents were Egyptian Muslims. The zone, then, is best described as an emergent urban district catering to an emergent and native middle-class. In its future, bright indeed, will follow their, if the zone does not lose favor due to the relocation of the government offices from their present concentration at the southern edge of the Gold Coast to the new quarters in Nasr City. However, other professional concentrations in the south, such as the University and the medical complex at Qar-al-'Ayni and Mansyia, as well as the commercial center on the east bank, should help to sustain the locational advantages of the Silver Coast, even after the government offices have departed. In addition, since this area, together with the Gold Coast, has been the recipient of several new hotels for visitors to Cairo, it should begin to diversify its commercial services to take advantage of this potential source of prosperity. The prognosis is for Community VIII to continue its expansion into the residual rural fringe on the west, Community VI.
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Community VI—Iimbabah and the Western Rural Fringe

The expansion of the Silver Coast back from the river's edge into the fertile flood plain between it and the desert's limit cut deeply into a formerly large rural fringe. This zone of fluid and contracting boundaries has no future at all. By the time of the next census, only a tiny rural portion will be left within the arc-shaped zone delimited on the north and west by the curving course of the major railroad to Upper Egypt and the irrigation canal that parallels it.

Because of its fluid condition one cannot locate a clear boundary for Community VI nor can one easily characterize the population. Two rather different types of population resided in the zone but, although they differ in degree of their involvement with the urban economy, they do not feel as profound a gulf between them as the one which separates them both from the middle-class urbanites who have recently invaded. One subgroup of the population, concentrated largely to the north in the settlements around Iimbabah, is urbanizing quite rapidly, but urbanizing on a pattern closer to the Bilbil prototype than to the Silver and Gold coasts that are its closer neighbors. Several nuclear villages in this subsection had long served as entrepots for the produce of the western bank on its way to the city. Thus, many of the residents were occupied not in farming per se but in the associated activities of transport and marketing. However, as large industrial plants were located to the north of the bounding railroad, an urban proletariat was added to the nucleated populations. In addition, a public housing project built by the Ministry of Waqf, the so-called "Workers' City," added low-income but urban families to this subarea. By 1960, this urbanizing portion of the western fringe had
doubled in population over 1947, containing by the latter year over 72,000 persons, many of whom, while of rural background, had come to Cairo for work and for better economic opportunities. The rapid growth of Cairo had put a strain on the city's services, including public transportation, education, and housing. The new residents often found themselves living in overcrowded conditions, sometimes in makeshift shanties or in the city's streets.

At this point in time, however, the realization is not nearly so obvious as the anomalies that exist in the district because of rigid, bureaucratic planning and the near-total lack of maintenance of the city and its future. One frequently sees a streetcar's mudbrick but wedged between modern apartment buildings; the elaborate villa of a prosperous engineer across the street from a primitive village; goats and sheep herded down the elegant, tree-lined street that borders the Nile. This juxtaposition, as sharp and jarring as it is, is of a highly transitional character. The residues are doomed and passing quickly.

Community XI—The Transitional Zone of Ormous

If, to the west, the Gold Coast must be mediated against the countryside by a Silver Coast, to the east of the core there is an even greater need for transition. The polar elements of Cairo urbanism are the Gold Coast on the one hand and the medieval city on the other. Thus, the belt between them must serve as both a divider and a binder. Upon it impinge the conflicting impulses toward upward grading and modernization that press from the west and the impulses of deterioration that point equally persistently from the east; throughout it blend the two competing patterns in a juxtaposition that with the years grows less and less uneasy. Once Cairo was bifurcated into two cities and the twain rarely met, even in the truest sense; from the 1920's on, they have substituted efficiently for physical barriers. Today, however, the city grows more and more into one cultural unit. As the Gold Coast becomes increasingly "bladed" and even more modernized, the transitional belt between them—neither fish nor fowl—witnesses to mediate between the narrowing social contrast.

A transitional district is always difficult to delineate and even more difficult to describe, since its prime characteristic is flux. Lacking internal coherence and stability, it is to be known chiefly by its rate of change and the marginality of its functions. Typical of the transitional zones which unifies Community XI is the fact that, with virtually few exceptions, the zone coincides with the area settled between the fourteenth and the late nineteenth centuries, whereas the two districts it connects were intensively settled either before or after.

At the extreme northern edge, the transitional zone serves to insulate the Westernized central business district of al-Tawfikiyah from the slums of al-Sha'rayyah that encroach perceptibly. Here formerly was the official prostitution district of the city but, since the withdrawal of official supervision and the suppression of the "trade," its former denizens have scattered in either direction—depending upon class—and other uses have taken over. Farther south around the northern fringes of the Azbih-

kiyah Gardens were only slightly more salubrious tourist attractions—dealers in authentic and spurious antiques as well as in the genuine, but unproven whereabouts of the pyramids, which depended heavily upon the clientele stopping at Shepherds' Hotel facing the Gardens. Since the burning of Shepherds' this area no longer attracts the "best customers," although the nearby Continental Hotel still survives, somewhat dilapidated. Many of the shops followed the major hotels westward to the Nile and Garden City, leaving the tattered edge at Azbikyah even more run down.

The Azbikyah Gardens themselves have suffered a sad decline since their dramatic landscaping in 1899. Once they were an exclusive domain, fenced and with an admission charge, in which white-uniformed maids paraded pampered babies, to which Europeans and those with European pretensions flocked to listen to the military bands and concerts, and in which exotic parrots and brilliant tropical birds chattered from their well-tended cages. The fences have long since been removed and the admission charge dropped, a highway has been cut through its center, and, with the recent decline of the surrounding sector, the park too has deteriorated. The grass is no longer lovingly manicured. Large brown areas show through the green cover along the more heavily traversed short cuts. Nits and grubs at cresq cafes and an outdoor area. By the line, and in a more rural sense, the Gold Coast and the transitional zone exist today slightly to +0.4. (Compare these to the +3 scores typical in the Gold Coast and the —0.4 scores of the medieval city.) These averages, however, conceal a wide range of subtypes and the approximate constancy of the overall score reflects major changes in the status and relative positions of constituent census tracts. Dynamic homogenization rather than stability has been the dominant fact. In 1947, the various "between zones" exhibited wider ranges within it and a more crazy-quilt pattern that it did by 1966, indicating that the process of blending the preindustrial with the modern city has been taking place rapidly and consistently. Extreme differences are decreasing. In 1947, the range was +6.7 to +0.0; in 1966, the range was Factor I scores between +0.25 and +0.75, a few deviating widely from this norm both above and below, the range for the entire community spreading between a low point of —0.5 and a high of +1.5. A graph showing the distribution of scores in Community XI was very irregular in outline. By 1966, however, the same census tracts in the district had Factor I scores that followed a rather smooth and narrow distribution curve.

This trend toward homogenization was traced through the changes in specific scores. Tracts that had been below the average for the district as a whole in 1947 tended to upgrade their populations (Factor I scores) between 1947 and 1966, whereas tracts that had been above average
tended to decline during the same interval. Thus, of the sixteen census tracts with Factor I scores of +0.5 or over in 1947, only five improved between 1947 and 1960 while eleven declined. On the other hand, of the fifteen tracts with Factor I scores below -0.5 in 1947, twelve improved their relative standing between 1947 and 1960 while only three declined. It is significant that the rare exceptions (high-scoring tracts whose Factor I scores improved) were to be found just adjacent to the Westernized central business district of the Gold Coast, and in some cases at least their change in score could be directly attributed to a municipal redevelopment project. The exceptions at the opposite end (low-scoring tracts that declined) tended to be located at the eastern extremity next to the medieval city into which they were being incorporated.

Thus, the hypothesized and long- overdue transition is taking place. The enormous gulf between the indigenous quarters of traditional urban life and the initially alien modern quarters associated with the colonial incursion—so marked at the turn of the century—is finally being bridged in Community XI, a zone of transition in more than one sense of the term. It is safe to predict that, by the next census, an even more complete blending of the two social worlds will have been achieved.

5 THE SUBCITIES OF THE NEW NORTH

Five sector cities stretch northward, spreading apart like the fingers on a hand from their common origin at Azbakiyah, to form the star-shaped and transport-linkcd city of the north. The "bone" of each finger is a radial transportation thoroughfare leading out from the city's center. Along the waterfront is the linear city of Sihli/, Grain in transit at Rawdl al-Faraj near Sihil)

Rawdl al-Faraj, actually an elongated tail that increasingly confirms its functional continuity with Büläg; it has therefore been combined with that subcity in this analysis. The other four communities of northern Cairo must be described here to complete our survey of the metropolitan region.

Community II—Shubra, Lower-Middle-Class Melange

Radiating northward from the rear of Cairo's major railroad station at Bilb al-Halid, roughly circumscribed on the west by Shir'i A hiI al-Faraj and on the east by the barrier of a major railroad to the Delta, is the sector of the city known generically as Shubra. The district derives its name from the major transportation axis that bisects it, the Shir'i Shubra which formerly joined Musammal 'Ali's palace with Birkat al-Azbakiyah but which now serves an even more critical function in linking central Cairo with the outlying and relatively new industrial complexes at Shubra al-Nahal and Shubra al-Khayam. The reader will recall the gradual transformation of this royal road into a fashionable carriage promenade and then into a streetcar axis, all prior to its urban development. Until World War I the sector was still largely agricultural, except for the few palaces and elaborate villas exploiting the access provided by the highway and for the buildings left unfinished by the 1907 panic. However, once fastened upon by the refinanced real estate speculators and junk-jobbers of the first quarter of the century, its transformation was rapid and total. By 1947 some 232,000 persons were living in Community II; by 1960 this number had almost doubled to 451,000.

The sector city of Shubra contains wider variations than are to be found in other neighboring subcommunities, in terms of socio-economic status, ethnic composition and housing types. In general, there is a declining gradient of urban structures, of percent Copts and of socio-economic rank as one moves outward from the central origin point near the train station. This gradient, however, is not always consistent and, furthermore, has been pushing outward as the interior zones deteriorate and as the peripheral sites are converted from agricultural to urban uses. Poorer population from the interior city has been supplanting the middle class at the core just as the decentralizing urban population continues to supplant farmers at the periphery.

Perhaps the most significant fact about Shubra is that it has been the favored residential quarter for Cairo's Copts for half a century, having been the logical geographic extension of the original Coptic quarter just north of the Azbakiyah. Although Copts constitute perhaps a tenth of the total population of Cairo, within the inlying census tracts of Shubra their representation climbs as high as 45 to 50 percent. Perhaps a third of the popu-
THE CONTEMPORARY METROPOLIS

The scores of the census tracts of Shubra on Factor I, then, are averages of the diversity within the district and, as such, are less indicative of a single way of life than are the average scores of other subcommunities in the city. Nevertheless, they permit us to rank Shubra with respect to other parts of the city and to evaluate its functional role within the urban complex. In 1947 the average Factor I score for census tracts in the sector of Shubra was +0.65, identifying the zone as one of moderate status, somewhat better than the norm for the city as a whole but lagging far behind the true middle- and upper-class districts near the Nile and toward the desert edge at Heliope. By 1960 the average score for the zone had improved to +0.95. This increase appears to be due to two complementary but independent trends: a conversion at the periphery from rural to urban uses, which has meant a population supplementation if not total displacement of low-scoring farmers; and a gradual assimilation of the rural migrants who temporarily swelled Shubra's less savory subquar ters during World War II, and have now become better adjusted to urban life and more securely integrated into the urban economy.

Community III—A Northern Agricultural Wedge

Cutting deep into the asymmetrical city is a residual wedge of farmland to remind us that, until recently, the northern section of Cairo, although officially classified as urban by a census, remains essentially a farmland that failed to quite sharply into the granary of the Delta. In this wide swathe of land, at least equal in area to all of Shubra which abuts on the west, lying between two major railroads that rigidly define its peripheries, almost totally devoid of transportation links to the center city, lived close to 100,000 "Cairenes" in 1947 and over 200,000 in 1966, under conditions which, except in the more urban portions of Sharafiyah and Matariyah, approximated those of any rural area in Egypt. (Another exception, added too late to appreciably affect the statistical results recorded in the Census of 1966, is to be found in several large public housing projects that have recently been constructed by the municipality in this sector.)

buses that link Cairo with the towns of the Egyptian Delta. These buses were the main means whereby Delta migrants reached the city during the war years of the early 1940's. If the locations of the migrant associations organized by these recent arrivals are used as an indirect index to where migrants first settled, we find that many must have remained very close to their port of entry, the bus terminal itself. In the early 1950's, eight village associations had addresses within a quarter of a mile of the terminal, and sixteen were found within a half-mile radius of it. It is significant that all of these were associations for Delta villages; one represented Upper Egyptian villages. All expressed a desire to create a "city" denoted "Ghiza" in the Delta, perhaps anticipating the rise of a new town in the northern part of Cairo (145) Rural-style housing in Community III, since replaced by public housing.

Although most of the land is in agricultural use, the occupational characteristics of the resident population are somewhat more diversified. Some 19 percent of the employed men in the entire zone were listed as full-time agriculturalists in the Census of 1947, a proportion that had declined to under 4 percent by 1960. On the other hand, most of the women with "occupations" (other than housewives) were listed as being engaged in farming, and many of the men were undoubtedly part-time agriculturalists in addition to their other employment. The railroads and railyards that define the limits of the district also offered major employment opportunities to the men. These have been supplemented in more recent years by the new industrial plants built and run by the government, which have attracted some of the residents to industrial employment. The shift from agriculture to industry is easily documented. Despite the fact that population in the sector doubled between 1947 and 1960, the number of full-time agriculturalists actually declined. The number of industrial workers, on the other hand, doubled to match the population growth. This indicates a gradual transformation in the functions of this zone, but the transformation, except in the new public housing projects, is not yet evident either in housing characteristics or in style of life. Indeed, as the urban quality of the inlying areas of Cairo has improved over the years, all fringe areas, including this northern one, have declined relatively to the improving norm. In 1947, the average score on Factor I for census tracts in this sector was -1.35; by 1960, despite the industrialization already evident in the zone, this score had dropped to -1.95. This does not necessarily mean that the zone deteriorated in the interval. Rather, it improved at a slower rate than most other sections of the city, thus leaving it farther behind in the race toward modernity.

