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A Geographical Study of the Evolution
of the Cities of Tehran and Isfahan

The introduction to this thesis sets forward its aims which are to account for the present morphological features of Tehran and Isfahan and to examine in detail the characteristic features of Persian towns. It goes on to examine the sources for such a study and to describe some of the methods which have been employed.

The thesis itself is divided into three sections. The first traces the historical development of Tehran and Isfahan from the earliest times. The periods during which the cities have been capitals of Persia, the Safavid period in the case of Isfahan and the Qajar and present Pahlevi periods for Tehran are considered in detail and the morphological effects of growth or decay are emphasised.

The second part is a detailed examination of certain morphological features which have played significant roles in forming the townscape of Tehran and Isfahan and which are valuable as distinguishing features of the Persian town in general. Those studied are defences and palace quarters, bazaars, gardens and palaces, Islamic religious buildings, squares, baths and foreign establishments. A further chapter considers changes of population up to the present and the part played by minority groups.

The third section uses the material thus presented in an analysis of urban characteristics in Persia. Finally an attempt has been made to apply modern theories of urban geography to Tehran and Isfahan especially those concerning the classifications of towns by typology and an urban hierarchy, and the trait complex.

A GEOGRAPHICAL STUDY
of the
EVOLUTION OF THE CITIES OF TEHRAN AND ISFAHAN

by

JUDITH A. BROWN

Ph.D. Thesis

1965

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from it should be acknowledged.

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CONTENTS

	<u>Page</u>
Acknowledgements	i
Contents	iii
Maps and Diagrams	v
Note on transliteration	vii
Introduction - Aims, sources and methods.	1
<u>Part I</u> The Historical development of Tehran and Isfahan.	
Chapter 1 - Tehran and Isfahan, pre-1790.	10
Chapter 2 - The Qajar Dynasty, 1790-1926.	37
Chapter 3 - Tehran and Isfahan in the Modern Period	80
Part 1 - 1926-41, the reign of Reza Shah	80
Part 2 - 1941-64, the Reign of Muhammad Reza Shah Pahlevi	92
<u>Part II</u> The Evolution of characteristic morphological features of Tehran and Isfahan.	
Chapter 4:	
Part 1 - Defences	109
Part 2 - Palace Quarters	129
Chapter 5 - The Bazaar	160
Chapter 6 - Gardens and Palaces.	188
Chapter 7 -	
Part 1 - Islamic religious buildings	233
Part 2 - Squares	251
Part 3 - Public Baths.	265
Part 4 - Foreign Establishments.	269
Chapter 8 - Population	296

PagePart III The Analysis of urban characteristics and the application of theories of urban geography.

Chapter 9 -

Part 1 - Origins and growth	= 340
Part 2 - Classification	354
Part 3 - The Trait Complex.	364

Appendices

1 - Gates of Tehran and Isfahan	370/1
2 - Caravanserais of Tehran and Isfahan.	372/3
3 - Yakhchals and Brickworks	374
4 - Religious buildings of Isfahan and Tehran.	379
5 - Public Baths in Tehran and Isfahan	386
6 - Estimates of Population for Tehran and Isfahan	388
7 - Classification of Tehran and Isfahan by employment structure - Tables	393
8 - Urban Hierarchy of Iran - Tables	395/7
9 - Quarter names in Tehran and Isfahan.	399

<u>Maps and Diagrams</u>	<u>After Page</u>
Fig. 1 - European travellers in Persia with accounts of Tehran and Isfahan, up to 1925	4
2 - Location maps; A - Tehran B - Isfahan. . . .	9
3 - Isfahan in the 17th century. Reconstruction .	26
4 - Tehran 1858. Reference map	46
5 - Tehran 1892 " "	60
6 - Non-residential land-use, Tehran 1892	62
7 - Tehran - Built-up area 1892	64
8 - Tehran - Plan for new avenues and regularisa- tion, 1937	84
9 - Tehran - Walls and gates	113
10 - Isfahan - Walls and gates	121
11 - Site of Tabarak citadel	128
12 - Isfahan Palace Quarter, Safavid Period	131
13 - Site of Isfahan Palace Quarter	138
14 - Tehran Ark, after map of 1858	140
15 - Tehran Ark, after map of 1892	144
16 - Site of Tehran Ark	150
17 - Isfahan - Bazaars and caravanserais.	161
18 - Isfahan - Qaysariyeh and associated bazaars. .	168
19 - Tehran Bazaar, 1858	171
20 - Tehran Bazaar, 1892	173
21 - Tehran - Caravanserais and industrial premises	175

	<u>After Page</u>
Fig. 22 - Tehran Bazaar. Present.	178
23 - Chahar Bagh Avenue, Safavid Period.	201
24 - " " " Present	204
25 - Tehran and district, c.1900. Royal Palaces $\frac{1}{2}$	206
26 - Tehran - Religious buildings	235
27 - Isfahan " "	237
28 - Site of Maydan-i-Kohneh	252
29 - Maydan-i-Shah, after Chardin et. al.	255
30 - Maydan-i-Shah. Present	258
31 - Site of Maydan-i-Mashkh	262
32- British Embassy Summer Quarters	279
33 - Isfahan - Population c.1840	301
34 - Tehran and Isfahan - Population trends.	303
35 - Tehran - 1892. References to Population Groups . .	310
36 - Julfa - Population trends	319
37 - Tehran and Isfahan - Employment structure	355
38 - Iran - Urban Hierarchy based on population.	359
39 - Iran - " " " " status	361
Map A (in pocket) Tehran, Reference map, Present.	
Map B " " Isfahan " " "	

Note on Transliteration

In transliterating Persian names it has been the policy in this thesis to keep as far as possible to the system adopted by the Royal Asiatic Society, as modified by A.K.S. Lambton in "Landlord and Peasant in Persia." However, where anglicised forms exist, these have been used. Similarly anglicised plurals have been adopted, such as madrasehs, bazaars. Sometimes names are included as transcribed by the travellers, as in the case of quotations, but where this has been done the source is stated.

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

AIMS, SOURCES AND METHODS

The aim of urban geography is to describe and explain the variation from place to place of urban settlement, to describe its present features, account for them, and, if possible, predict future trends. This study is two-fold in aim. It attempts to account for the present morphological features of Tehran and Isfahan with special reference to the influence of their being capitals and seats of oriental courts, on their growth and development. Secondly, it examines in detail those features of towns in Persia which make them distinctive, the "spatially variable phenomena" of Hartshorne which contribute to regional distinctiveness.

The thesis is divided into three sections. The first traces the historical development of Tehran and Isfahan from the earliest times, concentrating on the periods when they were capitals of Persia, and emphasising the morphological effects of growth or decay. The second part is a detailed examination of certain morphological features which have played significant roles in the evolution of townscape in Tehran and Isfahan in particular, and which are valuable as distinguishing features of the Persian town in general. The third section uses the material thus presented for an analysis of

urban characteristics in Persia, and some attempt is made to apply modern theories of urban geography to Tehran and Isfahan.

The sources for studies such as this are similar throughout the world although their relative value and reliability vary enormously; briefly they consist of:

- (i) Visitors' and residents' descriptions of towns.
- (ii) Reports and official documents concerning the towns, compiled either by municipal or national authorities.
- (iii) Maps, plans, engravings or photographs from the above.
- (iv) Evidence in the present townscape.

The fallibility of the sources and the special considerations which had to be made in a Persian setting became apparent as the material was explored and examined.

The greatest volume of source-material is found in the accounts of travellers who visited Tehran and Isfahan and recorded their impressions. These include European and Middle Eastern authors. Before the 14th century, Arab and Persian historians and travellers are the main source, as European accounts do not exist. Like European medieval writings, however, these tend to be mixed with legends and popular beliefs, inexact and unreliable. Many writers were concerned primarily with history, the acts of kings and princes, and so any information on towns is incidental, although royal activities included building works, defence and fortification, and

there are accounts of the grandeur of court life. Facts which can be derived from such sources are often no more than the mere mention of a town or village - proof that it existed then, at least, and some indication of size. Exaggeration is rife and many accounts fanciful, leaving a multitude of unanswered questions. Insofar as these early Arab and Persian accounts are the only sources for the study of medieval Persian cities, they are invaluable, but they must be handled with care both in translation and interpretation.

Once European writers appear on the scene the Middle Eastern authors fade in importance, not because they ceased writing, but because Europeans, with their eye for detail and insatiable quest for rarities and wonders, and because they wrote for Europeans who knew little of the east, produced material of much greater value to the geographer. European visitors' purposes were usually diplomatic or commercial or both, although from the early 17th century European religious houses were established in Isfahan from which the representatives sent regular reports.

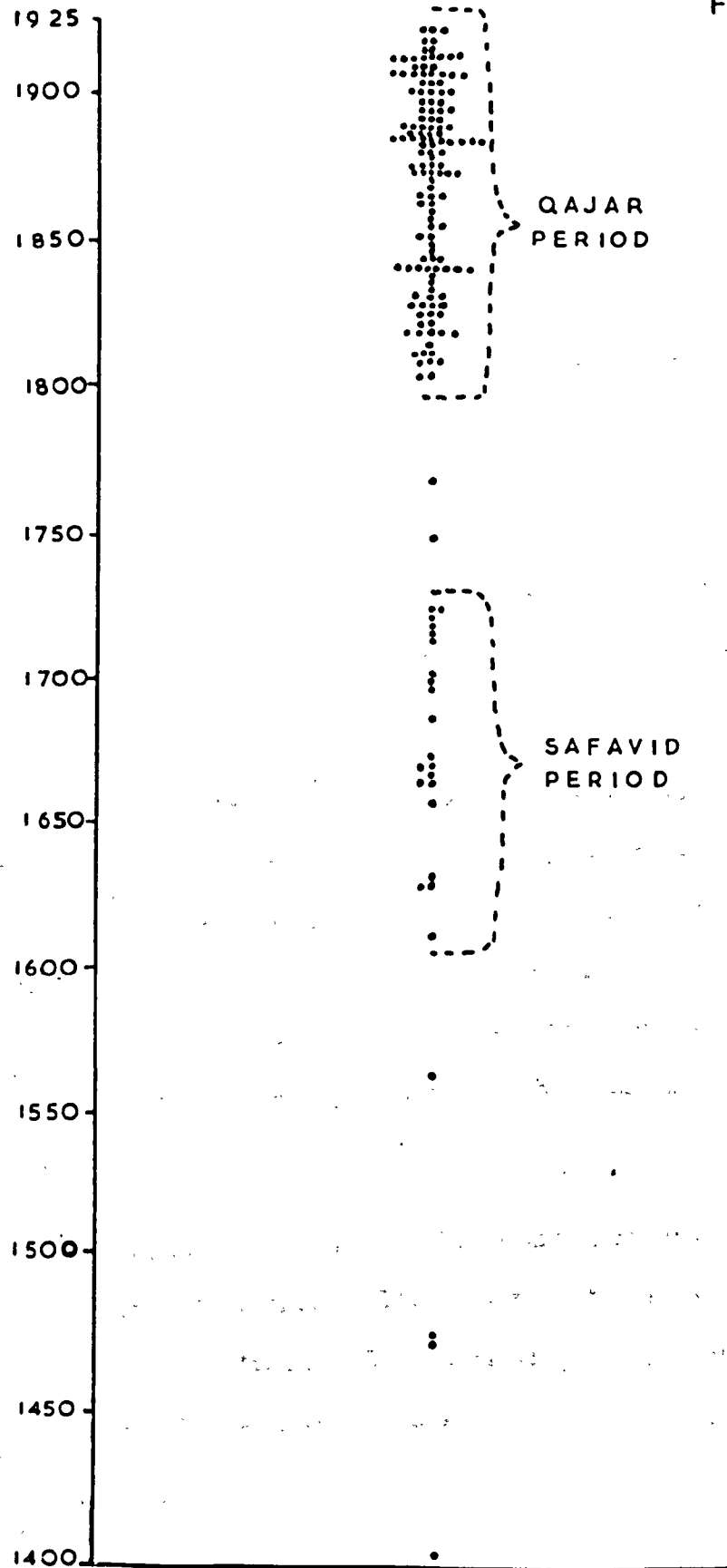
Although these accounts vary very much where actual figures, the length of walls, number of houses etc., are concerned, where a major urban feature is described they are usually similar enough to allow reconstruction, especially if the feature has left some surface expression in the present townscape, such as the Chahar Bagh Avenue at Isfahan.