Despite the involvement of many of the area's men in the expanding urban economy, the dominant way of life in this subcommunity has not suffered much; it still remains closer to the rural than to the urban mode. This can be recognized most easily by comparing the district with Bulaq, the not-too-distant urban slum, on two of the dimensions of differentiation. The zone ranks considerably below the urban slum quarter on Factor I, suggesting that illiteracy is almost universal, especially among the women, that it is only a rare child who is fortunate enough to attend school for any length of time if at all, that marriages are entered into at extremely early ages, and that large families are the norm. On the other hand, most of the urban forms of social disorganization, such as divorce, undistinguished unemployment, and attractiveness to handicapped dependents, are relatively absent from this zone. The scores on Factor III (measuring relative "social disorganization") of census tracts in the agricultural zone are considerably below those of the Bulaq census tracts, suggesting that while poverty may be more extreme on the periphery, its deviations are mitigated by a tightly organized social structure, in much the same way that the villages of Egypt, despite their physical deprivations, manage to maintain a stable and controlled social environment.

The future of this residual wedge is uncertain. Recognizing the need to assure sufficient truck-gardening activity to supply the growing metropolis with its daily requirements, and desiring to limit the physical sprawl of the urban area, the chief planner of Cairo has recommended that a greenbelt be established—a move that would protect this agricultural wedge, among other areas, from further urban encroachment. On the other hand, the Ministry of Industry has tended to favor this zone, which is so well served by rail-lines and so temptingly open to traffic by large-scale industrial forms, even when housing for employees must be provided as an adjunct to the plants. Given the conflict between the two goals, only political processes will determine the future disposition of the zone. Nevertheless, with the present stress on industrialization, it is very probable that industrial uses will usurp more and more of the agricultural land and that this sector city will eventually become the primary site of heavy industry and associated housing developments for industrial workers. It is perhaps appropriate that the city of the north, conjured into exist-

146. Rural-style housing in Community III, still not replaced even as it were at the beginning of Egypt's industrial age, should become the scene for the country's final mystery over modern industrialism. This quarter seems destined to pass from agrarianism to modern urbanism without going through the intermediate steps required in other parts of the city.

Community IV—A Strip City of the Urban Working Class

This city consists in reality of an elongated string of settlements (now almost continuous) that clustered one by one along the major transportation axes radiating to the northeast, toward the distant canal cities with which Cairo is linked by both a desert highway and a railroad. (147) Transition from rural to urban ways

13 Conversations with Mr. Muhammad HFIq 'Ali, Head of the Planning Subsection, Government of Cairo, during the summer of 1956. Some of his proposals to establish a greenbelt on the English town are contained in his publications. See, for example, his paper presented at a conference in Cairo in May, 1956, entitled 'Alj 'Alq jumhurija al-'Arabiyya wa 'Imrana al-Madina al-'Arabiyya (Contemporary Planning for the City of Cairo and Its Future Trends) (mimeo., Cairo: 1956).
148-149. Along the major axis

The subcity includes, as one moves outward from the point of origin, the settlements known as al-Wāyi, Al-Dimirdish, Manshiyat al-Qabāsh, Qubba, Qubba Gardens, Khatār al-Qubba, Zaytūn, Hāmidīyat al-Zaytūn, and finally, 'Ain Shams (where once, when it was the site of ancient Helβpolis, Plato had come to learn the wisdom of Egypt). While a few of these nuclei existed as villages or royal outposts before the present century, the process of concentration and the gradual integration of the area with the central city were definitely twentieth-century developments contingent upon the electric tram and Metro lines installed there during the opening decades of the century.

Perhaps the most revealing fact about this strip city is the remarkable degree to which the census tracts that comprise it have Factor I scores clustering at the dead center of the distribution. If one were to look for an area representative of the theoretical "norm" or average for Cairo, one would find it here in this solid working-class zone in which some 157,000 Cairenes lived in 1947. In that year, the average Factor I score of the census tracts in the subcity was —0.10. Despite the fact that between 1947 and 1960 the area more than doubled its population, housing some 356,000 residents by the latter year, the community evidently selected its new population in the image of its existing residents, for in 1960 the average Factor I score of tracts in the zone was still —0.08.

But what does it mean to say that an area lies at the mid-range of the distribution as measured by its style of life scores? It certainly means more than saying that the area is what the "city as a whole" would be, if all its extremes were averaged! In ways, this community at dead center is the benchmark against which the deviations of other districts of Cairo, whether above or below, can be gauged. In ways, it is the standard of contemporary Cairo, against which one can estimate how much above or below are the more elegant districts, how much below par are the slums, both rural and urban.

150. Traditional and modern clothing coexist

A problem which inevitably plagues cross-cultural comparative research is that the standards of the observer impinge upon the subject matter to distort judgment and even perception. This certainly occurs when the Western scholar tries to understand a phenomenon so different from his relevant experience as Cairo. To most Western observers (including myself when I first began to investigate the quarters of Cairo), the district here classified as solid working class would seem to be a slum; in many respects it is an Oriental version of such well-known prototypes as the South Side of Chicago, the Lower East Side or Upper Harlem of New York, the North End of Boston, or Bethnal Green of London—in short, any urban slum in an industrialized nation. The streets, although paved, are inadequately cleaned, and rubbish tends to accumulate more quickly than it can be cleared; children engage in their traditional rowdy street games, kicking cans, stones, or other ball-substitutes and hazardous accidents with cars and passers-by; tall buildings with walk-up flats or out-of-order elevators force unintended encounters; and windows opening on airshafts in tenement-type structures yield an auditory intimacy that permits one to follow in close detail the family squabbles of the neighbors. Children are admonished or called to dinner by mothers who lean over the edges of narrow balconies to signal them. The grocer across the street receives his orders by similar shouts. Whole conversations may be carried on at high pitch by neighbors with adjoining or opposing balconies, and one may often view through the open balcony doors of the flat across the street the life of a neighbor, as if it were being performed on a stage set.

Meals are not particularly regular nor are the members of the household unvarying; whoever happens to be present at mealtime is fed; whoever happens to be there at nightfall is offered a mattress to sleep on. A kind of casual, noisy, sometimes violent but often just exuberant spirit fills the air—a quality that for hundreds of years in various parts of the globe has alternately attracted and repelled middle-class investigators and social workers. It is this quality that unites the districts, for all the superficial distinctiveness of its odors and dress, with lower-class working districts throughout the world.

But these qualities and this way of life do not make Community IV a slum. The housing is too solid and the occupancy rates, although in excess of Western standards, are moderate in comparison with Bilāq, the medieval city, or Miṣr al-Qāmilah. The people, also, are too close to the middle of a pyramid of social status in Cairo to be classified as slum residents. Their educational level is not high, it is true, but neither is the average for the city as a whole. Their families are not small, granted, but neither could the typical Cairene family (average size 4.7 persons) be characterized as small by Western standards. In fact, on almost every variable, except the percent Muslims, which is higher in these census tracts than in the city as a whole, the rates found in this zone come very close to the overall average for the city. Again, quite typically, education is highly valued and a technical skill is much admired as a passport to security—but these values are chiefly projected onto the younger generation rather than applied personally to the parental one. Semi-skilled is the dominant labor force classification of workers living in this area. Commerce, industry, and services absorb most workers (scarcely any are in agriculture, despite the proximity to the fringe) and, although the data do not reveal at what levels, the likelihood of their being in the white-collar or managerial peaks of these industrial categories is slim indeed. The break with rural origins, however, has already been made by the residents of this zone, although they may occasionally receive relatives from the countryside, either as visitors or as new migrants whom they guide over the first hurdles of the urban transition.

It is here more than elsewhere in the city that one finds the crucial in which the Cairo of tomorrow—maturing beyond the ethnic fissions and life style ex-
the "norm" quite markedly, although it still ranked below the Gold Coast. By 1960 this average score declined somewhat to +1.5, although its relative rank among the thirteen subcommunities remained second. This decline, like that experienced even more drastically in the Gold Coast, could be attributed largely to the departure of the foreign communities of Cairo, already noted above.

Just as the middle class carved for itself a place in the social structure, so also it carved for its own use a residential quarter out of the desert limits of the city. A very narrow band connects this primarily peripheral district with its origin at the western business district but, with the exception of the few census tracts that constitute this connection, the remaining settlements all have in common a sharp border at the desert. Thus, although the district has, legally speaking, an area of over 40 square kilometers, much of it has still not been reclaimed from the desert. The actual functional and developed portion in which 172,000 persons resided in 1947 and 261,000 lived in 1960 is concentrated along the most interior strip abutting Community IV.

For those familiar with the neighborhoods of Cairo, much will be conveyed when it is noted that this middle-class district includes the census tracts of al-Zahir and al-Fajjâl, at the Wafîl to include the Faculty of Law Campus of Ain Shams University; takes in the new apartment house district at 'Abbâsiyyâh, includes Nasr City, the new community now being reclaimed from the desert, as well as Helîpola proper (Mîr al-Jalîfah, the New Cairo), the prototype city that had been planned in similar fashion half a century earlier. The zone, while definitely of high status and prestige, was never particularly favored by the extremely rich, except by a minority who sought extensive sites on which to construct palatial single-family residences. And, despite its "foreign" origin, it never was quite as exclusive as the Gold Coast. With the exception of the older baronial halls and hotels and now a sprinkling of hotel villas, the district, like most of Cairo, is dominated by multi-family flats.

Unlike many other parts of Cairo, however, the apartments are spacious, newer, and more modern in design. Both the older middle class (disproportionately either Copt or foreign of Mediterranean rather than northern European origin) and the rising middle class (technocrats, among whom Muslim Egyptians are proportionately better represented) have mixed freely in this zone, although the older middle class tends to be concentrated in the interior portions while the newer middle class—latecomer to the zone—tends to be concentrated in the more peripheral sections.

In 1947 the average Factor I score of tracts in this subcity was +1.5, indicating that the zone deviated from the "norm" quite markedly, although it still ranked below the Gold Coast. By 1960 this average score declined somewhat to +1.5, although its relative rank among the thirteen subcommunities remained second. This decline, like that experienced even more drastically in the Gold Coast, could be attributed largely to the departure of the foreign communities of Cairo, already noted above.

While a direct measure for this is lacking, the phenomenon can be partially traced in the decline of non-Muslims as a percentage of census tract populations. Whereas in 1947 Muslims had constituted between 71 and 99 percent of the populations in the census tracts of Community V, by 1960 the range had shifted to between 42 and 94 percent. The median was 63 percent in 1947, 73 percent in 1960.

Despite the rather high representation of Christians and foreigners in this zone, however, the style of life—the dominant "zone" of this area—is set by the upper-middle-class Egyptian who has not been as alienated from his native identity as his francophile and somewhat less "sophisticated" counterpart in the Gold Coast. The

153. The Helipolis Cathedral and its upper-middle-class environs in Miṣr al-Jalîfah
THE CONTEMPORARY METropolis

part of the market basket of consumer goods demanded and now more and more attained by Cairo’s middle class. All peripheral zones should profit from this new release from the iron bonds that once bound developments to the streetcar tracks.

SOME BRIEF GENERALIZATIONS

The population of Cairo, diversified as it is, can be divided roughly into three main types—each following the tune of a different pipper and each with a somewhat different prospect for the future. These three types are distributed within the metropolitan region according to a geographic pattern which is intimately connected with the past history of urban development in Cairo and which, for all its flux, shows a remarkable degree of persistence and reinforcement.

The three types that coexist within Cairo may be identified as (1) the rural; (2) the traditional urban; and (3) the modern or industrial urban. Rather than being arranged stably on a single dimension or continuum, the first two types represent independent points of origin—both of which existed in preindustrial Cairo—which have been converging by different paths toward the new and third type, the emergent form of modern urbanism which, while it differs from the others, still retains enough distinctive features to differentiate Cairo from a Western metropolis. Each of the thirteen subcities of Cairo that has been delineated in this chapter approximates one of these three "models" or types, either in relatively pure form or in varying degrees of mixture. Residuals of a rural way of life still remain in the present-day city, although these are becoming gradually less obvious as the population has begun to migrate to peripheral quarters. It should be remembered that as recently as 1877, according to Ismail’s admittedly inaccurate Muqâbîlâh survey, some 57 percent of Cairo’s economically active population was engaged in farming; the remaining workers were absorbed in traditional crafts, administration, personal services, or brute labor, for the modern sector had not yet appeared. Some thirty years later the number of farmers within Cairo was still impressive, but, due to the growth of the city’s population, they represented only about a tenth of the male labor force. Since that time there has been a steady decrease in the number of city residents engaged exclusively in agricultural work, to 3 percent of the city’s males list themselves as full-time farmers. Nevertheless, the break with rural patterns is far from complete. In the four peripheral or fringe communities

58 See, for example, "Varieties of Urban Experiences: Contrast, Confinement, and Concessions in Cairo," in Middle Eastern Cities, ed. Ira Lapidus (University of California Press, Berkeley, 1969), pp. 159-177.

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ANATOMY OF METROPOLITAN CAIRO

major prerequisites for participation in the modern economy is, of course, education, which proved so sensitive an indicator of life style in our factor analysis. Education in turn provides the employment and therefore the income necessary to maintain housing standards that were otherwise critical to index life style, and undoubtedly also influences the patterns of family life (later marriage, smaller families) associated with the style of life in Cairo called "modern."

According to these definitions, the heart of traditional urbanism in Cairo lies in the three interior slums that occupy land with the longest history of settlement: the medieval city, Bâlâq, and Misr al-Qadiimah. While not all residents of these communities are "old urbanites" with a lineage to the Middle Ages (in fact, a sizable minority have not recently come from the villages to occupy some of the lowest ranks), and while not all the residents are involved in the traditional enterprises concentrated in these zones, if there are transfugured remnants of premodernism still surviving in Cairo, they are chiefly to be found in these older quarters which, in 1947, contained some 37 percent of the total population of the city and in 1960, despite their inevitable decline, still some 30 percent.