The 17th century was Isfahan's hey-day. Accounts in French, German, English and Latin are long and voluble over the glories of the Safavid capital. The very slight consideration of Tehran at the period betokens its position as a small walled trading centre, well down in the urban hierarchy. After the flood of European visitors to the Safavid court, comparatively little is known of the period after the fall of Isfahan to the Afghan invaders in 1722. This is another disadvantage of using travellers' accounts. During a period of anarchy such as the Nadir Shah and Zand periods, trade is disrupted, diplomatic missions pointless and conditions hazardous even for the most intrepid traveller. As a result there are gaps in our knowledge for periods when much was happening to the towns, albeit with largely negative effects. (Fig. I)

The re-establishment of law and order under the Qajars again encouraged foreign visitors, this time with Tehran as their destination. Diplomats and military advisors head the list as Tehran had little tradition of commerce or industry. Later, British civil servants, passing to and from India, left valuable accounts. Both Tehran and Isfahan were considered in detail. However, subjectivity is augmented with a certain amount of sentiment as travellers bewail Isfahan's fall from glory and its ruin as compared with past splendours. Accounts of Tehran are also coloured with personal opinions, usually of a derogatory nature. Whereas Isfahan

EUROPEAN TRAVELLERS IN PERSIA
WITH ACCOUNTS OF TEHRAN AND ISFAHAN
TO 1925

FIG.1.



had compared favourably with the capitals of 17th century Europe, Tehran was now a "filthy village" compared with London or Paris. Attempts at westernisation were usually decried as incongruous and inefficient mixtures of the East and the West.

The 20th century brought a succession of books concerned with the political life of Persia following the constitutional crisis and the First World War, when Persia became a pawn in the struggle for power between Russia, Germany and Britain. Far more Europeans have visited Persia in the 20th century than ever before, but their contribution to the travel literature of the area is, with a few exceptions, of low quality.

The works of travellers are therefore of great value provided reservations are borne in mind as to the purpose of each particular book, whether intended to impress the general reader or set forth a serious view of the country, the author's length of stay and opportunities for study in Persia, including his knowledge of Persian, and the attitudes towards Persia prevailing in his country at the time of his visit.

Official documentation on aspects of urban growth and development are sadly lacking in Persia. Town government before the 1920s was vested in governors, often royal princes with little interest in the town except the collection of revenue. Royal decrees or 'firmans'

are useful in dating certain acts affecting the development of the cities, such as that granting the British representative in Tehran jurisdiction over the village of Qulhak, and those concerning the establishment and privileges of the Armenian community of Julfa. Rarely, if ever, can statistics be obtained from official documents before the 20th century. The first national census was not held until 1956. Before this counts had been made only in certain cities in the 1930s. The Department of National Statistics have recently produced social and economic data on Persian towns on a modern basis but this is still imperfect owing to special local difficulties and lack of experience. In any case this has little relevance to a historical study. Compare the wealth of statistics and reports on all aspects of development available for British towns, going back to medieval charters and the first censuses, and the problems of studying Persian towns are clearly evident.

Maps of individual towns in Persia are unknown before the mid-19th century. The first and only map of Isfahan before modern surveys is included in a folio of architectural drawings 'Monuments modernes de la Perse' by Coste, compiled about 1840. This is little more than a reference map locating the main monuments, but does outline the city wall and names the various quarters, giving some indication of the number of inhabited houses in each.

In Tehran Nasir-ud-Din Shah ordered the compilation of a map

produced in 1858. Its outline is the walls of Agha Muhammad Khan dating from the 1790s, but inside the street pattern, bazaars, quarter names and principal religious buildings are marked, giving a valuable insight into mid-19th century Tehran. However, the reading, transliteration and translation of names on this map present considerable difficulties as decoration was as much a consideration as legibility, and the two are not always compatible. A map of the same date, of Tehran and district, by Major Krziz, indicates the extent of development outside the walls. The same problems are encountered when studying the 1892 map of Tehran. This shows the new walls of the 1860s, but otherwise contains similar information. Tehran and its surroundings are again illustrated by Stahl's map of 1900. The 1858 and 1892 maps are excellent as background for 19th century accounts of Tehran. For the modern period, post-1926 maps are readily available of both towns, produced by military and municipal authorities, the census department, and more recently the National Cartographic Institute which also has valuable air-photograph coverage of major Persian towns.

Early writers often illustrated their works with engravings. These illustrate individual buildings of note, street scenes and important personages, but also include panoramas of cities, which are more useful. Often these are stylised, depicting the city with pitched roofs and battlemented walls like a European town, but from

others reconstructions of the interior lay-out can be made. Again, careful analysis is needed to sift truth from romantic fancy, before the general use of photographs.

Finally, this study has its own approach to field-work. Like all cities, Tehran and Isfahan are conglomerations of buildings, streets, and open spaces including elements from the past, which, if searched out and mapped, aid in tracing the town's development. Examples in Isfahan include the mapping of Seljuq remains and the reconstruction of the palace quarter and the Tabarak citadel. In Tehran there is less scope for such field-work and the city contains few buildings of antiquity. This is not perhaps the detailed mapping or statistical surveying usually associated with research work in urban geography, but it is just as essential to the study.

These then are the sources available for the study of the evolution of Tehran and Isfahan, with some indication of the methods found useful in their analysis and interpretation. In approaching the study of Middle Eastern towns as opposed to European or American examples special problems are encountered, which can only be tackled with reference to their local context, and new research methods must be adopted.

As the aims and scope of this thesis, as outlined above, are in the field of Historical Geography, an introduction to Tehran and Isfahan

and their hinterlands, in terms of physical environment, is provided only by the location maps, Fig. 2, A and B, which illustrate the sites and situation of the two towns.

LOCATION MAPS A. TEHRAN

IRAN

IRAK

TURKEY

U.S.S.R.

CASPIAN SEA

SEFIDROUD

RASHT

QAZVIN

CHALUS

AMOL

HARASRUDEH

BABOL

SARI

BANDAR SHAH

GORGAN (ASTARABAD)

TEHRAN

KARAJ

REY

VAJIR

VARAMIN

FIRUZ KUH

DASHT-I-LUT

SEA OF SALT

QOM

Legend: Shaded areas represent the study area. Dashed lines represent international borders.

A	B
---	---

A map of the Gorgan (Astarabad) region. It shows a coastline with three points marked: Bandar Shah, Sari, and Babol. A line runs along the coast, and a road or railway line is shown connecting these points. The text 'GORGAN (ASTARABAD)' is written vertically along the right side of the map.

CHALUS

QAZVIN


KARAJ

TEHRAN

1

FIRUZKUH

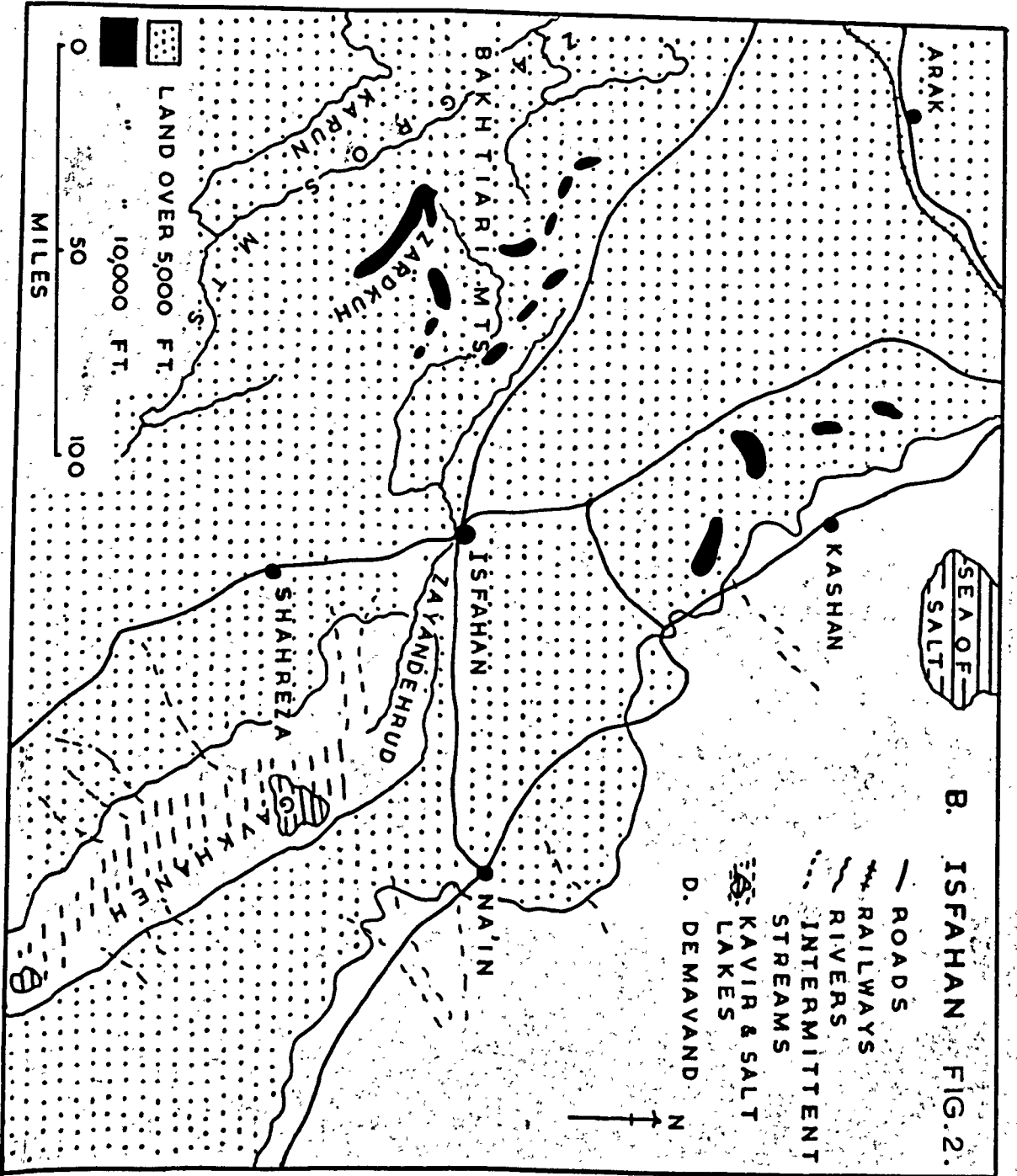
MOQ



SEA OF SALT

DASH T-1-LUT





PART I

THE HISTORICAL DEVELOPMENT OF

TEHRAN AND ISFAHAN.

CHAPTER I

TEHRAN AND ISFAHAN PRE-1790

The primary contrast between Tehran and Isfahan is that by 1790 Isfahan's period of greatness was over whereas Tehran's had not begun. Nevertheless the origins of both towns lie centuries before this date. They are difficult to trace because of the scarcity of written records, their unreliability (they are well-mixed with legends), and the incompleteness of an archeological study.

Little remains from Pre-Islamic times in Isfahan. The Masjid-i-Jami' contains some very old brickwork, which, it is suggested, may be from a Sasanian fire-temple on the same site. The bases of the bridges, especially the Shahrestan bridge may date from this period, but no inscriptions have been found which would help in dating. Two white marble capitals decorated with carved heads were found in excavations in the Maydan-i-Shah, described by Flandin and Coste,¹ who suggested they were from a Sasanian palace. However, Chardin² described two bases of marble columns brought from Persepolis which were adorning the Harem gate of the palace during his visit. These relics may then have been deliberately brought here from an older site. A small hill about four miles west of Isfahan, still called the Atishgah, or Place of Fire, is crowned with

some brickwork said to be derived from a fire-temple. Its site is certainly impressive but the whole is much eroded and mixed with later additions, and recently the building of a water-tank here has made it almost impossible to trace the outline and form of the buildings.

Despite the paucity of remains Isfahan was certainly a centre of some importance in Achaemenid and Sasanian times. Strabo,³ after describing Persepolis, said that the Achaemenids had other palaces including Gabae or Jay, as Isfahan was then known. In the Parthian and Sasanian eras Isfahan was the capital of a large province under the name Aspahan or Sepahan.** Sepahan, in Pahlevi, means "armies", thus Isfahan was probably a gathering-ground for troops. At the time of the Arab invasion Isfahan was governed by one of the four Padhospan of the Persian empire.

The original Gabae/Jay was to the west of the present city, a district still known as Jay. Before the Arab conquest a twin-town

* Archeological reconnaissance work has been done in the Isfahan area by university authorities with a view to opening an archeological department at Isfahan university, but there is a surprising lack of excavatable sites, probably due to centuries of ploughing and cultivation on the oasis lands.

** Isfahan may thus be the Aspadana of Ptolemy. One suggestion on the derivation of this name is found in Curzon, Persia, Vol.2 P.20. Coins of the later Sasanids bear the initials A.S.P. and may have been minted in Aspahan-Isfahan, thus suggesting it was a centre of some importance. However at best these are only possibilities.

was founded to the west named Yahudiyeh or Jewish town. Some authorities claim that Nebuchadnezzar settled Jews here in the 6th century B.C. Another tradition declares that it was the Sasanian Yazdigird I who was responsible, in the 4th century A.D., but no date can safely be given for this settlement.*

There is doubt over the exact date of the Arab Conquest of Isfahan, but it was around 640 A.D.³ Arab and Persian geographers give accounts of the twin-towns soon after this. Jay became known as Shahrستان or Medinah, both meaning simply 'city', probably 'city proper' as opposed to Yahudiyeh, which however is said to have been twice as large.⁴ Ibn Rustah, late 9th century, describes Jay as half a league across and covering 600 acres. There were four gates and a wall with a hundred towers. Yahudiyeh equalled Hamadan in size and was thus the largest city in Jibal province with the possible exception of Rey. Both towns had a Masjid-i-Jaml' so Yahudiyeh cannot have been completely Jewish. Its mosque was probably on the side of the present Masjid-i-Jaml'. Isfahan was already a great commercial centre exporting silks and cottons.

Having remained under the caliphate until 931 A.D., Isfahan was taken by the Daylamites, or Buyids. Under Rukn-ud-Douleh, Isfahan

* The former theory is doubted on the grounds that Nebuchadnezzar never held sufficient political sway in this area. The latter, based on the fact that Yazdigird I had a Jewish wife, is also perhaps seeking justification rather than a fact.

was first walled as a single town; the fortifications were said to have been 21,000 feet long. At the same time, although there is some doubt under which ruler, the citadel of Qal'eh Tabarak was built, traces of which remain in the south-east of the city.⁵ One of the earliest Islamic monuments in Isfahan is the Daylamite portal of the Jorjir Mosque which was only uncovered in 1956 and which can be seen near the Masjid-i-Hakim.

In 1051 Isfahan fell to the Seljuqs and the year after was visited by Nasir-i-Khusrov.⁴ The city had obviously entirely recovered from the siege. It was surrounded by a strong high wall $3\frac{1}{2}$ farsakhs long (about 12 miles) with forts, turrets, loopholes and well-built gates. Inside were running streams and fine, lofty buildings. He especially praised the magnificent Masjid-i-Jami' and declared that he did not see one single building in ruins. Commerce had recovered and was flourishing, as he describes many bazaars and clean and well-kept caravanserais. Each bazaar had its walls and gate as did every quarter, and in the money-changers' bazaar there were 200 of this profession. He concludes that Isfahan was the finest, largest, and most prosperous city he had seen in all Persian-speaking lands.*

* Benjamin of Tuleda, a few years later, corroborates the size of Isfahan, and adds that there were 15,000 Jews living there. Arnold T. Wilson in 'Early Spanish and Portuguese Travellers in Persia', however, doubts that he ever personally visited the country at all.

Many impressive religious monuments still existing in Isfahan date from the Seljuq period. Although the Safavid buildings are more spectacular and decorative, those of 500 years before have proved more solid and enduring. The two dome-chambers of the Masjid-i-Jami' were built between 1072 and 1092.⁶ In the next century the minarets of Chihil Dokhtaran, Sareban and Masjid-i-Ali were built, which, although their mosques have disappeared, preserve the distinctive Seljuq architecture well illustrated in the much-praised squinches of the dome-chambers. Decoration was largely in the form of patterns in brick and inscriptions in Kufic script.

However, when Yakut wrote early in the 13th century⁴ both Yahudiyeh and Jay were falling in ruins, perhaps through religious rioting between rival sects, and the latter was now the most populous. Later came the first Mongol invasion from which Isfahan emerged comparatively unscathed. Nevertheless Yahudiyeh recovered more quickly and by 1321 when Abu'l-Fida wrote, it was again rich and populous, whereas Jay had never risen from its ruins and remained little more than a suburb.*

* The site is now marked by the village of Shahrستان, some two miles downstream of Isfahan, poor and undistinguished except for some solid mud walls dating perhaps from early Islamic times, and an 'imamzadeh' which is claimed by scholars to be the mausoleum of Al Rashid Bella, a Caliph from Baghdad, who was killed by the Assassins during a visit to Jey in 1025 A.D. Although the village appears to be on a mound this is largely natural and there is little cover which could be excavated, and that very confused.

The poverty of the province between the Mongol invasions is illustrated by the lack of buildings from this period except small shrines like Imamzadeh Ja'far and Baba Qasim, and small additions and embellishments to the Masjid-i-Jami'.

When Timur first conquered Isfahan, late 14th century, he did not pillage the town, but after a revolt in 1388 he returned to massacre the inhabitants. According to differing reports 70,000 or 200,000 thus died. These figures, however exaggerated, indicate that the town was very large even then. Timur occupied the Tabarak citadel and strengthened its fortifications. Like the descendants of Jenghiz, however, the Timurids became peaceful rulers and patrons of the arts, contributing further to the architectural wealth of Isfahan.

After the Timurid period Isfahan was ruled successively by the Kara-qoyonlu and Ak-qoyonlu Turkomans, the Black and White Sheep. Uzun Hasan of the latter tribe, was ruling from Tabriz when the first Europeans, the Venetians Barbaro and Contarini⁷ visited 'Spahan' in 1474. They found it a considerable town, ditched and walled with mud, with many fine houses both within the walls and in the suburbs. They praised the caravanserais, the noble antiquities and monuments, and the abundance of corn and fruits there. This prince built the palace of Hasanabad, the ruins of which were seen by Chardin in the Khaju quarter 200 years later,⁸ and the predecessor of the Khaju bridge.

The 16th century saw the rise of the Safavid dynasty based in Ardabil, then Tabriz. Early Safavid monuments in Isfahan such as the Haroun Vilayat shrine and the Masjid-i-Ali held future promise. Shah Tahmasp moved his capital to Qazvin, but in the 1590s Shah Abbas I, the fifth and greatest king of the line, decided on Isfahan and thus opened up its period of supremacy as the capital of the strong and stable Persian Empire.

The origins of Tehran are bound up with the history of Rey or Rhages which dates back to the Achaemenid and Parthian times and became the chief town of Iraq Jibal after the Arab conquest and later one of the great Seljuq cities.* In the 10th century Ibn Hawkal declared it to be the most flourishing city in the east after Baghdad.⁹ The first possible mention of Tehran as a satellite of Rey is from Al Istakhri, Ibn Hawkal and Muqaddasi in the 4th century H, who mention a village named Behzan, Behtan, Behnan.¹⁰ De Goeje has suggested this refers to Tehran and that, in the hand-written books, the diacritical marks, which vary little between the words, have been misinterpreted. It is however unlikely that the same mistake occurred in all three works.^{II} Also, Yakut said that Behzan was 6 farsakhs from Rey whereas Tehran was only one farsakh away. It seems thus

* Archeological evidence has disclosed traces of settlement at Chishmeh Ali, near Rey, dating from 5000 B.C., showing the Tehran area to be one of the earliest occupied in Iran.

likely that another village and not Tehran was referred to.*

Tehran is certainly mentioned in the Farsnameh of Ibn Balkhi written about 1100 A.D. Both he and As Samani in 1160 praise the fruits of Tehran, especially the pomegranates. Later Tehran was named as a halting-place on the journey from Rey to the north-west, and Dulab, now a suburb south-east of Tehran, as a military camp. No details are, however, given until Yakut's account of 1180. Tehran was then a considerable settlement divided into twelve quarters. The houses were subterranean and the inhabitants lived like troglodytes, but because of this, and as the town was also surrounded by the dense foliage of its gardens, it needed no walls for defence. Between the quarters there was, however, continual strife so that the people were afraid to use animals in their fields for fear of theft, and cultivated with hoes and hand-tools. Sadij-ahl'-Rey confirmed that Tehran was a

* This is only one problem. The question of whether the Arabic or Persian T should be used and the pronunciation of the word need not concern this study. However the etymology of the word is also uncertain. The element 'tah' or 'tih' may mean below or under as in other place-names and could refer to the early appearance of the city. It is unlikely that the element 'ran' is associated with Rey, but more likely means simply 'place'. Another suggestion is that Tir means plains and can thus be opposed to the name Shemiran, 'sham' being the mountains where water is stored, which agrees with its site. In a similar vein 'shami' or 'zami' could mean cold, and 'tehr' or 'kohor' warm, so that there is again the opposition between Shemiran, the cool place and Tehran the hot, which is borne out by climate. It would be difficult to choose between these derivations and the question remains problematical. See Minorsky and Nafisi *op.cit.*

large subterranean region with no roads or squares, and Qazvini in 1275 compared the houses of Tehran to the holes of jerboas. Both mention the recalcitrant nature of the people who would retire to their mouse-holes where no enemy would dare follow, and emerge to kill and rob, but nevertheless the town was still known for its excellent fruits.