Modern urbanism, on the other hand, is equally evident in the upper-income zones of Heliopolis and the Gold Coast, where the skilled managers and members of the liberal professions and new petty bourgeoisie of "modern development" in Egypt reside. In 1947 some 11 percent of Cairo’s population lived in these distinctive modern quarters, a percentage that has declined to about 5 by 1960, partly due to the exodus into the country partly due to the fact that these zones were no longer the only ones favored by the modernized segments of the population. As the base of modernization has broadened, to the Gold Coast and Heliopolis, the number of people who have grown more numerous. Much of the Silver Coast now shares qualities which formerly were to be found almost exclusively in the Gold Coast or Heliopolis.

18 The average weekly wages paid in Egypt in January 1954 for 25 industry groups for which this information could be assembled. The Spearman rank correlation coefficient was -0.71, indicating a close association between scale and remuneration. Inspection of the rank order of industries by size confirms the distinction I have been drawing between the modern and traditional sectors of the economy. The largest firms were in industries such as electricity and gas, water, sanitation, extraction and processing of petroleum and its derivatives. At the bottom of the list, both in size and wage level, were such traditional industries as wood-working, extraction of stone and sand, beer producing and processing, and the industries of food and beverages. In my "Varieties of Urban Experience: Contrast, Confinement, and Concessions in Cairo," I have suggested that there may be some differential involvement of Cairo’s labor force in the modern and traditional sectors.

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TABLE 8. THE COMMUNITIES OF CAIRO IN 1947 AND 1960

<table>
<thead>
<tr>
<th>Community</th>
<th>1947</th>
<th>1960</th>
<th>1960/1947</th>
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<tbody>
<tr>
<td></td>
<td>Factor</td>
<td>Populations</td>
<td>Percent</td>
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<td></td>
<td>Stages</td>
<td>in Thousands</td>
<td>of Total</td>
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<td>Rural</td>
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<tr>
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<td>60.00</td>
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<td>1.84 102.00</td>
<td>00.00</td>
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<td>Interior Shams</td>
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<td>50.00</td>
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<td>1456.00</td>
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<td>Zaytun (IV)</td>
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<td>Heliopolis (V)</td>
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<td>1.97 101.00</td>
<td>65.00</td>
</tr>
</tbody>
</table>
13
Whither the City: A Prognosis

By 1975 the population of Cairo should exceed 7 million—excluding the residents in the northern industrial periphery at Shubra el-Khayam and in that integral part of the metropolitan complex lying on the west bank of the Nile. This projection is conservative, being based upon a symbolic growth rate of only 4 percent per year, an increment more and more easily assured by the rising rate of natural increase in the city, even in the absence of massive migration. In common with all previous projections of Cairo's growth, our estimate is likely to err in the direction of undercount. The actual population will be no less, short of unpredictable acts of God, but may be considerably more.

By that year Cairo will contain more than one-sixth (ca. 17 percent) of Egypt's population of 46 million; the metropolitan region as a whole may account for almost one out of every five Egyptians. Planning the living environment for so great a proportion of the country's population must, therefore, be a critical part of Egypt's plans for development, if she is to achieve its goals of sustained economic growth, higher income, and better living conditions. There is yet another reason why plans for the city cannot be separated from plans for the country. Cairo plays a dominant role in the modern economy, concentrating within her orbit much of the production, marketing, and consumption of virtually all of the coordinative networks that increasingly direct development. And from among her population are drawn much of the brawn and virtually all of the brains that run the modern economy of the country. Although many of the latter may have been born in the hinterlands, they now live in Cairo and identify with that city, even when temporarily assigned elsewhere. Together with the twin magnet of Alexandria, Cairo represents an even more important fraction of Egypt than population alone would indicate.

Some impressive figures have been compiled by the Egyptian economist, Sa'id al-Najjī. See his “An Economic Analysis of the Metropolis,” in The New Metropolis in the Arab World, ed. Morroe Berger (Algerian Publishers, New Delhi and New York: 1965), pp. 143-169. For example, in 1957 Cairo consumed 43.5 percent of all the electric power in Egypt, in 1964 contained 59 percent of all establishments for gross production, in 1960 accounted for 53.3 percent of all privately owned telephones in the country. Cairo, together with Tiba and Gharbiya, part of her metropolitan sphere of dominance, accounted for 44 percent of industrial employment and 34 percent of "value added" in Egypt in 1957 (for firms employing a minimum number of workers). An analysis of the five-year plans for economic development, prepared by Alphonse Fland and presented in mimeographed form to the same conference, indicated continued if not more intensive concentration of industrial development in Cairo.

Perhaps in reaction against the previous exploitative role of the capital as the center of alien dominance, there has been a certain reluctance—which now seems to be passing—to give the city her due. For too long the countryside represented the Egypt of the Egyptians, whereas the "symbolic" capital was only a peripheral part of the conspicuous consumption was achieved through conscience-less mutiling of the fullahs.7 There existed an ambivalence—a pride in the greatness of Cairo but also a rejection of her symbolic association with "the government." Even after the revolutionary regime succeeded in making that government indigenous, some residual ambivalence remained. Improvements in the city were viewed piously as luxuries which ought to be postponed until the farmers, who for too long had been totally overlooked and who still constitute the overwhelming majority of Egyptians, had been aided through preferential treatment. This early ideology has apparently now given way to a more balanced view. City and countryside are seen not so much as competitors as symbiotic outlets for balanced investment, the welfare of each dependent ultimately upon the other.8 The city is too critical a link in the plans for economic development to be slighted for ideological reasons, the grounds for which, in fact, no longer exist.

Just as Cairo has become more rather than less important to the whole with every advance in Egypt's industrialization, so within the city itself a similar shift has been occurring which confers upon the modern quarters of Cairo increasing importance, as socio-economic development proceeds. In 1957, according to my estimates, only about 15 percent of the city's labor force was involved in the modern sector of the dual economy, and that insignificant proportion consisted largely of foreigners in governmental and military occupations. By 1967, the labor force had shifted so far that almost half of the labor force


8 See Chapter 7. Although the country was ruled by Britain until 1952, it is illustrated in a paper by the former head of Egypt's Higher Planning Institute, Ibrahim Hijazi Abdel-Rahman, "Rilasim between Urban and National Planning," in The New Metropolis, pp. 189-209. His concluding remarks (p. 209) represent a sophisticated view of the dilemma. "The physical problems of city planning, including space, design, transport and amenities, are not to be neglected but the country's resources and capacity for development must be the ultimate determinant... It is certain that the modern city in Egypt will be able to execute its functions in a satisfactory manner."
of the city could be described as participating in the modern sector. By 1970, this should comprise some two-thirds of the city's economy, most of Cairo's population already lives in quarters of the city that date from the present century. By 1970 the proportion living in the oldest zones should be no more, and perhaps less, than half the city's population. It is clear that to plan and perhaps preserve these sections remains great, it is also true that the need to service adequately the newer quarters and to plan new zones even now being converted from rural to urban use is urgent.

The combined impact of these two trends—the higher percentage of Egyptians consoecrating in Cairo and the larger percentage of Cairenes involved in the modern economy and residing in the zones of recent settlement—makes what happens in Cairo a prime test of what will eventually happen in the rest of the country. If Cairo is Egypt's showcase to the world, she is also Egypt's testing ground for the future. What trials she has faced thus far and how she has sought to meet their challenge?

While others might compile a somewhat different list, it appears to me that several types of problems have salience at this juncture in the city's history. First, how can a metropolitan center occupying an area that is central a position in the entire economy and power structure, be governed—especially in the face of its traditional lack of corporate identity and its prior inexperience in self-determination? Second, how, in a situation of extremely limited financial resources and heightened competition between industrial investment and urban overhead can the city be kept from deteriorating to a dangerous point, in the face of the heavy demands which a rapidly increasing population places on housing, utilities, transport, and other public facilities? Third, given the present decision to depend upon public rather than private investment, how can urban development and encroachment be planned for and executed in the sphere of city building—traditionally the cumulative product of a multitude of private consumption-investments? Fourth, to what extent should be a policy of public development and encroachment be given priority in public investments, in view of the already severe housing shortage and the continued immigration from rural areas where housing standards fall far below those for urban areas? And finally, is there any way to deal with the problem of urban growth in Cairo that could maximize both Cairo's capacity to cope with her short-run problems of congestion and Egypt's future capacity to develop balanced regional economies?

Each of these questions has been the focus of study and debate in Egypt, and it would therefore be presumptuous of me to offer solutions or advice. The purpose of this chapter is more modest. I shall attempt to chronicle here some of the approaches explicitly attempted or implicitly espoused in Cairo's most recent efforts to deal with problems which will continue to challenge her in the years to come.

Within the past two decades considerable progress has been made in providing Cairo with greater control over her destiny and in assimilating within a single administrative framework the multitude of separate agencies for decision-making which previously had been uncoordinated and diffused. The era of the private concession has been brought to a close. These separate empires of municipal servicing have finally been made a part of the city, responsible and hopefully more responsive to the overall needs of the community. This process was well under way even before the Revolution of 1952, which merely completed the task. For example, in 1947 when the concession of Lebon et Cie, expired, the government took over the company's installations for electric light, power, and gas within the Cairo District and has since operated the utility through a special administration.6

The Cairo Water Works is similarly administered under the municipality and, while it has its own budget, this is subject to the overall control of the City Administration, which is responsible for the transportation system of the city, which until 1956 still remained under the control of foreign concessionaires, became a nationalized concern under government control and, most recently, was expropriated.

With the elimination of the foreign concessions which since their inception had made decisions with important implications for city development within a goal context of purpose and direction, the city administration was opened to rational overall planning of the city's utilities and public services. This has, however, merely shifted rather than eliminated the arena of conflict. While the conflict between profits and general welfare has been re-solved, it has been supplanted by a political conflict between the demands of local subsidies for preferential treatment and technical evaluations of overall system requirements. In the absence of dispassionate planning the danger always exists that political power will be used as a new currency in place of monetary strength.7

In addition to the private concessions, there had been another "government within a government," the Ministry of Finance, which controls a significant portion of Cairo's real estate and which, through its process, had access to financial resources over which it exercised discretionary control. So long as this ministry stood unchallenged by a strong and competent national administration, arguments could be advanced that it represented a sacred rather than secular authority and, as such, could claim exemption from the regular framework of controls that would apply to other defense of its anomalous position, it became more and more tenuous as the government became indigenized and assumed responsibility for welfare functions that formerly had been performed through the institution of waqf. Under these conditions, how could funds available and indeed earmarked for welfare purposes be allowed to remain unintergraed with overall national plans for development and public services?

The first waqf reforms in the 1960's had affected family endowments only. The waqf khayrat persisted and, at first, there was an attempt to maintain the autonomous administration of this properties. But while they were nominally left in the hands of the Ministry of Waqf, pressure was exerted to guide and coalesce the admittedly compliant ministry to invest its funds in projects which fitted into the overall needs of the community, as those needs were defined by the government. The construction by the Ministry of Waqf of the Verganous City at al-Mari and of several public housing projects for low-income tenants was undertaken during this interim period of coexistence.8 In the end, however, it was jettisoned in favor of incorporating this medieval survival into the framework of modern planning. A ministerial order issued in that year called upon the Ministry of Waqf to turn over all real property and land under its jurisdiction to the governors in which they were located, henceforth to be managed directly through the governorate offices. For the lands that were to be used directly for public purposes, the governorates were to recompense the Ministry of Waqf at the going rate for such of their properties as had been purchased, and for those properties taken but not required for public purposes, the governorates were to recompense to 90 percent of the value, the residual 10 percent being absorbed to defray the costs of administering the properties. I have been unable to determine the exact nature and extent of waqf khayrat properties that were, by this order, made available to the Governorate of Cairo for direct management and development. But even if it has not been substantiated, it seems likely that one of this anomalous unit as a potentially competitive power, and the addition even of scattered plots of land to the store of parcels over which the governorate exercise direct control cannot but detract from the hands of Cairo's planners.

Local government and home rule also are no longer issues in Cairo, even though the process of trial and error still continues in search of a viable method for translating rights into daily practice. The peculiar role of Cairo in the context of the economy and the long tradition of national involvement in the governing of the capital have given rise to a system which deviates in fundamental respects from the pattern of local government that evolved in the United States. For that reason, the municipal structure of Cairo may appear somewhat unusual to the Western student. However, while the process seems to have its own special weaknesses, it also has a strong potential for solving certain problems of urban growth in those areas in the United States, because of its excessive concern with home rule, have been unable to deal with effectively.

Ever since 1969 Cairo has had juridical personality. The Municipality (Baladyah) by Law 145 of that year was inaugurated in 1969 and assigned all the municipal functions that had formerly been under the juridical and executive departments of the Public Works. In that same year a new Ministry of Municipal and Rural Affairs was established which absorbed the administrations for public services, local communities, and the Cairo more generally. (which, having been under the Ministry of Health.)9 The law establishing the Municipality of Cairo, however, primarily the changed the status of an anomalous level govern- ing the city and added the formality of a town council, it neither solved the problems of overall coordination nor established true representative government. The relation- ship between the new Baladyah and the other existing administrative units, the Governorate (Mushrikah), re- mained relatively unspecified, although the former bore chief responsibility for housing and planning (advisory) functions in the city whereas the latter, under the Ministry of the Interior, continued to be responsible primarily for the maintenance of law, order, and security. Under these conditions, the Baladyah office, headed by an engineer in a capacity similar to a technician-city manager, enjoyed a certain amount of autonomy, albeit

6 Overseas Economic Surveys: Egypt, October 1952 (His Ma-
7 In a meeting of the Cairo Council which I attended in the summer of 1965, pressure was being exerted by the elected representatives of certain outlying districts of Cairo to have their political representation increased in the Planning Depart-
ments in areas not yet cleared for subdivision by the Planning Depart-


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with strictly circumscribed powers and a very narrowly defined span of jurisdiction.