The growth of Tehran and its elevation from this primitive state was conditioned by the downfall of neighbouring urban centres. In 1220 Rey was destroyed by the Mongols and many of the survivors fled to populate Veramin and Tehran which inherited its importance. Mustoufi in 1340 described Tehran as a large and populous town with a climate preferable to that of Rey and a better water supply. In 1404 Tehran was first visited by a European, Don Ruy de Clavijo, the Spanish ambassador to Tamerlane¹² who described it as a large place furnished with every convenience, but unwallled. In it was a representative of the governor of Rey province, a son-in-law of Tamerlane who resided at Veramin, and there was a house to accommodate the king on visits. The territory around was most productive and well-populated although the climate was not very healthy owing to the great summer heat. Rey was now entirely ruined and abandoned and there remained nothing but some towers and the remains of mosques.

With the rise of the Safavids and the displacement of the capital

to Qazvin and finally Isfahan, the province of Rey did not play an important role. However, that Tehran had certain strategic and commercial importance is shown in the action of Shah Tahmasp I who built a bazaar here, a citadel, probably the first on the site of the Ark, and walled the town in 1553.

Shah Abbas I having once fallen ill in Tehran, disliked the city, but in his reign a palace called Chahar-Bagh was built on the site of the Ark and the city put under a governor. Attracted by the court of the Great Sophy, more Europeans visited Persia and several passed through Tehran. Pietro della Valle came in 1618.¹³ Tehran was, he said, a place larger than Kashan but not as well-populated. Around it were abundant gardens producing fruit sought after for its excellent quality, a feature of Tehran from earliest times. The town itself was noted for its verdure, the streets being watered by streams and shaded by beautiful lofty planes. Excepting these, however, Tehran had not even a single building worthy of notice. The Englishmen, Herbert¹⁴ and Stoddart¹⁵ saw Tehran in 1627 and 1628 respectively. Herbert counted 3,000 houses of white, sun-baked brick, giving the first indication of population. Of these the governor's house and the bazaar were the fairest, although he could admire neither. The bazaar was partly arched and partly open and he again mentions streams running through the town and luxuriant gardens. Few other 17th century writers mention Tehran, it being

of no importance compared to Isfahan. Chardin called it a "petite ville du pays Comisène".¹⁶ It was, however, visited by the later Safavids and Shah Solayman built a palace here. Tehran's walls must still have been in good order as at first the Afghans were repulsed with considerable losses and Tehran remained free until 1725.¹⁷ The Qajar tribe was even then gathering strength and made an unsuccessful attempt to relieve the town which must already have been important to them.

According to Sani-ud-Douleh, the Afghans added the gates of Darvazeh-i-Doulet and Darvazeh-i-Ark to the defences of Tehran, being anxious to assure their means of retreat.¹⁰ Hanway, in 1744, mentioned Tehran as a city with an earthen wall and round turrets, but the whole much decayed.¹⁸ Nadir Shah, once in power, favoured Meshed, but his eldest son was governor in Tehran. The succeeding Zand dynasty established themselves in their native Shiraz, but had a great interest in Tehran, especially as their greatest rivals were the Qajars of north Persia. In 1760 Karim Khan ordered a seat of Government to be built in Tehran which included, according to Sadiq Nami and Sani-ud-Douleh, an audience hall, harem and barracks and several buildings in a garden named Jinnat. The latter states that Karim Khan intended to make Tehran his capital, but in 1763 his administration moved to Shiraz leaving a governor in the northern city.

After Karim Khan's death, Agha Muhammad Khan Qajar attacked Tehran

but did not secure the city until after the death of the Zand governor Ali Murad Khan in 1786. From then onwards Tehran became the headquarters of the Qajar cause and the base for their expeditions of conquest throughout Persia.

Shah Abbas chose Isfahan as his capital for a variety of reasons. The move from Tabriz to Qazvin was occasioned by the encroachment of the Ottoman Turks, but Isfahan was safe from both Turks and Afghans, at least as long as strong rule prevailed, and was centrally placed in the Persian Empire. It was already a centre of trade and industry, and well endowed with a productive agricultural hinterland, watered by the Zayandehrud.

The history and geography of Isfahan in the Safavid period is well-documented by European travellers and the layout of the town can be traced from features which have survived. No writer, however, has left a map or plan, and the engravings of the city used to illustrate their works are usually stylised and inaccurate.

Chardin, who stayed in Isfahan 1665-77 is the most valuable of these writers, but previously della Valle, Herbert, Provins, Tavernier, Olearius and Thevenot, among others, had given further information often corroborated by Chardin. Later in the century Deslandes, Struys, Sanson, Kaempfer and Careri wrote of Isfahan and at the end of the Safavid period Le Bruyn, Krusinski and Bell complete the picture

of the city before its downfall. Persian writers of the period are not generally as useful, being more concerned with historical and political documentation. Much additional evidence of Isfahan's development can be obtained from inscriptions on Safavid buildings giving their dates and other information.

Even before the capital was transferred from Qazvin there was a royal park named Naqsh-i-Jahan to the south of Isfahan, bordering a square which was the predecessor of the Maydan-i-Shah. In this park was a small Timurid palace much favoured by Shah Tahmasp. Here, in 1598, Shah Abbas I celebrated the first feast of No Ruz in his new capital.¹⁹ Charin, however, mentions a square as large as the Place Royale in Paris, called "Maidonneu or Nakcheguion" (Naqsh-i-Jahan) in the bazaar north of the Maydan, and says that the name was that of a palace which was pulled down to build the square, and which was adorned with paintings.²⁰ The square itself, he says, was built by Abbas as further accommodation for his merchants from the Maydan-i-Shah. Godard however considered that the Timurid palace formed the base for the Ali Qapu, which was raised by three storeys and a talar added.²¹ While this gateway/palace and other buildings in the palace quarter were being erected, Shah Abbas and his court and harem occupied an old palace in Dardasht, "fort grand et fort ancien, appelé la Maison des Chiens, parce qu'il appartenait á un grand-veneur."²²

The first public work of Shah Abbas was the creation of the

Chahar Bagh avenue in 1598.²³ This avenue, as much a place of promenade and a garden as a thoroughfare, served to connect the palace quarter with the Allah Verdi Khan bridge. Both garden and bridge were made at the same time, but the latter was built by the commander-in chief.*

Inscriptions on the Masjid-i-Shaykh Lutfullah indicate that it was begun before 1602 so that this building as well as the Ali'Qapu predate the Maydan-i-Shah, although an open space did exist before. According to Iskandar Munshi,²³ Shah Abbas in 1611 ordered the embellishment of this square which was regularised and surrounded by symmetrical, two-storey arcades containing shops and lodgings. At the same time the Qaysariyeh gate to the bazaar and the monumental gate of the Masjid-i-Shah were built and the two former buildings incorporated in the overall scheme. Della Valle, in 1617, saw the square completed except for the palace gate to the south of the Ali Qapu.²⁴

The Imperial bazaar itself was not built until 1620 and so the gateway was at first only an entrance to the old commercial quarter and a gallery used by royal musicians. Della Valle also saw the foundation of the Masjid-i-Shah, begun in 1612. This mosque was not finished until after the death of Shah Abbas in 1629, as testified by Olearius, who added that the work was being continued by

* Other examples of building by courtiers are the mosques of Maksud Beg, 1600-03, and of Sofreji, known as Masjid-i-Sorkh, 1605-6.

Shah Safi.²⁵ These main monuments of Shah Abbas illustrate his policy in aggrandising his capital with works of practical value, including the many bazaars, caravanserais, baths and waterways which were established at this time by royal initiative and that of nobles and merchants; and also with mosques, palaces and gardens, of which beauty is the most striking attribute. The best-preserved palace from his reign is the Chehel Sutun in the palace quarter. Its date is uncertain and some writers claim that the original palace was destroyed by fire in the reign of Shah Sultan Husayn and subsequently rebuilt. However, Godard, in his detailed examination of the building has proved that only the upper part was burned and the majority remains as in the time of Shah Abbas.²⁶ Indeed all accounts of it are strikingly similar.²⁷

Shah Abbas not only endowed his capital with beautiful buildings, he also attempted to populate it with people of special skills. The most important act of colonisation was the settling of Armenians in New Julfa, a suburb built for them to the south of the Zayandehrud. The colony received special encouragement from the tolerant king, and soon prospered, adding considerably to the industry and commerce of Isfahan as a whole. This prosperity is shown in the number of Armenian churches including the Cathedral of St. Saviour, built 1606-1654 and the Bethlehem and Maryam churches dating from 1627. To the east of Julfa was the suburb of Gabrabad occupied by Zoroastrians.

Thus all non-Muslims were relegated to the southern bank of the Zayanehrud. Olearius does, however, speak of a colony of "Tzurtzi" (Jurji) Christian Georgians, living in Hasanabad, a south-eastern suburb of Isfahan who also had a quarter behind the Masjid-i-Shah, called Nassara, meaning non-Muslim.

Shah Abbas I also used Muslim subjects in his colonisation of Isfahan. To the west of the Chahar Bagh was a suburb called Tabrizabad, later renamed Abbasabad and populated with people from the north-west of Persia. With the old city of Isfahan these new additions comprised a kind of tetrapole, which, according to della Valle, was a conscious creation by Shah Abbas.²⁹ No writers record the building of a wall to enclose one or all of these constituent parts, although some refer to a wall and give a list of gates. It seems strange that Shah Abbas should neglect the defences of his capital, although it was, during his reign, well away from the scenes of war.

Early in his reign Shah Abbas conducted campaigns against his enemies in the north-west and north-east of Persia, but after he had decisively beaten the Ottoman Turks in 1606 and driven the Uzbeqs and Turkomans out of Khorasan, the country enjoyed a period of comparative peace and stability which continued into succeeding reigns. In fact, the impetus of the brilliant career of Shah Abbas I allowed the weakening dynasty to survive for a century after his death. Shah Abbas I

continued the tradition of adding to the architectural heritage of Isfahan. During his reign the Khaju bridge was built to replace the former one from Uzun Hasan's time. This was part of a scheme of palace-building on the south bank including the Sa'adatabad palace and the Namakdan, Haft Dast and other pavilions built by the same monarch. He also added the Talar Ashraf in the palace quarter. Chardin lived in Isfahan in the reigns of Shah Abbas II and his successor Shah Solayman. On the basis of his and other accounts, an overall picture of the town at this time may be reconstructed, as most of the Safavid building and town-planning works were complete.(Fig.3)

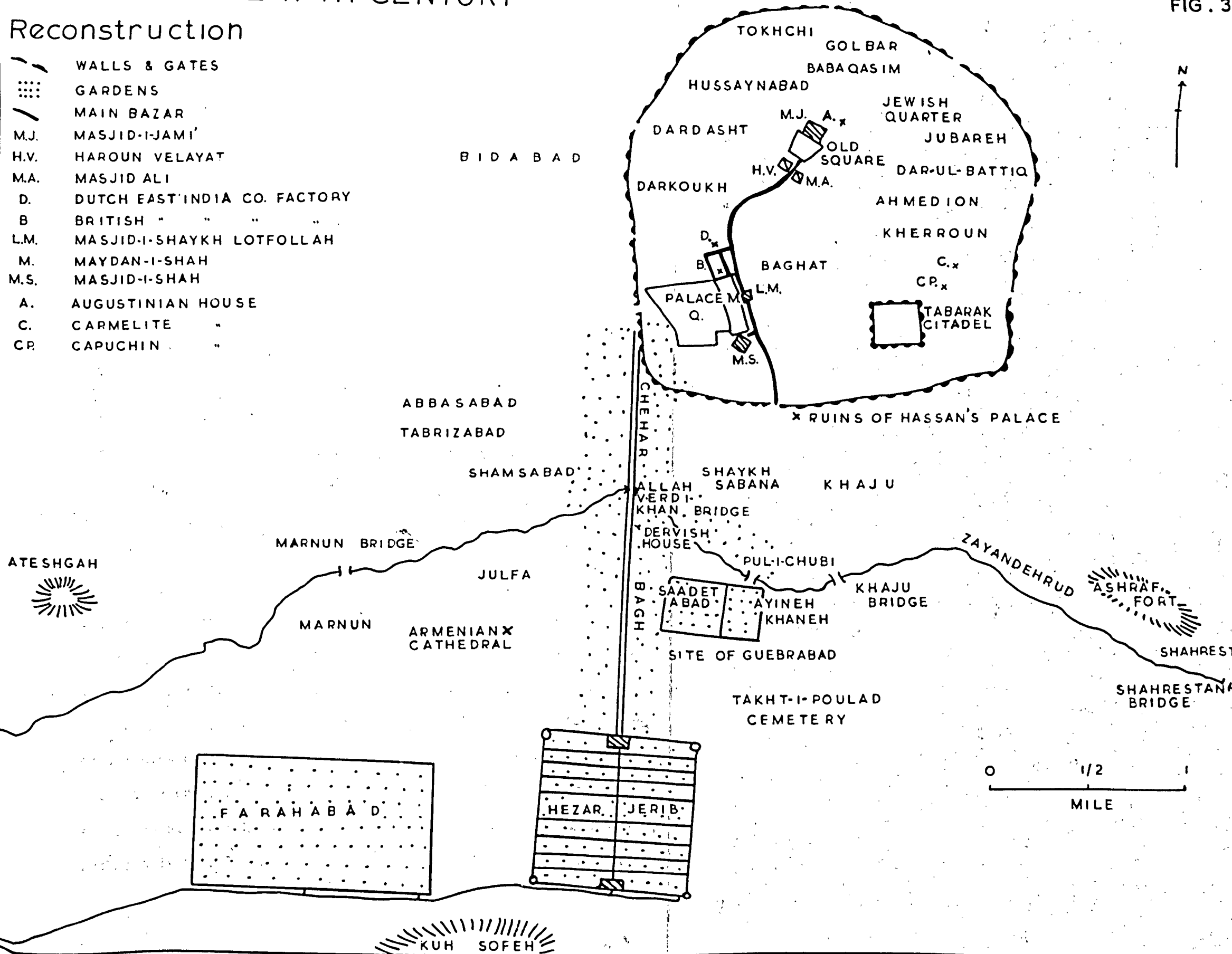
To many travellers approaching Isfahan it appeared more as a forest than a city with the trees obscuring all buildings except the domes and minarets of the principal mosques. This intermingling of buildings and gardens made it difficult to estimate the size of the city. Chardin gives the circuit, with suburbs, as not less than 12 leagues or 24 miles making Isfahan one of the largest towns in the world.³⁰ Other estimates vary from 9 to 48 English miles, but both des Landes and Tavernier considered Isfahan similar in size to Paris although its population was less.³¹ Some realised the danger of comparing Isfahan from the point of view of population with a European town of similar size as here the houses were mainly one-storey and much of the land, even inside the walls, was taken up with gardens. The dense vegetation may account for the lack of clear definition of the

ISFAHAN IN THE 17TH CENTURY

FIG. 3

Reconstruction

- WALLS & GATES
- GARDENS
- MAIN BAZAR
- M.J. MASJID-I-JAMI'
- H.V. HAROUN VELAYAT
- M.A. MASJID ALI
- D. DUTCH EAST INDIA CO. FACTORY
- B. BRITISH " " " "
- L.M. MASJID-I-SHAYKH LOTFOLLAH
- M. MAYDAN-I-SHAH
- M.S. MASJID-I-SHAH
- A. AUGUSTINIAN HOUSE
- C. CARMELITE " "
- CP. CAPUCHIN " "



wall. An old wall appears to have existed around Isfahan proper, but this was low and weak although the gates appear to have been impressive.³² Inside the walls in addition to the main monuments and the bazaar complex, the area was largely taken up by private houses which varied in size and style. However the almost universal building material was sun-dried, mud brick. Only a very few public buildings were of fired brick. This meant, as Thevenot pointed out,³³ that they were in danger of collapse during heavy rain and also that snow had to be removed immediately from the flat roofs. This still applies today in the older parts of Isfahan. The houses were of the courtyard type, the yard taking up the larger part and containing a pool, which was the sole water supply, and a small garden, as in houses of the same type today. This tank served as water storage, being replenished from a well belonging to the house. Even comparatively shallow wells would give water in Isfahan.³⁴ The poor brought their water from public sources. It is probable that the "madi" system was in use though used largely for irrigation in the larger gardens and fields. Around the courtyard were the rooms with flat roof terraces. No writers mention wind-towers in Isfahan. They do not appear on old drawings or exist today, probably because of the more temperate climate of Isfahan compared to Yazd or Kerman, where they are common. All writers agree on the mean and ugly exteriors of these houses, and the monotony of the bare earth walls, broken only by a low door, with no windows facing outwards. Thus

houses of rich and poor looked alike until one ventured inside. Here the houses were clean and neat, well-vaulted and whitened with a thin layer of clay or plaster. Each room had a door onto the courtyard and windows as large as doors, though there was rarely glass in them. Oiled paper was sometimes used as a substitute. Houses of rich people had several courtyards with ornamental ayvans facing onto them, second storey rooms, and sometimes cellars which were used in summer for coolness, often containing pools and facilities for bathing. The square plan with a courtyard was thus basic, with elaborations dependent on the status and wealth of the occupants.

A very striking point in Chardin's account is that the houses of the rich were intermixed with those of poorer folk. Thus palaces appear in all quarters. Sometimes a district was named after the rich man who occupied it and endowed it with public buildings such as bazaars, caravanserais, mosques and baths. An exception to this rule were the suburban houses or garden pavilions such as those along the Chahar Bagh. These were detached houses comprised of a talar with rooms attached like the Chehel Sutun, or built around a dome like the Hasht Behesht, and standing in their own gardens, which were surrounded by high walls in most cases. This type of house was also more localised and was found in the south and south-west of Isfahan, in the garden suburbs of Abbasabad, Chahar Bagh and Khaju.

Pouillet, among many writers, compared the houses of Julfa favourably

to those of Isfahan.³⁵ He found them, although still built of mud, "plus apparentes...le symetrie.. mieux gardée" and the roofs were domed, which gave better drainage.*

Even the most enthusiastic observers had little good to say of the streets of Isfahan except those of the bazaar. They were narrow, irregular and tortuous, so much that "bien loin de voir d'un bout á l'autre, on ne saurait du milieu en voir les bouts, ni deux cents pas devant soi."³⁶ They were unpaved, making them dusty in summer except where they were watered, which was only in the better parts, and muddy in winter, the dirtiest in the world according to des Landes.³⁷ Apart from this there were numerous holes in the road, either qanat shafts, wells, or just simply holes and irregularities which were never repaired. In front of each house there was moreover an open cess-pit, an added hazard and extremely unpleasant. Chardin, however, said that the streets were not "empuantes" because peasants came regularly to collect the town 'by-products' for manuring. The picture, however, is not an attractive one. There were avenues, such as the Chahar Bagh, which were wide, straight, shaded with trees and watered with streams. The streets of Julfa were of this kind although narrower, benefitting from comparatively late establishment and deliberate planning. They were "bien partagées..plantées de grandes arbres et quelques ruisseaux."³⁵ Struys³⁸ and Olearius³⁹ stated that formerly the Isfahan streets were much wider, enough for

* Houses of this kind and age with barrel-vaulted roofs can still be seen in Julfa.

20 men on horses abreast, but, with the growth of population, roads and squares were built on and rows of houses put in the middle of every street. While this cannot be accepted literally it indicates the tremendous physical growth which the new functions brought, realised not only by outward expansion, but also by increased pressure on building land within Isfahan itself. Another indication is Thevenot's statement that a few years prior to his visit the land near the fortress had been gardens, but it had been built over and was called the new city.⁴⁰

The picture of Isfahan in the mid and late 17th century is varied and colourful. The nuclear area centred on the Masjid-i-Jami' was one of courtyard houses, an irregular street pattern and scattered monuments and public buildings mostly from pre-Safavid times. To the south was the royal quarter, including the extensive palace, the Maydan-i-Shah and bazaars. South again was an aristocratic garden suburb along the axis of the Chahar Bagh. Within this were, no doubt, areas of poorer housing, inhabited by servants and also villages which had been engulfed, such as Marnun. South of the Zayandehrud, and completely detached were the Armenian and Zoroastrian suburbs with the prolongation of the Chahar Bagh to the Hizar Jarib and the new palace of Sa'adatabad.

Estimates of population for Isfahan vary, but a general figure of half a million may be adopted.³¹ However, with the tributary villages of the oasis of which there were 1,460, according to Olearius,⁴¹ the

higher figure of a million may well have been reached. Supplies for such a large number were obtained largely from the oasis itself, which is very fertile and well-watered, but with additional supplies from other provinces. Kerman sent fat sheep in winter and lambs in summer. Gilan sent rice, Yazd, Kerman "Tasum and Eberku" wheat and barley, and coal came from Mazanderan and Yeilaq Perjan.⁴²

Isfahan was described as "the largest and most beautiful city in all the Orient", "one of the richest commercial centres in the world", and "incomparable in Persia for the healthfulness of its air", but not all shared this enthusiasm. Tavernier and Pouillet considered it rather a large village than a town, with nothing in its entire length worth writing about, "ny carlée, ny pavée, ny peuplée." However despite personal opinions there is no doubt that Isfahan was at this time the largest and most important city at least in the whole of Persia,* and that this was due to its status as capital city.

The increasing weakness and decadence of the Safavid court did not prevent it from adding further to the architectural beauty of Isfahan. One of the most famous Safavid monuments, the Madraseh-i-Madar-i-Shah with its attached caravanserai and bazaar, dates from the reign of Shah Sultan Husayn, built 1706-14. The mosque of Misou and the Shamsabad madraseh are dated 1704 and 1713 respectively. The same king created the palace and garden of Farahabad, south of Julfa,

* This is borne out by maps of the period. See Hotz collection, Royal Geographical Society Map Library.

begun about 1700 but never completely finished owing to difficulties of water supply.