In 1950 a new law (No. 124 on "Territorial Administration") was promulgated, establishing a Ministry for Local Administration. This law established a uniform system of local government within the framework of the then-recently established National Union, a preliminary approach to representative government soon superseded by the Arab Socialist Union. This new law abrogated conflicting clauses in the 1946 Law and laid the foundation for the immediate establishment of the Baladlah and Mahlabjah of Cairo into a single entity, in which the former chief of the Baladlah became an undersecretary directly responsible to the Governor of Cairo. Eventually the subordinated unit was renamed the Department of Housing and Public Utilities. This department was subdivided, as before, into separate sections to deal with planning and buildings, circulation (roads, bridges, and lands), drainage, electrical and mechanical equipment, and public gardens, as well as an adjunct authority to deal with public housing. Other departments in the Mahlabjah, on the same administrative level, include Education, Social Affairs, Youth, Welfare and Health.

While each of these divisions retains a stronger relationship to the relevant national ministry than would certainly be true in the United States—but not necessarily in France or, for that matter, in central Europe—administrations—at least they are now gathered together under one roof where their decisions of planning and budgeting can be if not controlled at least coordinated.

Another important step in the 1960 law was to empower the President of Egypt to establish the boundaries of all governorates, presided over by the governor of the province, on which to sit both ex officio and popularly elected representatives. In conformity with these provisions, a Cairo Governorate Council (Majlis Muhiyyah al-Qahirah) was set up, consisting of four ex officio members and 26 popularly elected members. The governor himself is included in the council of office, i.e., by virtue of his important position in the administrative apparatus of the governorate; 16 are special appointees to the council by virtue of their active participation in the Socialist Union and their particular technical competence (economists, lawyers, engineers, educators); the remaining 42 are elected representatives through the Socialist Union, 2 from each of the 23 districts (aqamah) into which the city is politically as well as administratively divided. While a local government council that consists only half of duly elected representatives of the residents of the city seems to fall short of the Western ideals of popular self-government, the inclusion of these three classes of council members may be viewed as a transitional step until such time as the political decision-making structure of the metropolis that could be ignored only with serious consequences. Without the power to raise funds locally through taxation to any extent, the people would not be able, in the absence of a purely elective council realistically empowered to determine the allocation of expenditures? Thus, the key to the problem of local government in Cairo, as elsewhere, seems to lie in the power of the purse rather than anything of the political character.

The fact remains that the major portion of Cairo's financial resources comes not from locally raised taxes, over which elected representatives might legitimately be expected to exercise administrative control, but from nationally determined subventions and administratively determined allocations for specific functions. This being the case, it should not surprise us that the involved ministries expect to share in, if not to determine, expenditure decisions.

To demonstrate the degree to which Cairo's revenues are derived from sources over which it has no control and for which it remains at the mercy of other administrative bodies, I refer to some data compiled in Table 9. The figures are available to the Cairo Governorate in the fiscal years 1954-1955, 1955-1956, and 1956-1957.

<table>
<thead>
<tr>
<th>Source of Funds</th>
<th>LE 1954-55</th>
<th>LE 1955-56</th>
<th>LE 1956-57</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Revenues Collected</td>
<td>12,488.1</td>
<td>14,423.2</td>
<td>32</td>
</tr>
<tr>
<td>Of which</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cairo House Tax</td>
<td>1,210</td>
<td>1,450</td>
<td>35</td>
</tr>
<tr>
<td>Tax on business,</td>
<td>585</td>
<td>648</td>
<td>200</td>
</tr>
<tr>
<td>Alien residents</td>
<td>1,950</td>
<td>2,300</td>
<td></td>
</tr>
<tr>
<td>Public accommodations</td>
<td>100</td>
<td>950</td>
<td></td>
</tr>
<tr>
<td>Other taxes</td>
<td>2,901</td>
<td>2,289</td>
<td></td>
</tr>
<tr>
<td>Revenues from quarters</td>
<td>362</td>
<td>140</td>
<td></td>
</tr>
<tr>
<td>Irregularity or simply imposed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>taxes, etc.</td>
<td>4,077</td>
<td>1,770</td>
<td></td>
</tr>
<tr>
<td>Special (capital investments)</td>
<td>500</td>
<td>925</td>
<td></td>
</tr>
<tr>
<td>Housing revenues</td>
<td>700</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proceeds from demolition and clearance of blight</td>
<td>222</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2) Cairo's Share of</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Common Revenues</td>
<td>427.8</td>
<td>1,260</td>
<td>4</td>
</tr>
<tr>
<td>3) Subvention from Ministry of</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local Administration</td>
<td>16,258.2</td>
<td>20,705.8</td>
<td>64</td>
</tr>
<tr>
<td>Total Revenues</td>
<td>29,174.1</td>
<td>32,408.3</td>
<td>100</td>
</tr>
</tbody>
</table>

| SOURCE: | Mimeoographed releases from the Mahlabjah.
|--------------------------------------------------|
| (Formerly, the revenues from the Cairo House Tax were higher, but a graduated ceiling, with rates varying from 2 to 10 percent, was imposed on the monthly rental paid to the government. The ceiling was raised from 4 to 7 percent in 1957.)
| (This includes over LE 10 million from the Ministry of Education and LE 3 million from the Ministry of Health—obviously earmarked for special purposes.)

mean enough to warrant the establishment of a council within each of which the people would not be able, in the absence of a purely elective council realistically empowered to determine the allocation of expenditures? Thus, the key to the problem of local government in Cairo, as elsewhere, seems to lie in the power of the purse rather than anything of the political character.

While a local government council that consists only half of duly elected representatives of the residents of the city seems to fall short of the Western ideals of popular self-government, the inclusion of these three classes of council members may be viewed as a transitional step until such time as the political decision-making structure of the metropolis that could be ignored only with serious consequences. Without the power to raise funds locally through taxation to any extent, the people would not be able, in the absence of a purely elective council realistically empowered to determine the allocation of expenditures? Thus, the key to the problem of local government in Cairo, as elsewhere, seems to lie in the power of the purse rather than anything of the political character.

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WHITHER THE CITY? A PROGNOSIS

Ali Sabri dedicated the new facilities. Among the projects undertaken were substantial replacements of defective or inadequate sewer pipes and mains as well as repairs, enlargements, and additions to the pumping stations at Al-Ma'darya, Ghamrah, Jizah, and Port Said (al-Khalil) Street, at an estimated cost of a quarter of a million Egyptian pounds. Recommendations for future projects and pumping stations were also made by the consultants.

It is not known, however, whether their recommendations also directed attention to the underlying conditions that had led to the emergency or whether they suggested means for building into the day-to-day operations of the municipal government the powers necessary to avert future recurrences. This seems unlikely. Without such recommendations, however, a dangerous precedent has been set which cannot help but undermine the autonomy and self-reliance of the Government, although the latter has been a goalavored by the government and supported both by legislation and executive directives. The attractiveness of this short-cut method to effective action in crisis situations cannot be denied, and the temptation to extend this principle into other areas seems to have become irresistible. The public transit system, for example, has also been subjected to severe overload conditions, due to an enormously increased urban unit coupled with the failure to replace, repair, or add to the already inadequate stock in sufficient force to meet it. Again, an emergency expedition was resorted to when the army was assigned the special task of coping with the mass transit crisis in the city.

A final example, designed to deal with problems of a somewhat different nature but according to the procedures adopted, the "get around" the limited potency of existing units of government, was the issuance in early July 1956 of a republican decree by President Nasser forming a Higher Committee to supervise the preparation of a five-year plan for the Cairo Region and the execution of necessary projects. According to a contemporary newspaper account, the committee was entrusted with the responsibility for drawing up a comprehensive plan for the Cairo Metropolis Region, including "all its public utilities and its requirements as a capital city," with setting a time schedule for the execution of plans, and with coordinating the efforts of all bodies concerned with executing these projects. The decree further stipulated—and herein lies the problem—that the Government, as the fiscus, would do its utmost to provide the necessary financial assistance. The Government, however, had not announced how much financial assistance it would provide by way of credits for the carrying out of the plan. In short, the financial responsibility of the Government for the plan remains to be determined.

The fascinating aspect of this committee and its work can be found in the Cairo newspapers of the period. The completion of the project and its estimated cost are reported, for example, on page 1 of the Sunday edition of the Egyptian Gazette, July 18, 1956.

As reported under the heading "Cairo Planning Committee," in the Egyptian Gazette, July 9, 1956, pp. 1 and 3. 227
THE CONTEMPORARY METROPOLIS

sions are to be considered "final and will have to be observed by all Ministries, Governorsates, organizations and authorities after being approved by the Prime Minister."
The committee is to have its own independent budget, and the funds being allocated to it by the Prime Minister himself, to whom and to the Deputy Prime Minister for Local Government and Services the committee is required to submit reports of its deliberations and decisions.

To what extent has the unrepresentative character of the intergovernmental committee assigned to the work of putting a brake on the uncontrolled growth and construction around Metropolitan Cairo, which has been operating under the auspices of the capitally independent of the Cairo Council and the operating departments of the Governorate? Although this appears to have been the interpretation of the ex-Governor of Cairo who resigned within a few days of this announcement, only time will tell whether the committee can even prove effective enough to seriously threaten existing units of government which, after all, are represented on the committee.18 If, however, the committee does not succeed in its mission, this attempt to circumscribe rather than strengthen normal administrative channels will have delayed rather than hastened the day of eventual adequate planning for the city. It is important in this respect to point out that the prerequisite legal powers to execute even the most carefully devised plans for the metropolis are still conspicuously absent.

Traditionally, large cities have evolved as the aggregate product of thousands or even millions of individual decisions coordinated loosely, if at all, through the operation of what urban ecologists have termed the "subconscious" processes of spatial distribution. We have seen, in our analysis of the present social-physical organization of Cairo, that these processes have been far from ineffective in giving shape and coherence to the structure of the city. Where the state wishes to intervene in these processes to guide developments in certain desired directions, or discourage decisions which would undermine planning goals, it has two options that are, of course, not mutually exclusive. First, it can participate actively in development, engaging in direct investment, physical planning, and construction; and second, it can use its legal powers of incentives and sanctions to manipulate the terms within which decisions of individual investors and consumers are made. Different systems play a role in each of these two techniques for guiding urban development. Although Cairo has apparently opted for heavy dependence upon the first, her planners have not ignored the second, even though the approach has never been allowed to become an independent direct tool. Without these indirect legal controls and to what extent are they at the disposal of responsible agents in the Governorate?

Among the minimum number of tools a modern municipality expects to have to control development are: building codes to set standards of safe and healthy construction; housing codes to control occupancy standards and minimum dwelling unit quality; zoning ordinances to assure conformity of land use to an overall plan for the city; subdivision regulations to define new developments to approved areas and to assure conformity of site plans to current standards of adequacy; site control powers over nonprivate developers (usually governmental agencies exempted from the other types of controlling ordinances); and perhaps also general planning laws permitting the acquisition and/or reservation of lands required or anticipated to be required for public purposes, such as schools, recreational facilities, the circulation system, utility installations, etc.

In American cities the existence of even the full roster of control "tools" on the book does not assure effectiveness. First, most of these laws apply only to new construction or changed uses, not to existing structures or uses established before passage of the ordinances. Second, inspection and enforcement permits, stringent enough and fines high enough to discourage violations. In Cairo these problems of securing compliance are compounded by inadequate or missing laws, the absence of sanctions and by the lack of long-range plans for metropolitan growth and land use which might serve as the ultimate referent for decisions and ordinances which are not ends in themselves but merely ways of achieving such ends.

Of these laws, Cairo by 1957 had only a building code and a law governing land subdivision. There was no housing code nor was there a general zoning ordinance, although in a few isolated quarters of the city, land use and architectural controls govern development. Among these are the zoning via deed restriction regulations in force in the two planned residential suburbs of al-Maadi to the south and Heliopolis to the northeast, plus even more stringent regulations in the new town of Nasr City, as well as the architectural control ordinance recently enacted to preserve the historic character of the Faiyum

City.19 But it must be recognized that there does not exist any real basis for exacting an overall zoning ordinance, for what the use and character of which is more based not yet been drawn up or approved, nor in fact is a detailed land use map of the region, which would be required to draw up such a plan, available to the planners.20

18 A zoning-architectural control ordinance was devised in 1965 to control the most objectionable features of the blossoming modernism. Full circle has been turned in the seven seven years between Muhammad Ali’s, who sought to change the Flamingos housing law, a new model, and Cairo’s own temporary planners who, secure in their modernism, seek to restore a museum of the past. The regulations govern the introduction of new buildings in the area and the structural alterations of existing buildings. In addition to limiting the height of all buildings to four stories, including the ground floor, the ordinance specifies that the façades of all buildings in the historical district should be in a simplified Islamic style; should have their exterior windows with mashrabiya or some similar device (it will be recalled that it was these very mashrabiya that Muhammad Ali had outlawed as fire hazards); should be equipped with wooden doors or, where iron is used, it should be grilled in the Arabesque style. Counter to Muhammad Ali’s intent to “light up” the city, the ordinance specifically prohibits fluorescent and neon lighting and permits entrance-way lights only when they follow the lamp designs of the earlier period. Windows are prohibited from framing the streets; where they do, display windows must intervene between the shops and the thoroughfare. In only one area do the present regulations agree with those of Muhammad Ali, namely the opening of roadways from encroachments. Projections are limited on the ground floor to the length of only may and no more than 15 cm. in width; on the upper stories, projections are limited to a specified proportion of street width. To enforce these regulations, the police, urban planners, architects, and representatives from the ministries of Tourism, Works, and Housing has been appointed by the Governorate to review designs. Second, inspection and enforcement permits, stringent enough and fines high enough to discourage violations. In Cairo these problems of securing compliance are compounded by inadequate or missing laws, the absence of sanctions and by the lack of long-range plans for metropolitan growth and land use which might serve as the ultimate referent for decisions and ordinances which are not ends in themselves but merely ways of achieving such ends.