It was here that the king fled at the approach of the Afghans in 1721. After the Persian defeat at Gulnabad the siege of Isfahan began in earnest, leading to a terrible famine.⁴³ In March 1722 Julfa was attacked and capitulated. Soon the Afghans possessed all the suburbs south of the river and established themselves in Farahabad. From here they attacked the bridges. Part of their forces had previously crossed upstream and were blocking the roads to the north. Advancing over the Marnun bridge, a force of 7,000 Afghans took half of Abbasabad and the quarters of Great and Little Chaharsu. Later the Shiraz bridge was taken, and eventually the town surrendered. Shah Sultan Husayn abdicated and himself crowned Mahmud, the Afghan leader, who adopted the title of Shah, entered the city, and took over the palace.

Writers usually ascribe the decline of Isfahan solely to the Afghan attack. However there is little evidence that the Afghan armies devastated the city itself, although the southern suburbs suffered. Many thousands died in the famine or were killed subsequently and also occupation by Afghan troops could not improve the condition of the town. But most of the damage came about through neglect in the 18th century. In 1729 the victories of Nadir Shah ended the period of Afghan rule, but this king favoured Meshed and paid little attention

to the restoration of Isfahan. His reign was also one of continual wars which even when they took place outside Persia, drained the country's resources. Similarly during the ensuing Zand period, Isfahan was situated between the Zands of Shiraz and the Qajars of the north between whom the struggle for power was continuous and ruthless. Some of the Zand princes set up residence in Isfahan, but on the whole they preferred Shiraz.⁴⁴ With the choice of Tehran for capital and the consolidation of Qajar power into a stable government, Isfahan lost all hope of regaining its former glory. Although even in the anarchy of the 18th century the town retained strategic and commercial importance, this could not justify its great size, only the role of capital of an empire like that of Shah Abbas could do this.

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CHAPTER 2

THE QAJAR DYNASTY 1790-1926

The rule of the Qajar dynasty was to Tehran as the Safavid had been to Isfahan, the period of growth and glory as the seat of a government which consisted of the monarch, an autocratic ruler surrounded by a host of courtiers who were also the administrative and executive officers of the state. This was the paramount function of the city. In many ways the history of Tehran during this period mirrors that of Isfahan under the Safavids. There was an initial period of establishment when buildings works were carried out, first those of an urgent practical nature and then more luxurious decorative additions. There was a period when foreign influence and penetration became important, especially in commerce and through expert advisors. And finally there was the period of decadence and stagnation, but here this affected only the dynasty itself, and the city did not fall with it, as did Isfahan with the Safavids.

The early 19th century saw the establishment of the Qajars in Tehran and its endowment with the attributes of a capital. The former was the work of Agha Muhammad Khan, who successfully defeated his rivals for the throne and chose Tehran as his capital. The latter may be ascribed to his nephew and successor Fath-Ali-Shah

during whose long reign the country enjoyed relative stability especially after the conclusion of war with Russia by the Treaty of Turkomanchai in 1828. At the death of Fath-Ali Shah in 1834 Muhammad Shah came to the throne and his undistinguished reign lasted until 1848 when Nasir-ud-Din brought in a new period of expansion and modernisation.

At the same time Isfahan stagnated, having been stripped of its function of capital and most of its importance as a commercial and cultural metropolis, becoming only a regional capital albeit of a potentially prosperous province. Periods of temporary prosperity coincided with strong governorships such as that of Hajji Muhammad Husayn Khan in the first decade of the 19th century and of Zill-us-Sultan, the eldest son of Nasir-ud-Din. Royal patronage and interest was another factor which relieved the decline of Isfahan. Fath-Ali Shah often camped here with his court and army but later Nasir-ud-Din became more interested in Tehran, which he had endowed with all the modern equipment and oddities which caught his eye, and thus neglected the anachronistic ex-capital. The low ebbs in the life of Isfahan were in mid-century and at the beginning of the 20th century when the town was in such a state as to be despaired of.

Several theories are advanced to explain the choice of Tehran as capital. The traditional Qajar headquarters was Astarabad which was too remote once the whole country fell into Qajar hands. For

some time Agha Muhammad fixed his residence at Sari, but finally Tehran was chosen in what was a compromise position, not too far away from the tribal lands from which the Qajars drew much-needed support, but yet on the plateau where most of the important towns of Persia were situated. Another consideration was the Russians, the main enemies of the Qajars once opposition in the south had been firmly and brutally eradicated. A capital strategically placed to meet this menace was needed and yet one secure against a Russian advance. Tehran appeared to fulfill both these considerations and was an established town, although of no great size, with growing commercial functions. Its position allowed Tehran to act as intermediary and market in the trade between the mountains and the plateau and there were fertile and well-watered agricultural areas nearby like the Veramin plain.

Even though Tehran may have been politically well-chosen its actual site entailed many disadvantages, quickly pointed out by early travellers. Olivier said the water was bad and 'purgative'¹ Dupré adding that it had "un gout saumâtre" because the canals which brought it were not well cleaned.² Those who could afford it brought their drinking water from Karaj, presumably from the river, still used for most of Tehran's water. Bad air was blamed for the fevers which were so prevalent in summer. These with the 'insupportable' heat, which according to Flandin³ lasted for six months, drove all

those who possibly could to leave Tehran for the villages of Shemiran or other mountain resorts.⁴

Epidemics, especially of water-borne diseases such as cholera and typhoid, were common until well into the 20th century. Around the city were salt marshes whose stagnant waters bred 'noxious miasmas' from which diseases were supposed to come. The old town was in a hollow and built on moist salty soil according to Morier, which was not only unwholesome, making drainage difficult, but also could not provide a firm foundation for building. Not only the unhealthy air and the poor water, but also the unhygienic conditions in which the inhabitants lived caused Tehran's unhealthiness. Water was used and re-used for all domestic and industrial purposes without any attempt at purification, under the Muslim assumption that all running water must be pure. The heat was increased by the crowding together of mud-built houses and the lack of trees and gardens which always mitigated the summer heat of Isfahan. Around Tehran stretched the barren stony desert, described by Money⁶ as a most dreary and desolate-looking plain, full of ravines traditionally haunted by "ghools and deevs" (sic), only partially cultivated and crowded with ruins.

The only advantage of Tehran in Sercey's opinion, was that the mountains to the north protected it from cold winds, but they also obstructed rain-bearing winds from the Caspian, and the proximity of a high ridge such as Tochal put Tehran in danger of flooding from

mountain torrents, although this danger was less when the town was small and surrounded by a moat. A great disadvantage of site both practically and aesthetically was the lack of a river. Water supply has always been a major difficulty and brake to the expansion of Tehran. The advantage of Isfahan in this respect is obvious.

Olivier's report on Tehran in 1796, the last year of Agha Muhammad's reign⁸, gives an insight into conditions during this very critical period of its growth. The town gave the impression of one completely renewed. Its walls, bazaars, mosques and caravanserais, built under Agha Muhammad, made it, in his eyes, one of the most beautiful towns in Persia. He considered, falsely it appears, that this rebuilding followed extensive destruction under the Afghans. It was rather expansion and renewal of inadequate facilities. Olivier praised the palace, saying it left nothing to be desired in its extent, the beauty of its buildings, the luxury of its gardens and the abundance of its waters. The town, surrounded by walls with four gates and defensive outworks was a little over 2 miles square but less than half the enceinte was filled with houses, the rest being gardens of fruit-trees. Population was scarcely 50,000, 3,000 being the court and royal bodyguard, but great efforts were being made to encourage trade and attract merchants and craftsmen. Olivier had no doubt that these would be successful.

Other travellers did not share this enthusiasm for the beauty of

Tehran. The streets were like those of 17th century Isfahan without the relief of shaded avenues - tortuous, unpaved, narrow, dirty, rugged and neglected, and such clouds of dust rose from them as to make it impossible to distinguish anything. Ouseley added that streets used by the king would disgrace the meanest village. Qanat holes were numerous and dangerous and the streets filled with "nuisances and abominations". The houses were low, flat-roofed, built of mud or mud-brick with a small yard surrounded by a high wall and seldom, if ever, any windows onto the road. Ker Porter¹⁰ quotes a native opinion that narrow streets and high walls gave desirable shade, but confined heat, crowds and odious smells produced much more intolerable effects. The traveller looked in vain for streets as he knew them, he would scarcely see a house. He was surrounded by a mass of mud, burrowed into holes, resembling an ant's nest or a rabbit warren more than human abodes, for only the dwellings of the poor presented themselves. Great houses were shrouded by high walls of unseemly appearance.¹¹ Even from a height the view was uninteresting. The mud houses were the same colour as the earth, very few exceeding one storey to break the monotony of flat roofs, long walls of mud and intermingled ruins.

Even in mid-century, conditions had not improved. Hommaire de Hell could not tell whether he was in the capital or a miserable village and crossed what he supposed to be an interminable suburb until a

view of the palace proved it to be the town centre.¹² The most miserable area of Tehran, described by Ker Porter¹³ and Dubeux¹⁴ was one of wide and deep excavation just inside the Qazvin gate, where holes led to subterranean rooms used by the poor and homeless as a stabling for beasts of burden. It was supposed to be the original village of Tehran and indeed the description resembles that of the ancient troglodyte village. The 1858 map shows two areas of excavations, they are either brick works or borrow-pits.(Fig.4)

Tehran's growth was shown by the crowding of buildings within the walls. As early as 1807 Dupré said that former spaces were now filled¹⁵, but Briand in 1829 still saw gaps.¹⁶ Despite the general appearance of monotony and poverty, the period saw the erection of buildings which improved the grim picture. The most striking was the palace quarter, the Ark, begun by Agha Muhammad who surrounded it with a high strong wall and added to by Fath-Ali Shah.¹⁷ Further royal palaces and summer resorts were built, some as far away as Sultanieh and Oujan, but several in Shemiran and the Elburz foothills. The size of the court necessitated several palaces. Not all the harem would, for example, follow the king on his summer excursions. Princes, the numbers of which are proverbial in Persia, Fath-Ali Shah alone having over a hundred sons also built palaces in or near Tehran, their example being followed by courtiers and rich merchants. These palaces attracted the praise

of travellers so disillusioned by the general appearance of the town. Qasr-i-Qajar, a castle-like edifice, surrounded by a large park and set on a hill overlooking the town reflected the martial nature of Agha Muhammad who began it. Fath-Ali Shah embellished it with paintings and used it to house the 700 wives who did not accompany him for the summer. The Nigaristan palace was however more suited to the favourite pleasures of this king, being a series of pleasure houses in a large and luxurious garden. The only other pleasanse mentioned in Tehran before 1850 was the Lalehzar garden. However, the 'Ishratābad garden and palace was probably built during Fath-Ali's reign as it contained paintings of his durbars.¹⁸ Muhammad Shah began to build a fort and palace on the slopes above Tajrish. It was here that he died in 1848 and the unfinished palace soon fell to ruins.