19 Among the members of the committee are the ministers of Housing and Public Utilities, Economy and Foreign Trade, the Treasury, Deputy Minister of Housing and Utilities, the governors of Cairo and Giza, the General Authority for Electric Power, the Chairman of the Cairo Transport Authority, the Chairman of the Central Organ for Statistics and Mobilization, and representatives of the ministries of Health and of Supply and the Governor-General of the Cairo Water Works, professors of engineering and city planning from Cairo, Ain Shams, and Alexandria Universities, representatives from information, tourism, industry, transport and communications, as well as the Director of Planning of the Cairo Governorate (Mr. Mohamad Hilfi ‘Ali), also appointed secretary to the committee.

The Planning Department has taken over the responsibility for approving all sites selected for planned use, including those selected for development by various government agencies. In the case of conflict, the issuers referred to the Cairo Council. According to its director, the Planning Department has been successful in about 60 percent of the conflict cases in obtaining the backing of the Council for its decisions and recommendations. However, the lack of any official powers and, consequently, the absence of any real sanctions that can be applied against offenders has inevitably invited numerous violations. Chieftly, these violations have been in the form of commencing construction before and without seeking to obtain clearance of the site for intended use. On the periphery, private developers and the Ministry of Industry have been the prime offenders; nearer to the center of the city, the Ministry of Tourism, although it has been constructing numerous hotels and other accommodations to encourage the tourist industry, has frequently failed to consult the Planning Department about its intended construction.

22 In the absence of such overall regulations, the advisory powers vested in the Planning Department of the Governorate have become heightened as it is given the measures to prevent serious misjudgments which will interfere with effective planning at a later date. The site-control powers of the Planning Department, however, are not constitutionally vested. By convention though not statute law, the Planning Department has taken over the responsibility for approving all sites selected for planned use, including those selected for development by various government agencies. In the case of conflict, the issuers referred to the Cairo Council. According to its director, the Planning Department has been successful in about 60 percent of the conflict cases in obtaining the backing of the Council for its decisions and recommendations. However, the lack of any official powers and, consequently, the absence of any real sanctions that can be applied against offenders has inevitably invited numerous violations. Chieftly, these violations have been in the form of commencing construction before and without seeking to obtain clearance of the site for intended use. On the periphery, private developers and the Ministry of Industry have been the prime offenders; nearer to the center of the city, the Ministry of Tourism, although it has been constructing numerous hotels and other accommodations to encourage the tourist industry, has frequently failed to consult the Planning Department about its intended construction.

23 Before these weak legal powers can be strengthened, however, the goals toward which they are to be directed must be specified more clearly and receive official approval—a prerequisite still lacking in Cairo. It is true that in 1953 the Municipality commissioned a group of engineers and planners to formulate a master plan for the capital, and numerous committees were set up to handle specific aspects. Surveys were undertaken to accumulate needed data on the distribution of inhabitants, the location of industry, commerce, and other land uses, housing conditions, labor conditions, transport and communications problems, streets and highways. These use data through field surveys throughout the city. These data were transcribed by address on separate sheets which noted not only the land use, but also the habits, health, and some essential items. Organizing grids and codes were used and no further processing (except a general map showing building condition) was done. When I saw the sheets in 1959, they were dusty and beginning to deteriorate and were stored in a wooden cabinet far from the offices concerned with planning. An enormous amount of effort was wasted, which has to be set aside, to transcribe data for IBM analysis, and to prepare the land use map, by now, in addition with the vast amount of data what is used. Another land use survey is now being undertaken in connection with the work of the new Higher Planning Committee.
surveys required two years to complete. Finally, in 1956 the Master Plan for the city was finished and subse-
tenently published, and the planning of the city was pro-
ceeded. It is not officially binding, nor does anyone claim that its con-
tents offer a realistic set of goals for the city or a reasoned pro-
gram for their achievement.

It may be that the Higher Planning Committee will succeed where the academic planners failed and that they will be able to assemble and process the required informa-
tion and will be able to establish a mechanism for on-
goings planning (rather than a static master plan out-
lined by the date of its publication) that will be coupled with effective capital-budgeting both for long-range goals and short-run targets. Perhaps their recommendations will also include a diminution of the metropolitan region which could, by Presidential order, be made coterminous with the Cairo Governorate.18 And perhaps then it would be reasonable to hope for the legal powers that are so sorely needed to effectuate planning.

In the interim, however, some greater measure of con-
trol than now exists is necessary if the battle against un-
derdirected urban expansion is to be waged successfully.

Whether this should be in the form of a general planning
law on the English model, designating areas for urban ex-
ansion within a limiting greenbelt, both suitably zoned, as has been suggested by M. Hāflīg,19 or simply by

18 For the history of the first Master Plan, see United Arab
Republic, Information Department, Eleven Years of Progres-
and Development, 1952-1963 (Cairo, undated), unnumbered
section on “The City of Cairo.” In fairness, it must be pointed
out that the Master Plan provided a number of recommen-
dations that have already been carried out, such as the construc-
tion of several major highways, the Fustat Bridge, and the inaugu-
ration of a program of public housing. However, to illustrate the unrealistic assumptions upon which this plan was based, it need only be pointed out that the population “utilized” for Cairo of 3.5 million—a size already approached when the plan was published.

19 By doing, the committee would, of course, terminate its legal powers. For, its existence is based upon a provision of the law of local government which permits the President to appoint special bodies to solve problems beyond the boundaries of any one governorate.


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construction, not only in those areas where it has con-
ventionally operated—such as the construction of roads, bridges, utilities, and comparable structures but also in areas formerly left to private investment. In its direct

tivities the government has been assisted by its rather

tensive land holdings within the Governorate, in the form of

Areas of expanse, mankal‘ah lands and waqf land over which it recently gained control, which have pro-

vided not only sites for construction but sources of rev-

ue to finance further projects. The most important of these
direct government interventions is in the field of

hosing, which, since 1956, has become an important

function of the Governorate in cooperation with the Min-

istry of Housing. These projects have helped to fill a

case of private investment which has generally tied

the field of urban real estate.

We have already noted how Cairo entered the most

recent decades of her history severely crippled by a serious

housing shortage which required occupancy densities far

exceeding accepted standards of adequacy. During World

War II, when there was a virtual moratorium on con-

struction, overcrowding became endemic. In the immedi-

ate postwar period private investment in housing, while

vigorous, was confined almost entirely to providing lux-

ury dwellings for that segment of the population already

best accommodated in the city. When even this modest

activity decreased in the 1950s, the overall shortage of

housing became more acute and direct government in-

vestment was finally thrown into the breach. The task,

however, is enormous, and the efforts thus far, heroic as

they may be, have been tardy in beginning and paltry in

comparison to the expanding needs.

In a 1965 appraisal of the housing problem in Cairo it

was estimated that by the target date of 1979, some

40,000 new dwelling units would be required to take care of

the population increase alone; another 30,000 dwelling

units were required to reduce the existing levels of oc-

cupancy density; furthermore, another 70,000 dwelling

units were needed to replace deteriorated or to-be-demolished units.20 We have already seen that the number of build-

ings permits issued annually for residential structures in

Cairo has averaged no more than 1,700 in recent years.

Even if all these structures were built and if the average

number of dwelling units provided in the apartment

buildings was 10, the additions to the housing stock

would run no higher than about 15,000 dwelling units an-

nually. To this extent, there has direct investment

managed to bridge the widening gap between need and

supply but, it is important to point out that before 1953 there

was no housing policy in Cairo. The only public con-

structive housing project was Workers’ City in Imbīlḥah,

with about 1,000 dwelling units. These had been rental

units but, after the Revolution, they were sold to their occu-

pants.21 One of the recommendations contained in the

Master Plan was that a program of public housing be

commenced. The first project to be executed under this

new program was a relatively small, middle-income de-

velopment at Masrīn Victoria in Shubra, followed by

more ambitious schemes to reclaim the kharāb just below the

aqueduct of al-Ghūrī, where the projects of Zweynum and

Ain al-Shirāth were begun in 1955-1956. Another major

devlopment in the north, al-Amīrīyah, was also con-

ceived at this early date, followed by two other minor

projects, but there was as yet no coordinated program for

housing.

The Ministry of Housing drew up its first five-year plan
to cover the period 1956-1961, allocating targets and

finances to the local units charged with plan execution.

In this first plan, the country-wide allocations for housing were as follows:

\[
\begin{align*}
\text{Low-income} & \quad 45,200 \text{ d.1.s. at estimated}
\text{urban housing} & \quad \text{the annual rate of cost \$5,700}, \\
\text{MIDDLE-DOWN} & \quad 22,600 \text{ d.1.s. at estimated}
\text{urban housing} & \quad \text{the annual rate of cost \$3,500}, \\
\text{RURAL HOUSING} & \quad 500 \text{ d.1.s. at estimated}
\text{urban housing} & \quad \text{the annual rate of cost \$1,000}.
\end{align*}
\]

Cairo’s share of this total allocation was quite high, amounting to some LE 11,000,000 of which LE 6,450,000 was specified for low-income housing and the remaining LE 5,000,000 for middle-income housing.

In line with this five-year plan, projects were rapidly

undertaken by the Mankal‘ah to expand the scope and

scale of their housing activities. By the end of 1964, with

only one more year of the plan to run, they had spent close

to LE 6 million on the construction of some 14,532

low-income dwelling units and close to LE 900,000 on

20 United Arab Republic Annual Yearbook [Al-Kūtūb al-
Sa‘arān], 1979 (Cairo, 1979), p. 563.

21 There are serious and irreconcilable (for me) discrep-

cies between the various lists of public housing projects and

the total number of buildings and dwelling units as shown by

various submittals of the Mankal‘ah. Information has been com-

piled with caution, therefore.

Table 10. Public Housing Constructed for Low-Income Tenants by the Cairo Governorate Through 1964

<table>
<thead>
<tr>
<th>Name of Project</th>
<th>Cost in LE</th>
<th>Number of Dwelling Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ain al-Shirāth</td>
<td>79,567</td>
<td>8</td>
</tr>
<tr>
<td>Tāhā Fārdīl</td>
<td>159,306</td>
<td>11.5</td>
</tr>
<tr>
<td>Al-Dawdaw</td>
<td>73,043</td>
<td>200</td>
</tr>
<tr>
<td>Al-Zwā‘ī al-Shams</td>
<td>839,890</td>
<td>59</td>
</tr>
<tr>
<td>Al-Amīrīyah</td>
<td>493,953</td>
<td>42</td>
</tr>
</tbody>
</table>
| Hāshīmīn, even though the assumed average site of occupant families is six and, in empirical studies, has been found to be closer to seven.

Tables 10 and 11 present information on the low- and middle-income housing projects which had been

constructed in Cairo as of 1955. Most of the public low-

income projects are rental units, although the government has sought to convert some to cooperative; on the other

hand, the middle-income projects have been conceived for
cooporative ownership on attractive terms, even when they are initially rented. Demand for both types has been high, as one might suspect from the housing data pre-
nounced.

22 This information, as well as that contained in Tables 10

and 11, has been taken from the uncontrolled and therefore

official report by the Department of Housing and Public Utili-

ties, entitled "The First Five-Year Plan," pp. 51-52. (In Arabic.)
sent earlier. Particularly for the middle-income project in Ma'arif, located on prime downtown land which had escaped renewal only because it had previously been encumbered by awjif, the competition has been stiff. Priorities have been established to accommodate persons displaced by clearance operations, even when their incomes exceed the limits established for eligibility. Waiting lists are long and, in the case of the Ma'arif project at least, it was necessary to resort to a public lottery for initial selection of tenants from among the long list of eligibles.35 There is little doubt that these projects, extensive as they are, merely scratch the surface of the backlog of need and demand for housing in Cairo.

An even more ambitious program of direct government construction is envisaged during the second five-year plan for 1965-70. According to interviews granted by both the then-incumbent Minister of Housing and his Deputy Minister in July 1965, as reported in the press,36 certain policy changes have been made which place greater emphasis upon rural housing and upon private-financed housing. In addition, more attention is to be paid to the possibility of repairing and renovating existing urban structures. What these new plans will mean for Cairo is not yet clear, but officials in the city anticipate an expanded program that would provide up to 50,000 additional dwelling units within the five-year period, of which about 50,000 would be for low-income families.37

In addition to these housing projects that have been or are being planned, built, and managed by the government, there are many other housing developments which have been or will be planned, constructed, and initially financed by special housing authorities but then sold in the form of cooperatives to occupant-owners. This method is favored for several reasons. First, it has the advantage of making available the large amounts of capital required to construct coherent developments. Second, it maximizes, through direct design, controls over the location and standards of developments which otherwise would be relatively unenforced by legal restrictions, given the inadvisability of the laws regulating housing and land use. And finally, this method extricates the government from having its funds tied up indefinitely in projects it must continue to administer and maintain. Presumably, as cooperative loans are paid off or transferred to other investment sources, the funds would again be available for new projects. This approach offers attractive possibilities which are now being exploited. Many of the housing developments on the west bank are being sponsored in this manner, as well as other more centrally located smaller projects for middle- and upper-middle-income groups.