In addition to mosques already existing (Ouseley gives a figure of 30-40 mosques and colleges in 1810).¹⁹ none of which were large or magnificent, the early Qajars erected religious buildings although none could vie with the Safavid mosques of Isfahan. There was a mosque, takiyeh and madrasehs in the Ark.²⁰ Gardane in 1807 saw a mosque, being built opposite the palace, which he considered would be very beautiful.²¹ Dupré speaks of a mosque with a golden dome, built by Fath-Ali and finished at the time of his visit.²² This was the Masjid-i-Shah with its 'gilded cap', a landmark for early travellers. Work was also done on the Masjid-i-Jami' including tilework with the

characteristic yellow tones of the Qajar period, and several other mosques and madrasehs were built although they did not attract the travellers' attention.²⁰

In this period the first permanent foreign establishments began to appear in Tehran, chiefly legations. Anglo-French rivalry during the Napoleonic period brought embassies seeking the Shah's support. General Gardane founded a French legation and military advisory mission in 1807 although this was recalled as British influence grew. Since Sir Gore Ouseley's mission in 1811, British representation has been almost continuous. The Russians appeared only after the treaty of 1828. These three, with the Turks, whose mission was first given the rank of embassy, had the greatest influence over Persian foreign affairs and were the only foreign nations represented until the second half of the century.²³

Despite Tehran's endowment with the attributes of power, it was doubted whether the town could retain its position as capital. Dupré was emphatic that it could never attain the former prosperity of Isfahan.²² It was thought probable that Isfahan would sometime become capital again as Tehran was only capital by accident, and Isfahan was still the true centre of Persia.²⁴ Flandin added, quite rightly, that the only greatness of Tehran lay in the presence of the king and court, the very fact which constituted a capital city at that period.

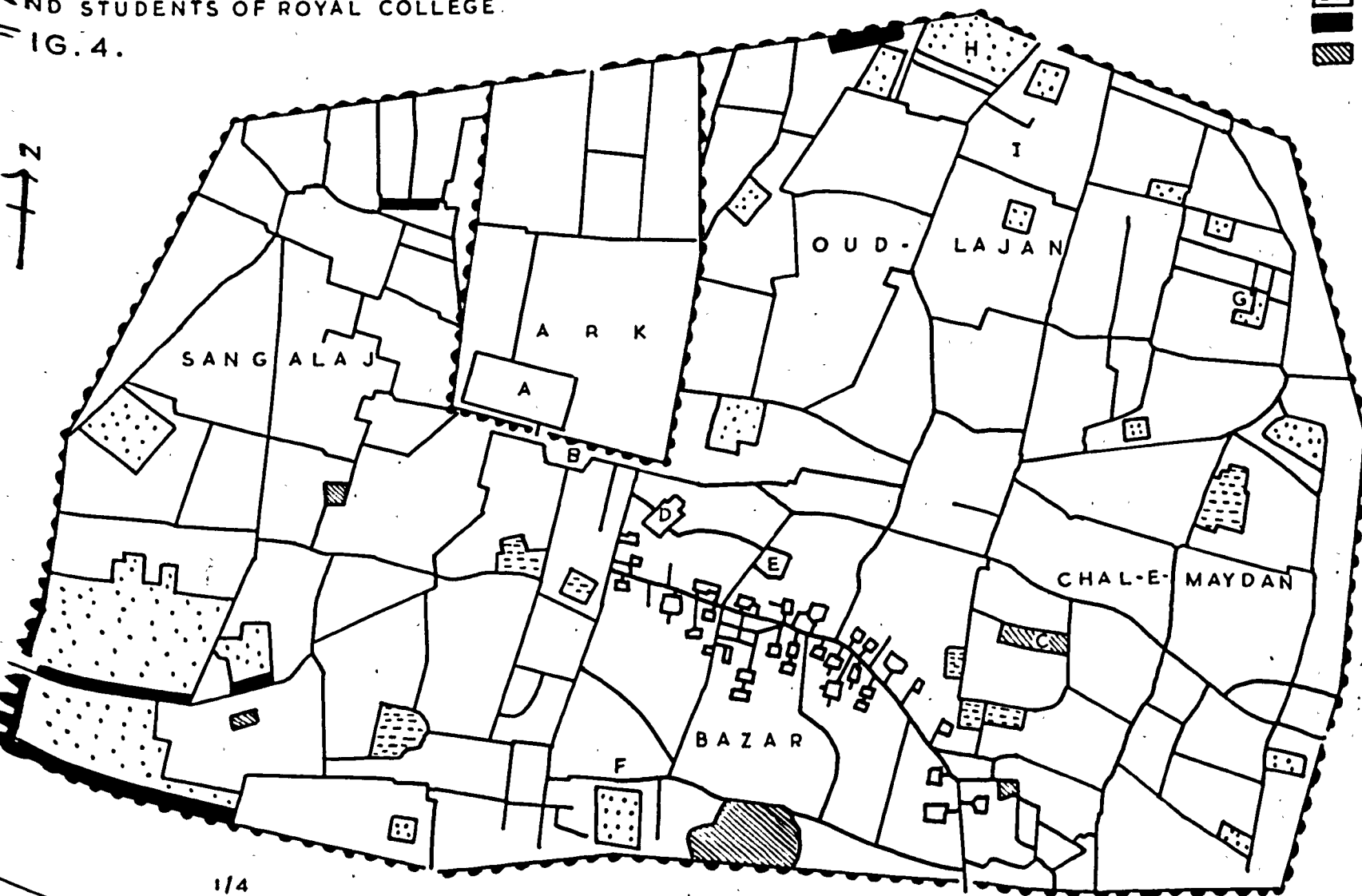
Thus Tehran became established as capital although "forsooth very unlike one".²⁵ It was "the most miserable compound of filth" Money had ever seen, the better parts being clean only because they were new. Fraser visited Tehran in 1833 and found that the early impetus of the capital had weakened. Like the government and dynasty Tehran was exhibiting symptoms of decay.²⁶ There was no brilliancy, no splendour, no bustle of youth about the place. Like the government it was falling to pieces, like the king becoming old and careless. A general air of dilapidation had spread even over the royal buildings. This gloomy picture of Tehran before European influences became strong, passed however with the era of orientalism and the effect of the 'Victorian' period was soon to be felt on Tehran and Persian culture as a whole.

Mid-19th century Tehran is illustrated by the map of I'tezad-ud-Saltaneh dated 1858 (Fig.4). This shows the walled palace quarter and the Bazaar with its caravanserais. A variety of religious buildings are marked and named. The town was divided into four quarters plus the Ark. These were Sangalaj, which contained the largest area of gardens within the walls; the Bazaar; Chal-i-Maydan; and Oud Lajan. The boundaries appear to have followed recognised lines. In addition to the major divisions the districts occupied by racial and religious minority groups are marked, like the Jewish Mahalleh, streets named after the Armenians who occupied them and the Arab districts.²⁷ As in Persian towns of all ages, the houses

TEHRAN 1858

AFTER MAP OF ETEZAD-AS-SALTANEH
AND STUDENTS OF ROYAL COLLEGE.

IG. 4.



Reference map

- GARDENS
- GRAVEYARDS
- YAKHCHALS
- PITS

- A. MAYDAN-I-ARK
- B. SABZ-I-MAYDAN
- C. CHAL-I-MAYDAN
- D. MASJID-I-SHAH
- E. MASJID-I-JAMI
- F. BRITISH LEGATION
- G. FRENCH "
- H. RUSSIAN "
- I. OTTOMAN "

1/4

MILE

of the rich, some of them named on the map, were mixed with those of lower classes, grouped possibly by links of clan or tribe, each noble or tribal leader having an entourage of poor relatives, dependents and servants. It is evident even today that household size grows with income. The map however, gives no indication of development outside the walls and travellers also are not explicit on this point. Major Krziz's map of 1858 shows that little building had taken place outside except for large gardens and villas, following the royal example, as there was still some danger of attack and the early 19th century walls were apparently built on generous lines. After the first surge of population growth the rate levelled off to a steady rise. The existence of gardens inside the walls in 1858 shows that pressure on land cannot have been too great. Large-scale industries, such as brick-making, ice-making etc., and those such as slaughtering and tanning which would have been offensive in residential areas, were outside the walls. Just outside the gates were large caravanserais serving as depots for the unloading and sorting of camel caravans. Early sketches of Tehran, however, show little if any extra-mural development.

Almost every account of Isfahan in the early 19th century begins with a lament on its fall from splendour and greatness. From a distance, an approaching traveller could still see domes and minarets rising from the trees, but on arrival he was sadly disappointed. The

hand of time had undone Shah Abbas's efforts to raise his favourite city to pre-eminent beauty. From half to two-thirds of the city was in ruins and it was often difficult to distinguish which houses were inhabited and which not. Now only an area of two miles diameter (Olivier's estimate²⁸) remained inhabited and population had fallen disastrously to about 50,000.* It was possible to ride for hours among ruins of houses, bazaars, mosques and caravanserais without seeing a living creature. In once-flourishing bazaars only a few shops remained. "Noxious vegetation" spread unchecked over the fairest gardens, which, according to Stocqueller²⁹, affected the salubrity of the city and poisoned the soils, thus obstructing the growth of useful products. In some of the western suburbs signs of activity persisted, although Olivier searched in vain for the formerly opulent suburb of Abbasabad²⁸ and 'Kadjouk' was completely ruined. Sercey saw places where peasants had taken over the sites of former palaces and were cultivating fields inside walls which had been painted and gilded.³⁰ On the outskirts were houses still in good repair and some of the Chahar Bagh pavilions were still habitable according to Ouseley,³¹ but they had been abandoned as the remaining population converged on the core areas of the town. He explains that in Persia an isolated dwelling was never secure, and so for mutual protection all the houses in an area must be inhabited or all suffer decay. Thus it was improbable that the suburbs should be peopled while half of the city was in ruins.

* Other travellers give higher figures, see Chap. 8 Population. This period gave more problems in estimating population than any other. Malcolm even considered Isfahan still the most populous town in Persia. History of Persia. Vol.2 p.374.

This desolation could also be seen in the satellite villages. Many had disappeared altogether, of others only a few miserable huts remained and only enough cultivation to serve the very much reduced needs of the city. Julfa was now connected to Isfahan by long tracts of ruins spreading between the bank of the river and the few habitable remains of the Armenian town. Julfa had participated in the general decay and depopulation. Many houses had fallen into the hand of Muslims, but what did remain still gave a brave show compared to the Muslim town.³²

The streets and houses which were still inhabited resembled those of Tehran at the same time and had changed little from the 17th century. Almost all the buildings were of the same monotonous earth-coloured mud-brick, the houses of one storey, on the courtyard plan, with a flat roof-terrace. The streets were narrow, tortuous unpaved and dirty.