By far the largest and most important of the government-sponsored projects is Nasr City, a centrally planned and executed (but eventually self-liquidating) development designed to provide not only housing but employ-

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**Table 11. Middle-income Housing Undertaken by the Government of Cairo during the First Four Years of the 1965-1967 Five-Year Plan**

<table>
<thead>
<tr>
<th>Name of Project and Its Location</th>
<th>Total Appraisal in LE</th>
<th>Spent in 4 Years</th>
<th>Number of Buildings (LE)</th>
<th>Number of Dwelling Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shubra (northwest)</td>
<td>348,734</td>
<td>93,949</td>
<td>4</td>
<td>264</td>
</tr>
<tr>
<td>Land acquisition costs</td>
<td>(117,640)</td>
<td>(117,640)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compensation to company</td>
<td>(40,063)</td>
<td>(40,063)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public facilities</td>
<td>(1,650)</td>
<td>(1,650)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ma'arif A (central)</td>
<td>354,915</td>
<td>249,339</td>
<td>3</td>
<td>275</td>
</tr>
<tr>
<td>Ma'arif B (central)</td>
<td>658,994</td>
<td>51,304</td>
<td>none yet</td>
<td>none yet</td>
</tr>
<tr>
<td>Saydah Busayu (east central)</td>
<td>97,718</td>
<td>52,460</td>
<td>3</td>
<td>109 plus offices</td>
</tr>
<tr>
<td>Bib al-Sha'hiyah (east central)</td>
<td>195,000</td>
<td>6,605</td>
<td>3</td>
<td>134</td>
</tr>
<tr>
<td>Maghs al-Uummah (central)</td>
<td>51,391</td>
<td>1</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td>Halwa (central)</td>
<td>104,993</td>
<td>84,276</td>
<td>7</td>
<td>67</td>
</tr>
<tr>
<td>Talfil Halwa (south central)</td>
<td>88,041</td>
<td>35,146</td>
<td>4</td>
<td>44</td>
</tr>
<tr>
<td>Al-Masry Al-Rawdah</td>
<td>276,278</td>
<td>132,365</td>
<td>3</td>
<td>181</td>
</tr>
</tbody>
</table>

Total Middle Income 2,454,124 893,160 25 1,040 plus offices

*This figure appears in the same source, but the sums of the entries in the table do not quite add up to the totals as reported. Either a typographic or transcriptional error in the original is possible.

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155. Nasr City, first blocks of apartment cooperatives

156. Nasr City, still under construction

153. Nasr City, first blocks of apartment cooperatives

Parallels not only to Heliopolis, which faced similar technical problems, but to even earlier prototypes suggest themselves. Cairo has had a long tradition of "royal cities" founded to mark the inauguration of new dynasties, and myths and symbols have grown up around their founding. This appears to be no less the case for Nasr City. The fictions that Fusuf owed its site selection to the nesting of a dove in General 'Amr's tent, or that al-Qihirah was believed to control the ill-omened tug of a crow, seem to be matched by the now ritualized sentimentality that the site of Nasr City was selected because it was in the very barracks of that zone that the Revolution of 1952 (whose secret watchword was *nayr*,...
Najr City not only conforms to these minimum standards but, in addition, are governed by even more stringent requirements as to land coverage limitations and setbacks, these being incorporated into deed restrictions running with the land. Furthermore, the Department of Housing and Public Utilities has been called upon to give technical assistance in the design of the community, particularly in coordinating the planned streets with those of the Muhajzah. This was essential, since the Governorate is financially responsible for half of the expense of constructing major social projects in Najr City and is expected eventually to accept title to all public ways.

The final relationship between the Najr City Society and the Governorate lies in the ultimate disposition of the project. The Society has tried to minimize its permanent investment in the community, conceiving of its role as builder and then disposer of the project. To this end, land in most of the subareas is being marketed outright to private buyers and cooperative developers who will construct single-family dwellings and apartment houses using independent financial resources but conforming to the deed restrictions established by the Society. The only direct construction undertaken by the Society has been the modest administration building and the blocks of eleven-story apartment buildings on a small off-center plot which the Society has been marketing to tenants on a cooperatively owned and managed basis. It intends to liquidate its investments in streets and street trees as soon as possible by getting the Muhajzah to accept the deeds and assume responsibility for maintenance. Large centrally located plots in each of the residential neighborhood units are being deeded directly to the Ministry of Education so that the latter can construct the necessary schools. General 'Arifah anticipated that within twenty years the Society would be able to turn over the completed community to the full control of the Cairo Governorate, thus freeing itself to undertake new projects.

These are the long-term prospects for the city; the immediate plans are somewhat more modest. The Society is now concerned with only the first phase of the development plan covering an area of some 7,000 acres. A fairly detailed site plan has been drawn up and approved for this nucleus which enjoys the most favorable location, being closest to access highways and existing main transit routes and having the most hospitable terrain. Rights to the remaining 14,000 acres had not yet been granted as of 1965 and plans for them remain in the visionary stage. Map XVIII shows a rough sketch plan for the 7,000 acres currently being developed.

As we have seen, in the absence of overall zoning regulations for the city, deed restrictions have been the indispensable technique for controlling development in the Najr City area. Thus far, pressure has been exerted over land use and development in isolated sections of Cairo. Enforcement, however, remains difficult. Sketch Map XVIII has been prepared by compiling information from several sources, one of which is without flaw and all of which may subsequently have been altered. A photographic reproduction of what appears to be a three-dimensional model of the original plan was included in an advertising brochure issued quite early by the Building Society. In addition, I was given a blue-line reproduction of the general site plan being used in the architects’ office of the Society, showing major roads but no land uses. This plan covered a more extensive area than had been included in the advertising brochure. From these two “blue maps,” and on the assumption that the latter was probably more accurate and up-to-date than the former, the main outlines of the map were sketched. Information on present and planned uses came from observation and interviews, as well as additional maps on display in the office of the architect for the project.
street, utilities, street lights, mailboxes), and its single-family detached houses, which in Egypt are always called the "villas," were a step or two below the houses of a few higher ranking government officials. In addition, there were several other inhabited blocks containing semi-detached but low apartment buildings, each one accommodating from four to eight families. These homes were pleasantly landscaped with trees, grass, flowers, and inserting themselves inconspicuously with the dusty expanses of surrounding desert. Nearby was a school building, a mosque under construction, and a small cluster of units obviously intended for commercial use. The landscape planned at that time only the government-run cooperative grocery store appeared to be functioning. One can only assume that at the time of this writing all these zones are fully inhabited.

The second major portion of the site, roughly to the west and the upper part of the site, is to be devoted chiefly to industrial, institutional, and recreational uses. At the southernmost extremity lies the intractable terrain of the "Red Mountain" (al-Tabut-al-Amur), an irregularly deep desert expanse, broken by outcroppings of red sandstone boulders and chunks of marbled petrified wood, which rises to an elevation overlooking not only Nasr City to the east and the remainder of Cairo as well. Due south one sees—two miles away—the massive peak of the Mokattam and Muhammad Al'i's citadel-plateau atop it, and in the flat intervening plain the exposed limestone plateau of Nasr City. It is on this peak that a casino-resort house is being built as a focus for a recreational zone; the surrounding hills are being terraced, irrigated, and planted with trees and greenery.

The Red Mountain, however, has not hitherto been a place of recreation. Its chief value, rather, has been as a rich source of marble, sand, gravel, and other raw materials for brick and concrete. Thus, in the industrial zone at its base are factories engaged in extracting and processing these materials. These are to remain and to be supplemented by other, hopefully less distasteful, industries. On the foothills beyond is a large district being developed into an extensive campus for al-Azhar University. Some of these buildings were already being occupied as early as 1955 and the plans envisage a complex of classroom, laboratory and dormitory structures to house the "secular" branches of the university (the Colleges of Arts and Science). The religious and literary schools will remain behind in the medieval city. The al-Azhar site is broken into at one corner by some very rocky irregular terrain. This area cannot be developed for anything except widely spaced villas and will require enormous investments in reforestation and greenery. Any promotion that has been tentatively marked off as the site for a single-family home and the minimum building plot has been set at one acre. It is hoped that this zone will be developed into a prestigious "garden city" for government officials of the highest rank.

The major use intended for the final third of the site is residential. As can be seen from the sketch map, three very extensive low-density "villa" communities, accommodating between 40,000 and 75,000 inhabitants each, are planned for this most peripheral portion, to be built from the industrial and institutional uses by multi-family housing for lower-income groups. By the summer of 1965, only the first community area had begun to receive site improvements, and lots had been plotted and were being sold to private builders. At that time it was anticipated that all utilities and other improvements would be completed within two years and that the area would then be ready for development and occupancy. Thus far, Nasr City shows great promise. The amount of government backing available has enabled it to progress in a manner not matched by privately underwritten schemes. (Plans for a new scheme, the Mountain to the southeast of the existing city, which were devised about the same time as those for Nasr City, have made far less progress, partly because government played a smaller role, partly because the zone abutted low-income areas rather than the more desirable residential quarters of Heliopolis.) The source of its strength, however, may prove a double-edged sword. Thus far, government agency have been the sole instigators. The city's public relations ministries have, however, not been eliminated nor reversed. In fact, as conurbation continues on an even greater scale, the magnets of distant cities both north and south grow ever stronger. Already, the mayor of Alexandria some 200 kilometers away pulls urban developments in its direction and, as we have suggested elsewhere, should Egypt eventually develop its own "megapolis," the urban growth could be divided along the two most important cities of Egypt. To work against this trend may be futile; to work with it the better part of wisdom.

The satellite cities that have been so ardently advocated by Cairo's physical planners may offer a means for relieving some of the population pressure on Cairo while still not forfeiting the economies of scale desired by the economic planners. Technology permits this greater decentralization, for Egypt, perhaps more than most other nations, will depend upon electric power which elsewhere has been an important factor in urban decentralization. The strip between Cairo and Alexandria is already well served by highspeed and other transportation connections, as well as by the rich agricultural belt, which also has been a major reason for the establishment of the new airport. But there are no plans for major new highways and only minor improvements on the existing roads, a fact that suggests that, while the concept is understood, there is no intention to implement it. The new cities cannot be isolated from the existing urban areas, and the provision of transportation facilities is of primary importance.
A Personal Postscript

In the summer of 1965 I made a "final" field trip to Cairo to gather information for the most contemporary period. By the end of May 1967, these additions and revisions had been incorporated into the manuscript. The concluding lines of the final chapter were typed and the manuscript mailed to the publisher. Although it was evident that there could never be a logical termination point for a biography of a living city, it appeared that the future of Cairo, at least for the next few decades, was clearly charted. National goals had been established and Egypt was making rapid progress in her social revolution. The problems facing the city were mere extensions of those already apparent and recognized, and were, furthermore, receiving concerted attention from a large and competent cadre of professionalism trained and sophisticated Egyptian planners. It was, therefore, with a somewhat saucy amount of relief that I closed both the book and, so I thought, a chapter of my life.

Within only two weeks, however, war had again broken out in the Middle East. The future of Cairo was suddenly shadowed; there were even reports that the city was being bombed. It seemed that not only Cairo's but Egypt's fortune lay in the balance. These events set in motion changes that were far less predictable than the problems that had perplexed me in the final chapter. One year later, when shock had subsided, I returned to the manuscript, wondering whether or in what way it should be revised. Rather than attempt the impossible, I decided not to revise the book itself but rather to add a few brief notes concerning the impact of the present crisis upon Cairo. Return visits to the city during the summers of 1968 and 1969 were both reaffirming and distressing. Reassurance lay in the fact that the supreme vitality of Cairo had again triumphed over adversity. Distress, however, lay in the fact that the still-smoldering war had imposed doubled difficulties upon the city.

One of the most important effects of the war and of continued hostilities along the Suez Canal has been a marked increase in the population of Cairo. Between half a million and a million Egyptians have been evacuated from the war zone, and although some have been relocated in other governorates and in areas of land reclamation, many of them are now settled in Cairo. Public housing projects constructed initially for low-income Cairenes are being used to house some of the evacuees. Others have settled in the fringe cemetery cities where makeshift housing has supplemented public facilities. In every quarter of the city, however, is evidence of additional crowding, as families have doubled up to make room for relatives from the Canal towns. In the summer of 1969, official estimates of Cairo's population were as high as 6½ million, even though that number would not have been approached for several more years had growth remained at normal levels.

A second effect of the war has been a relative cessation of construction for tourism, for the tourist industry, upon which at least some of the future plans for Cairo were premised, has virtually disappeared. Many of the largest hotels under construction along the Nile Gold Coast remain unfinished and the existing hotels report vacancies. Not only has demand disappeared but the need for construction to house the burgeoning population has declined whatever activity was occurring near the city center to construction of housing on the periphery.

A third effect has been a tightened and more stringent budget for local improvements and developments. Many of the municipal schemes have been revised to tabled plans and, although planning activities still go on, there is little immediate hope of putting the ideas into practice. The scheme to build a subway for Cairo is, in a case in point. Planning is going on, both in the Greater Cairo Planning Office and by foreign consulting firms, directed toward a rational underground transport system for the city, but expectations concerning the feasibility of executing these plans, if and when they are adopted, remain at a low level. With one mind, people plan for the future; with another, they fear that the plans will remain dreams for the distant tomorrow.

Despite these restrictions, despite halfhearted attempts to paint headlight blue, despite security measures prohibiting photography in the city and controlling internal population mobility, the city appears remarkably stable and prosperous. Many of the underlying trends in social transformation have continued despite the war. The homogenization of the city, perhaps even assisted by the abnormal times, has proceeded more rapidly than I would have predicted in 1966. This homogenization seems to be the joint product of two not unrelated trends. First has been an increased leveling off at the top, with conspicuous consumption less and less obvious. The older elite is scarcely visible any more, and with the temporary loss of stature of the new military elite, few have taken their place. Members of the older bourgeoisie have been emigrating from the country, their places being filled from the ranks. On the other hand, there has been an undeniable leavening from below. Consumption patterns, ways of dress, and leisure time activities which were once the prerogative of a somewhat Westernized middle class have been diffusing down the social structure. One rarely sees the jallābiyyah, even in the most traditional quarters of the city, and many persons alternate with ease between Western and traditional dress (wearing trousers to work and putting on the jallābiyyah only if required by the service character of their employment). Almost no women are veiled, and if one sees some black-gowned women, in most cases these turn out to be village women in for Friday shopping. Sharp social lines between the old and new cities are being rapidly erased and population flows more freely between the quarters. Downtown shops which formerly specialized in foreign goods now carry locally produced goods little differentiated from the lines handled elsewhere in the city. Rarely now does one see the pretentiously overgrown; but rarely too does one see really destitute persons.

The overall appearance of the city reflects some of this social homogenization. The newer quarters of Cairo are somewhat shabbier than they were some ten years ago. They are also far more crowded, since all now dare to tread where once only the wealthier classes isolated themselves. The older quarters, however, are less depressed than they were some years ago, for public housing projects, slum clearance, and more equitable income distribution have been making their influences felt. Trades which formerly catered to a Western or Westernized clientele, such as furniture makers, now seem to do a thriving business among the indigenous working class of the city. Whereas fifteen years ago one was struck with the rural qualities of the city, today one is impressed with the urbanness of large quarters in Cairo. It is as if, in that intimate reciprocal relationship between the city and her national hinterland, Cairo has again forged ahead of the countryside, but her lead, as in the past, will again be drawn back to her roots.

Thus, the current crisis has in some important ways altered the city but in other equally important ways has scarcely affected her. The war has caused many projects for improvement to grind to a temporary halt; it has increased the city's responsibility for caring for an even larger proportion of the country's population and has led to attendant problems generated by numbers and density. On the other hand, the main thrust of the social revolution has not been deferred, however interrupted the economic revolution. The movement to Egyptian modernity has been sustained.

One final note. The publisher suggested to me that, perhaps in this somewhat dark hour of Cairo's history, it might appear insensitive to retain the word victorious in the title of a book about Cairo. I disagree profoundly. Al-Qahirah still means "The Victorious"; Nasr still means "victory." This name sustained her during the chaos of the late Middle Ages, during the inglorious defeat by the Turks, during the even more humiliating temporary capitulation to Napoleon, and during the long decades of colonial servility to a British High Commissioner. Survivial, not temporary fortune, is the true measure of victory. In 1964, Cairo marked with subdued celebrations her thousandth anniversary. Few cities in the world share with her such longevity and sustained importance. That one can no more think of the world without its heritage of the great city of Cairo than one can think of the world without that city's silent sentinels—the pyramids—is perhaps the ultimate defense of Cairo: City Victorious.
Appendix A: A Methodological Note

The variables selected for the original analysis of the Census of 1957 were initially grouped under four headings which were considered related to the social dimensions suggested by the social area analysis, but no attempt was made to replicate the exact measurements employed by Shevky and Bell. My efforts, rather, were directed toward developing measures that would be sensitive indicators of the unique social conditions of Cairo. Furthermore, my limited data precluded certain of the standard measures, as will be explained below. The major headings under which variables were grouped were demographic characteristics, family characteristics, socio-economic status characteristics, and ethnic identity. The final three categories were consciously predicated on the assumptions of social area analysis, although their ultimate combination was not attempted until the empirical interrelationships had been thoroughly investigated.

To summarize the demographic structure of each census tract, population pyramids were constructed from the age and sex distributions. Density of development was measured by computing the ratio of residents per square kilometer. In addition, because Cairo had experienced rapid growth resulting from rural-to-urban migration, it was felt that differences in the sex ratio might be found that would distinguish areas differentially affected by in-migration. Therefore, two final demographic measures, a general sex ratio and a sex ratio specific for the migration-prone ages between 15 and 50, were also computed.

To summarize the nature of family life in various quarters of the city, other indices were devised. Among these were the average size of family and the standard fertility ratio. In addition, it was believed that some measure of marital status would be useful in describing the nature of family life, since significant cultural differences exist within the city that determine such matters as usual age at marriage and prevalence of divorce. To reflect these differences the percentage of females sixteen years of age and older who were listed as never married was computed and a similar rate of never-married males was derived.

These rates were presumed to measure somewhat different phenomena, justifying the inclusion of both. For females, eventual entrance into at least one marital union is virtually universal in Egypt. Therefore, the percentage of females in a census tract who have reached the age of sixteen or over but are still listed as “never married” represents in reality the proportion of women not yet married. Since this proportion decreases rapidly with age, the measure may be taken as an indicator of the “usual age of marriage” for females in a census tract. Given a normal age distribution, tracts having high percentages of never-married females contain populations in which females typically marry at older ages; conversely, those with low percentages of never-married females contain populations characterized by very early marriages.

The male rate, on the other hand, appears to be more completely deter
determined, being affected not only by the typical age at marriage but even more by the selective migration of single males. Transients, migrants who plan to return to their villages, and young, career-oriented males establishing residences apart from their families of origin tend to gravitate to sections of the city which provide housing and services suited to their special requirements. Their concentration in turn gives to certain census tracts high rates of “never-married” men, just as their selective out-migration from rural zones gives these areas typically low rates. There is absolutely no evidence that a similar selective process operates for females in Cairo, since the culture effectively bars single females from migrating singly and from living alone.

In the original study two additional indicators of marital status were computed, although these were later dropped and another measure substituted. These were the percentage of widowed and divorced men and a similar rate computed for women. Neither of these measures proved particularly sensitive. The male rate, for example, was found to be relatively constant throughout the city (in the neighborhood of 5 percent), a fact explainable by the ease with which widowed and divorced men remarry and by the nature of the census data which presented current marital status only. It was later omitted on the grounds of lack of discrimination. The female rate, on the other hand, did vary from one part of the city to another and was usually high enough (in the neighborhood of 20 percent) to discriminate. However, because it combined phenomena of very different meaning, I believed it could not be justified on conceptual grounds. Widowhood and the divorced state are perceived very differently and the attendant social condition of the indi-
APPENDIX

vidual is therefore significantly affected. Young widows tend to remarry more, and their widows are therefore primarily older; on the other hand, young husbands who are generally younger, unlikely to remarry, and poorly sustained by culturally approved support. The social stigma of divorce—and it should be borne in mind here that urban Turkey has a divorce rate that exceeds that of the United States and is one of the highest in the world)—coupled with the financial deprivations that beset a divorced woman in a culture which provides few legal legitimate ways of earning a living for ill-educated women, means that divorced women represent a significant departure from traditional family life. I therefore decided to eliminate the general measure which combined widows and divorces and to substitute, in later analyses, a new measure based on the ratio of currently divorced women per 100 ever-married women.3

Sherry had utilized, in addition to the fertility ratio, two other indicators of "urbanization" or "familism": the percentage of single-family dwellings, and the rate of female participation in the labor force. Neither of these indices was relevant to the Cairo case and no attempt was made to include them. For one thing, data on house types are not available in the Egyptian census. Furthermore, multi-family flats predominate in Cairo. Single-family dwellings remain rare. A few are scattered in upper-income districts where they have been converted to institutional uses. At the periphery, they are found chiefly in Maadi and, most recently, in newer developments at the outskirts of Helopoli and on the Silver Coast. However, no census data can be found in the poorest quarters of the periphery as well, inhabited by farmers in the agricultural fringe and by tomb custodians and squatters in the Cities of the Dead. House type, therefore, and the spiritual life or the values of familism, although recent beginnings in urbanization suggest future differentiation more in line with Western developments.

Female, marriage, the Census’s final indicator of familism, is equally irrelevant thus far in Egypt. Few women work and those who do are drawn from both extremes of the social scale. According to a sample labor force study conducted by the Egyptian government in 1957, only 6 percent of all females over five years of age were employed in urban (nonagricultural) occupations, and except for a small number of professional and sales women, most were engaged in domestic service. This difficulty was compounded by the Census’s use of an anomalous classification system which effectively prevented the computation of any meaningful labor force figures for females.

4 This map was not available officially and I truly shall be forgiven for having hastily transcribed the major outlines of the survey findings from a single copy on file at the planning office of the Cairo Baedeker.

5 In retrospect and after doing some additional research into the Egyptian class structure and the types of occupational changes resulting from the transition from a traditional to a modern economy, I have altered my first position and now firmly believe that the occupational index one should have included in the study, even if the index did not express a direct aspect of social status, was that conducted by the study the agent; I would dichotomize the first seven years of study to include only those engaged in the modern sector of the Egyptian economy, namely, transport, construction, commerce, and professional services; and those chiefly within the traditional sector of the economy, such as agriculture, mining, and personal services. For any index, I would definitely include the male labor force. The base for the rate would then be males classified in the first seven categories. This hindsight, however, comes too late to affect the study being reported here. Again, my main consideration lies in the fact that the Census of 1960, which I sought to compare with (1947, included so basically all but "substantially improved" an occupational classification system that, had an index been derived from the original data, it could not have been replicated in the second census year.

A METHODOLOGICAL NOTE

The use of education as an index to status, however, is not without substantial justification, especially in the case of a newly industrializing country such as Egypt. Earlier research undertaken on the nature of Egyptian urbanization3 in which I had attempted to devise a scale of "urbanity" for Egyptian towns on the basis of demographic and industrial characteristics, led me to the firm conviction that the single best index to way of life, values, and the macroeconomic and social class position of subgroups in Egypt was the female literacy rate. No other variable appeared to occupy so pivotal a position in social differentiation. First, female literacy is associated with higher income, since one’s way of life in comfortable circumstances can afford to spare girls from their farm or domestic duties (often by hiring a substitute, a young servant girl); only they can afford what appears to the outsider to be the "normal" costs of books, clothing, and other materials required for school attendance. However, within the economic groups financially able to send girls to school, the decisive variable is value orientation. Along with a decision to educate females go many related cultural values, each of which implies a partial break with tradition and a preference for modernism. These in turn are significantly related to basic cleavages and distinctions in Egyptian social and political life.

On the basis of this reasoning, then, a literacy index (constructed by computing the percentage of females five years of age or older in a census tract who could read and write) was placed under the rough heading, socio-economic status. A similar index, but one which was also constructed. It seemed highly desirable to separate the two rates, not only because they were significantly different (male rates were generally three times higher than female rates) but it also appeared that even the size of the differential might reveal something about the double standard it implied. Whereas the female literacy rate can be viewed as an indicator of "conspicuous leisure," no such interpretation should be given to the male rate which I believe represents real differential power in the labor market.

My justification for selecting literacy rather than a more complex measure of educational attainment was a rather simple one: the Census of 1947 did not provide the education of the females of five years and older as classified in literacy in Cairo in 1947, even after the exclusion of the "unknowns," most of whom may be presumed to be illiterate. Literacy rates ranged widely in the 1947, varying from a low of about 3 percent for females in certain agricultural fringe areas to a high of almost 90 percent for males in the highest status, most Westernized Gold
APPENDIX

Coast of the central city along the Nile. Had some higher educational level been selected, the result would have been to reduce the rates in a majority of census tracts to near zero, and the total number (particularly for females) would have been so small that meaningful rates could not have been computed, given the large number of unknowns and the relative unreliability of data on educational levels.

Change, particularly in the realm of education, has been taking place very rapidly in Egypt in recent decades, and each successive census has documented an impressive rise in literacy. Because of this, it was felt that the literacy rate based on almost all the coreal population was a better reflection of the operation of past values than it was of contemporary ones. It therefore seemed desirable to include a measure of current educational differentials to supplement the literacy rate. Such a measure, for example, as percent of school-aged children (male and female) actually enrolled in school would have been an ideal one, but since these data were not available, a substitute measure had to be used.

In my search for such a measure I was quite fortunate, for my struggles with the Egyptian census classificatory system for occupations had led me to an early insight. The unusual category of "unemployed"—which accounted for a substantial proportion of Cairo's so-called labor force (real potential labor pool), upon closer examination of summary tables cross-tabulating occupation by age, was found to be entirely of school-aged children. I then decided that some rough approximation of school enrollment rates could be obtained by dividing the number of persons five years and older listed as "unproductively employed" by the number of persons between five and twenty years of age in the census tract (per 100). This rate was computed separately for the sexes (ratio of male children in school and female children in school,) since the difference between the two, while less pronounced than the difference between male and female literacy rates, was still large enough to be affected by abnormal age and sex distributions.

Two additional measures, actually designed to tap the dimension Tryon had called "Economic Independence" Bulletin 3.

1 I do not claim that my measure is numerically equivalent to the actual school enrollment figure; I simply claim that the measure would probably correlate very highly with real school enrollment and that therefore it allows us to locate census tracts with respect to their relative ranks on school enrollment. Obviously, a more direct measurement, were it available, would be superior.

APPENDIX

NOTES TO TABLE A-1

1. This variable was dropped because of a change in census procedure concerning the recording of institutionalized population. In 1947, institutionalized population was reported by present location; in 1960, it was reported at home address. Therefore, computations of persons per family varied widely. Short of recomputing an entirely new rate which would have excluded the "present person families" in both years, it seemed better to drop the index which, in any case, had not proved particularly valuable.

2. The densities for 1960 had to be computed using area measurements that approximately correspond to those. These were adjusted in gross fashion when tracts were combined or grouped. However, those cases where boundary changes were slight or marginals were borders, some of my density figures for 1960 undoubtedly contain errors of small magnitude.

3. Between 1947 and 1960, Egypt experienced a radical drop in the infant mortality rate, the Cairo rate actually being halved. Therefore, there has been a major shift upward in the general fertility ratio which is quite sensitive to changes in the rate of infant survival. Despite this trend, I retained the fertility index in this study, since it was used to determine relative positions of census tracts within the ecological structure rather than as an absolute measure.

4. In the Census of 1947, the base population for which marital status data were presented was the population sixteen years of age and older. Therefore, all the 1947 rates concerning marital status have this as a base. In the Census of 1960, the population covered in the table on marital status included all those fifteen years of age and older. My 1960 rates, therefore, diverge slightly from those computed for 1947, but the difference again appears to be minimal. The net result, however, purus, would be to increase slightly the percentage of never-married.

5. See note 1 concerning treatment of institutionalized persons.

6. In 1947 the base used for presenting occupational data was the total population five years of age and older. In 1960, this base was revised to six years of age and older. Apart from a slight but constant change in the criteria of occupation, this appears to be a serious contraindication to its retention. The change in definition of "unemployed" was due to the unavailability of accurate data, and the results were not as successful as I had hoped.

7. This rate could not be computed in 1947 because of the listing of housewives as "employed in domestic service."

8. As an experiment I computed this rate in 1960. What I found was that it was positively correlated with high socio-economic status. Employed women were either educated themselves or were domestic servants in a receiving room and heard as part of their compensation. When the correlation coefficients between this variable and all other measures were computed, I discovered that they were all negative. The coefficients obtained when the 1947 variable of females in school was correlated with the remaining variables. While the two variables appear superficially different, they evidently reflect a common (but unmeasured) variable. Therefore decided to use females in school in the 1947 analysis and substitute females in paid employment in the 1960 analysis. No measure of school enrollment could be computed for 1960, due to the absence of data.

9. There was a rather drastic change in the age group for which literacy was reported. In 1947, literacy status had been given for all persons and every variable for which each of the two separate census years were computed, the results of which are reported in Matrix R reproduced as Table A-3. The n's were based on the total of 206 cases, except those involving the handicapped rate in 1947, where three extreme cases were omitted to minimize the distortion they otherwise would have introduced. As can be seen, many of the variables demonstrated approximately the same intercorrelations in both years. Others showed variations which appear to be caused more by census redactions than by secular trends among the variables. To the extent that these gross similarities are found, it appears legitimate to use the data for time comparisons. Preliminary inspection of the correlation matrices indicated high intercorrelations within certain groups of variables which appeared somewhat independent of one another. On the strength of this observation, I decided to do a factor analysis for the purpose of extracting the underlying factorial structure that could account for the intercorrelations.

The data contained in Table A-3 were used as input for an IBM 650 Program (No. 10, Computer Aide Factor Analysis Using Hotelling's Iterative Procedure. Seven factors, accounting for more than 90 percent of the total variance in each year, were successively extracted from the original matrix and the correlation residual matrices. Table A-4 presents the sum of the squares and the percentage of variance accounted for in each data year by the four factors retained for later rotation. As can be seen, the solutions are quite comparable for both years and in each case the first four factors accounted for better than three-fourths of the total variance. Since subsequent factors added little marginal explanatory power, the study was confined to the first four. One of the first items of interest in Table A-4 is the degree to which the first factor explains the variance contained in the correlation matrices, amounting to about half in both data years. This dominance of the first factor is not uncommon in principal axis factors solution, but it should be noted that it appears even more dominant in these results than could be accounted for by the inherent bias of the method. A Thurstone centroid extraction, based upon fifteen variables for 1947 alone, had yielded a similarly dominant centroid factor, suggesting that, at least for the limited number of variables included in this study and for a city like Cairo, marked as it is by gross socio-cultural variations, the major social differentiations reflected in ecological organization are almost unidimensional. This will be seen more clearly in Table A-5 which presents the factor loadings (before rotation) of each variable on the four basic factors.

As can be seen from Table A-5, the variables with the highest loadings on Factor I included the persons per room ratio (negatively related), the male and female literacy rates (positively associated), the female school enrollment and employment rates (again, positively related), and the handicapped and male unemployment rates (negatively associated with the factor). It had been hypothesized initially that all of these variables would indicate the relative socioeconomic status of census tract populations, and in each case the direction of the association was in the hypothesized direction. This led me to identify Factor I tentatively as an underlying vector in
## APPENDIX

### Table A.5. Unobtained Factor Loadings of the Thirty Variables. Cairo, 1947 and 1960

<table>
<thead>
<tr>
<th>Variables</th>
<th>Factor I</th>
<th>Factor II</th>
<th>Factor III</th>
<th>Factor IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persons/room</td>
<td>-0.0344</td>
<td>0.0687</td>
<td>0.0214</td>
<td>0.0325</td>
</tr>
<tr>
<td>Density</td>
<td>-0.0344</td>
<td>0.0687</td>
<td>0.0214</td>
<td>0.0325</td>
</tr>
<tr>
<td>Sex ratio</td>
<td>0.0687</td>
<td>-0.0344</td>
<td>0.0214</td>
<td>0.0325</td>
</tr>
<tr>
<td>Fertility ratio</td>
<td>0.0214</td>
<td>0.0325</td>
<td>-0.0344</td>
<td>0.0687</td>
</tr>
<tr>
<td>Females married</td>
<td>0.0325</td>
<td>0.0325</td>
<td>0.0325</td>
<td>-0.0344</td>
</tr>
<tr>
<td>Handicapped</td>
<td>0.0325</td>
<td>0.0325</td>
<td>0.0325</td>
<td>-0.0344</td>
</tr>
<tr>
<td>Males married</td>
<td>0.0325</td>
<td>0.0325</td>
<td>0.0325</td>
<td>-0.0344</td>
</tr>
<tr>
<td>F/Sch./Emp.</td>
<td>0.0325</td>
<td>0.0325</td>
<td>0.0325</td>
<td>-0.0344</td>
</tr>
<tr>
<td>Males unemployed</td>
<td>-0.0344</td>
<td>0.0687</td>
<td>0.0214</td>
<td>0.0325</td>
</tr>
</tbody>
</table>

### Table A.6. Factor Loadings after Varimax Orthogonal Rotation, First Four Factors Only. Cairo, 1947 and 1960

<table>
<thead>
<tr>
<th>Variables</th>
<th>Factor I</th>
<th>Factor II</th>
<th>Factor III</th>
<th>Factor IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persons/room</td>
<td>-0.9729</td>
<td>-0.5413</td>
<td>0.0476</td>
<td>0.0578</td>
</tr>
<tr>
<td>Density</td>
<td>-0.9729</td>
<td>-0.5413</td>
<td>0.0476</td>
<td>0.0578</td>
</tr>
<tr>
<td>Sex ratio</td>
<td>0.0476</td>
<td>0.0578</td>
<td>-0.9729</td>
<td>-0.5413</td>
</tr>
<tr>
<td>Fertility ratio</td>
<td>0.0578</td>
<td>-0.9729</td>
<td>-0.5413</td>
<td>0.0476</td>
</tr>
<tr>
<td>Males married</td>
<td>0.0476</td>
<td>0.0578</td>
<td>-0.9729</td>
<td>-0.5413</td>
</tr>
<tr>
<td>Handicapped</td>
<td>0.0578</td>
<td>-0.9729</td>
<td>-0.5413</td>
<td>0.0476</td>
</tr>
<tr>
<td>Males married</td>
<td>0.0476</td>
<td>0.0578</td>
<td>-0.9729</td>
<td>-0.5413</td>
</tr>
<tr>
<td>F/Sch./Emp.</td>
<td>0.0578</td>
<td>-0.9729</td>
<td>-0.5413</td>
<td>0.0476</td>
</tr>
<tr>
<td>Males unemployed</td>
<td>-0.9729</td>
<td>-0.5413</td>
<td>0.0476</td>
<td>0.0578</td>
</tr>
</tbody>
</table>

### Table A.7. Factor Patterns for Factors I and II. Cairo, 1947 and 1960

<table>
<thead>
<tr>
<th>Variables</th>
<th>Factor I</th>
<th>Factor II</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persons/room</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>Sex ratio</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Males married</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>F/Sch./Emp.</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Males unemployed</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>

### Table A.8. Factor Patterns for Orthogonal Factors I, II, and III (revised). Cairo, 1947 and 1960

<table>
<thead>
<tr>
<th>Variables</th>
<th>Factor I</th>
<th>Factor II</th>
<th>Factor III</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persons/room</td>
<td>-</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Density</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Sex ratio</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Males married</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Males married</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>F/Sch./Emp.</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Males unemployed</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>

### Table A.9. Correlation Matrix (revised) Cairo, 1947 and 1960

<table>
<thead>
<tr>
<th>Variables</th>
<th>Factor I</th>
<th>Factor II</th>
<th>Factor III</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persons/room</td>
<td>-</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Density</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Sex ratio</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Males married</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Males married</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>F/Sch./Emp.</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Males unemployed</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>

### Table A.10. Tabulation of Factor Loadings and Factor Scores

<table>
<thead>
<tr>
<th>Factors</th>
<th>Loadings</th>
<th>Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor I</td>
<td>-0.9729</td>
<td>-0.5413</td>
</tr>
</tbody>
</table>

### Table A.11. Transformation Matrix from Canonical Rotation (k2)

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

### Table A.12. Tabulation of Factor Scores

<table>
<thead>
<tr>
<th>Variables</th>
<th>Factor I</th>
<th>Factor II</th>
<th>Factor III</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persons/room</td>
<td>-</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Density</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Sex ratio</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Males married</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Males married</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>F/Sch./Emp.</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Males unemployed</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>

---

As can be seen from Table A-9, the three variables with consistently high loadings on Factor 1 in both census years were density (positive), the percentage of unmarried women (positive), and the handicapped rate (also positive). The several other variables with significant loadings in single year mode reflect the logical pattern. In the light ratio of this it appeared reasonable to interpret the third factor as indicating the presence of socio-psychological conditions associated with the high density of urban residence. I believed that this factor would help locate high density zones in the city whose populations suffered more from than their share of the disorganization and dependency that often attends urban living for those at the economic margin. Density could be viewed not as a casual element in that disorganization but as a variable associated with the selective concentration of "problem persons" in orlying zones of the city. However, without further tests of validity, my identification of Factor III must remain tentative.

Now that I have presented the findings obtained through factor analyzing the variables included in the study, I must explain how these results were used to score census tracts by weighting the values on each variable for each tract and then combining them into a composite score or "index" to the factor. This step will require a fairly detailed description since few preconcepts existed at the time it was performed. For this reason the standard deviations for each of the thirteen variables were computed for 1947 and 1960, based on the distribution of values for each census tract. The results are presented in Table A-10.

The two years were standardized separately because of the significant changes in value and distribution that occurred in the interim.

Z matrices of standardized scores were constructed on the basis of the standard deviations for each separate census year the standardized scores for each census tract on each of the thirteen variables. The standardized score is a measure of the deviation of one value from the mean of all values expressed in terms of the standard deviation. Thus, for example, a census tract whose female literacy rate was exactly equal to the mean of all tract literacy rates would have a standardized or Z score of 0. The standard error rate exceeded the mean by a value exactly equal to the interval equivalent to one standard deviation would be scored +10; negative signs indicate deviations below mean value.

The standardized scores of each census tract were then weighted by means of a β matrix to obtain composite factor scores for each of the census tracts in each of the

<table>
<thead>
<tr>
<th>Variable</th>
<th>1947 Mean</th>
<th>Standard Deviation</th>
<th>1960 Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Persons/room (ratio)</td>
<td>2.17</td>
<td>0.63</td>
<td>2.43</td>
<td>0.62</td>
</tr>
<tr>
<td>2. Density (1000 persons/ sq. km)</td>
<td>58</td>
<td>56</td>
<td>74</td>
<td>64</td>
</tr>
<tr>
<td>3. Sex ratio (males/ 100 females)</td>
<td>109</td>
<td>173</td>
<td>105</td>
<td>180</td>
</tr>
<tr>
<td>4. Perim rate (children under 5/1000 females, 15-49 years of age)</td>
<td>545</td>
<td>117</td>
<td>669</td>
<td>144</td>
</tr>
<tr>
<td>5. Females never married (%)</td>
<td>13.5</td>
<td>7.1</td>
<td>16.2</td>
<td>5.8</td>
</tr>
<tr>
<td>6. Males never married (%)</td>
<td>3.8</td>
<td>1.6</td>
<td>3.7</td>
<td>1.8</td>
</tr>
<tr>
<td>7. Males never, housed (%)</td>
<td>29.9</td>
<td>8.6</td>
<td>28.6</td>
<td>6.3</td>
</tr>
<tr>
<td>8. Handicapped/ 1000 population</td>
<td>8.7</td>
<td>5.9</td>
<td>5.9</td>
<td>3.0</td>
</tr>
<tr>
<td>9. Males literate</td>
<td>55.3</td>
<td>13.8</td>
<td>65.3</td>
<td>13.7</td>
</tr>
<tr>
<td>10. Females literate</td>
<td>29.7</td>
<td>17.2</td>
<td>36.3</td>
<td>16.5</td>
</tr>
<tr>
<td>11. Females in Sch/ employed (%)</td>
<td>24.9</td>
<td>11.8</td>
<td>7.7</td>
<td>6.5</td>
</tr>
<tr>
<td>12. Those unemployed</td>
<td>9.4</td>
<td>11.0</td>
<td>1.0</td>
<td>1.5</td>
</tr>
<tr>
<td>13. Muslims</td>
<td>85.1</td>
<td>19.9</td>
<td>89.0</td>
<td>13.4</td>
</tr>
</tbody>
</table>

This mean (computed by averaging the census tract rates) is not to be confused with the rates for the total city population, since tracts vary in size. No weighting was attempted.

NOTES TO TABLE A-10

Variable 1. The persons/room ratio measured almost the same phenomenon in both years, and the change in means reflects the real fact that between census dates the population of Cairo grew much faster than the housing stock. For the city as a whole, housing density of occupancy has definitely increased.

Variable 2. The increase in average density reflects in part the heightened intensity of occupancy but is also the result of an expansion of the urbanized, built-up portion of the city into the rural fringe. The total density of the city in both years is substantially lower than this figure which averages the densities of census tracts, for the simple reason that the least densely settled tracts on the periphery of the city contain very small populations and very large areas, whereas the reverse is true for census tracts in the central core.

Variable 3. The change in sex ratio reflects a real change in the age-sex distribution of the population of Cairo. Between 1947 and 1960, there has been an in-migration of the females of the families who migrated singly in the war years prior to 1947, which has tended to equalize the overall sex ratio in the city for the first time since data became available (earliest nineteenth century). The sex ratio still remains slightly unbalanced in the migration-peak census year.

Variable 4. This variable changed most between census dates, reflecting a real change in the fertility situation in the city. The increase is the largest of all the increases for such variables that occurred in the interim. However, other evidence indicates that the birth rate increase is fertility as well, as is in part parceled to an increase in the migration rate, in part to the rural-to-urban migration of families of earlier

...
APPENDIX

In addition to Factor I, however, I prepared similar maps for the distribution of Factor II and III (revised) scores, although these maps do not appear in this book. They were more simply constructed and of a more tentative nature, since I felt that their validity had been less well established and that it would be going beyond their limitations to use them in more than very rough fashion. Primitive "social areas" were delineated by overlaying the few rough subcities derived from Factors II and III (revised) upon those established from the Factor I scores, but it was decided that, for purposes of the present book, they offered little additional value.
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