However, it was not only the extent of ruins which testified to the former greatness of Isfahan. Many magnificent bazaars and caravanserais survived, empty of buyers and sellers, but the asylum of hundreds of starving wretches.³³ In the palace quarter the Safavid buildings were neglected as they were no longer needed, it being now only a governor's residence. Money which might have been used in their restoration was lavished on new apartments in the Qajar style for Fath-Ali Shah. The Chehel Sutun was still used as

an audience hall although the Ali Qapu was deserted, serving only as a vantage point from which travellers could view the miles of ruins around it. The arcades of the Maydan-i-Shah were now uninhabited and falling to ruin, the trees were gone, the canals ruined and there was no water either in them or in the pools. Only one corner was now used by the market. The Masjid-i-Shah could still be described as a noble building although many of the tiles were missing. The Masjid-i-Shaykh Lutfullah was in fairly good repair although little used. Similarly the Chahar Bagh Madraseh had suffered neglect and decay, but still retained its atmosphere of quiet and retirement and was still the most beautiful monument in the city. The bridges over the Zayandehrud were in fairly good repair. The monuments south of the river had suffered greatly during the Afghan attack. Thus little remained of the Hizar Jarib, Farahabad, or the southern Chahar Bagh. The Sa'adatabad palaces were still in use. Sir Gore Ouseley was accommodated in the Haft Dast in 1810 and his suite in the Namakdan. In 1825 Kinneir's suite occupied the Haft Dast and also found the apartments adequate if somewhat dirty. A new palace called Fathabad after Fath-Ali Shah was built at Sa'adatabad, new at the time of Ouseley's visit. He described it as "cheerful, clean and comfortable".³⁴ This was used by the Shah and his followers were housed in tents on the left bank of the river.

The rebuilding and new building carried out early in the 19th century

was done under the energetic governor Hajji Muhammad Husayn Khan. He built the Naranjistan and Fathabad palaces, as if with the intention, as Malcolm remarked, of tempting the monarch to patronise and visit the city,³⁵ and also a bazaar named after him which was the only new one in the town. His rebuilding programme included the restoration of the Qaysariyeh gate and repairs to the Chehel Sutun, Sa'adatabad and Hasht Behest (which was painted with scenes from the life of Fath-Ali Shah like the Tehran palaces). Thanks to him, some, at least, of Isfahan's public buildings were in a tolerable state. Leading to the Khaju bridge the governor laid out a new avenue of trees with basins, canals and fountains, known as the New Chahar Bagh. Morier implies that there were several of these avenues at the entrances to Isfahan and considered them works of pure vanity, giving a specious appearance to the numerous ruins which still existed.³⁶ There was no doubt, however, that Hajji Muhammad's efforts to repair and recolonise deserted villages, encourage agriculture, populate the habitable streets of the city by promoting the old manufactures and attracting commerce to its old channels, accounted for what little bustle and activity could be seen in Isfahan. Along the trade routes to Isfahan caravanserais were reopened and Kinneir averred that Isfahan was still the first commercial city of the Persian empire.³⁷

However the period of office of one strong and energetic governor

was no substitute for the presence of the court and conditions soon deteriorated again. The acres of ruins spoke as much of misgovernment, poverty and oppression as of a disastrous siege a hundred years before. Other towns had recovered from such catastrophies in less than half the time. When Sercy wrote, conditions were very serious.³⁸ The king's authority was nominal and the population restless and turbulent, affected by the continual struggle for power between the Imam Juma, the chief religious official, and the governor. Organised bands of criminals said to be under the Imam, undermined central authority until the king was forced to march in Isfahan with 4,000 men to pacify it.* Such conditions did not encourage the re-establishment of the capital there. Nevertheless, other travellers considered that if Isfahan were again made the seat of government it would quickly have regained its former splendour. This was possibly true and certainly pinpointed the reason for Isfahan's fall. Having lost a large part of its trade and with royal residence removed from it, there was no motive for an influx of population or active industry by those who remained. In Ker Porter's opinion, this state of affairs, continuing for another 50 years with the city totally abandoned by the sovereign, would give governors no stimulus for the re-erection of buildings, the

* Buckingham, J.S. Travels in Assyria, Medea and Persia, London, 1829. Chap. 15 p.234-35, said that Fath Ali Shah liked the city but regard for his security made him prefer even the bad air, bad water and disagreeable station of Tehran, secured by strong walls, close to tribal support and near impenetrable forests for escape.

repair of bazaars and the preservation of gardens, and Isfahan would become a total ruin amid the saddest of wildernesses from the process of neglect alone.³⁹ Isfahan escaped such a fate by another strong governorship and the spread of European influences which were soon to break in full force on Persia.

Isfahan at this period is illustrated by the map made by the French architect Coste about 1840 and included in Morel's "Monuments Modernes de la Perse." The main monuments of both Isfahan and Julfa are marked, as well as several unnamed mosques and churches. Gates and walls are also depicted.⁴⁰ The most ruined quarters of Isfahan according to the map are those to the south and east, especially Abbasabad, completely ruined, Khadju, Telli-oustoukhan, Tcherkh-ab, Pa-kalaa' and Lonban (sic). Population had retired into the old nucleus of the north-east and the suburbs of the north-west. The walls themselves were largely ruined and their position on the map bears little relationship to the outline of the inhabited area. (Fig.33)

Change came slowly to Tehran but improvement was already evident at the time of Gobineau's stay.⁴¹ The town in its hollow was still difficult to distinguish from afar, and the streets were still irregular and full of holes, but the general cleanliness and tidiness had much improved. Every year new and beautiful buildings were rising both in and outside the city. One was the Hajib-ud-Douleh

caravanserai which in Gobineau's opinion was one of the finest monuments in Persia and compared favourably with the most beautiful of Isfahan. Other new buildings included bazaars constructed by "the late Prime Minister" mentioned in Lady Sheil's account as drawing a large amount of trade.⁴² This was perhaps the bazaar of Taqi-Khan built 1850-51 and mentioned by Eastwick.⁴³ A new palace called Nizamiyeh had been built by the Shah for his son-in-law near the Nigaristan on the site of the present Majlis building. Nasir-ud-Din also, early in his reign, rebuilt Sabz-i-Maydan at the entrance to the bazaar, surrounding it with arcades containing fashionable shops selling European goods and owned by Europeans and Armenians.

There were still ruins but, as several writers point out, a Persian town without ruins is impossible. The king had apparently made new channels for water from the mountains which had improved the streets and allowed the creation of gardens which ameliorated the climate. Gobineau points out that thirty years before it had been impossible to remain in Tehran even in spring because of the heat. On the other hand cholera had been raging in the city for eight or nine years. Still, improvements were such that he could state that all accounts of the town up to 1845 were no longer correct.

The populace was becoming accustomed to the presence of foreigners and according to Binning had learned to respect them.⁴⁴ There were

by 1851 French and Italian shopkeepers, an English translator to the king and newspaper managers in addition to Europeans serving in diplomatic missions and as military advisers. Carriages were kept and used by several Europeans and Persian nobles, especially for journeys to their summer quarters in Shemiran. European influence could be seen in the smart appearance of the regiments stationed in Tehran, who were well-dressed and well-armed, and in the effective and well-managed police-force. Other innovations included modern printing-presses and oil lamps to light the streets in the Ark. Living was, however, much more expensive than at Isfahan or Shiraz. House rents were higher especially for the type of accommodation demanded by Europeans and all the necessities of life were expensive. This probably also applied to the Persian inhabitants. Tehran was not yet completely equipped for its role. Even in 1860 the only paved street was that opposite the British Legation, done at British expense, despite orders of the Shah on this matter.

The Royal College or Dar-ul-Funun, founded in the year of Nasir-ud-Din's accession, illustrated the growth of European influence. This had a European curriculum and teachers. It was state-supported and open to all, its purpose being to train young men for posts in administration and as army officers. A newspaper under a European manager had existed since 1850 but its scope was limited. In 1860 the Tehran-Tabriz electric telegraph line was opened and later extended.

A modern letter post did not come until 1875, organised by an Austrian. Road transport was, however, somewhat neglected, the only carriageable roads being those to royal palaces in the neighbourhood of Tehran. In fact, all these reforms had little effect outside the capital.

Several new palaces were built by Nasir-ud-Din before 1860. It was said he disliked life in Tehran and spent his time in these suburban palaces and shooting-boxes. His favourite was the Niavaran palace built in the modern style but not grandiose. Sultanabad was also favoured, this was the least oriental, adorned with paintings of European scenes. Da'udiyeh, opposite Qasr-i-Qajar, abandoned by this time, was famous for its gardens. At Doushan Tepeh the king built a shooting-lodge near his hunting grounds in the eastern hills.¹⁸ There were also additions within the Ark such as the Shams-ul-'Imarat which consisted of two high towers, for long the tallest building in Tehran, housing the most costly presents given to the Shah.¹⁷

When Mounsey wrote in 1866 there was considerable suburban development.⁴⁵ The new reign had brought increased trade and industry and population had risen. This growth led Nasir-ud-Din in 1866 to decree the building of new walls almost a mile away from the old, which were torn down and the moat filled up. The new walls resembled Vauban's walls of Paris, being rather a rampart than a wall as no stone was used, and arrow-head bastions designed for defence by artillery, although this was never used here. There were twelve ornamental gates,

closed at sunset. The wall, however, had little military significance.⁴⁶ The area enclosed was over twice that of the former town and included not only former suburbs and caravanserais, but also large gardens like the Nigaristan and considerable tracts of desert. Travellers arriving in Tehran often remarked that after passing the city gate they still had to cross waste land before coming in sight of the city. Work on the walls continued for several years, much of the money sent from Britain for famine relief in 1871 was used to employ labour on deepening the ditch. Tehran was now 11 miles around, but the space within the walls was never completely built up.

In the new quarters space was plentiful and new avenues were laid out leading to the new gates. The southern area had already been occupied by brick-fields, and to the east were several yakhchals, all now enclosed. Because of this and also for reasons of water supply and climate, the north and west of the new town became fashionable garden suburbs. In 1871 the British Legation moved from the south to a large compound on one of the new avenues. It was followed by the Turkish Embassy and Prevot's the first European hotel, and this street became known as "Boulevard des Ambassadeurs", dubbed the 'Belgravia' of Tehran. It was roughly paved with boulders and bordered by 12 ft. high garden walls, built of mud but panelled and covered with plaster, washed blue and moulded into scrolled decorations. This was said to be an innovation introduced after the Shah's first visit to Europe in 1873.⁴⁷ Several other changes followed; a council

of state was formed and a modern mint created. New, wide streets were built and water conduits laid. Streets were named and marked with plaques in Persian script, but the majority of the population were illiterate and continued to give directions with reference to well-known land-marks, thus Gasworks Street, Dr. Tholozan street and French Embassy street. The army was re-organised and a military hospital built. A new square was built to house the artillery and called after it 'Tupkhaneh'. This was surrounded by barracks and six wide avenues led out through gates to the new quarters.⁴⁸ In the Ark a new takiyeh was built, said to have been inspired by the Albert Hall in London, but after the walls were built they were not strong enough to support the dome and so the building remained unfinished.²⁰ The lighting of the Ark and the main street by gas was begun but difficulties ensued with the Belgian firm who had gained the concession and the lamps were replaced with 'native candles'. In 1879-80 electricity was introduced for lighting in the palace but was not extended elsewhere.

European establishments multiplied after the enlargement of the city. The American Presbyterian Mission began its work in Tehran in 1872. The Sisters of St. Vincent de Paul founded a school and dispensary in 1875. Further European countries and the U.S.A. sent diplomatic missions to Tehran,²³ mostly establishing themselves in the northern area which became known as the "European quarter". Following the Reuter concession of 1872 it was hoped that Tehran would have railway connections with the large towns of Persia, or even become

a major centre on a route from Europe to India. However the railway was never begun and Tehran lost what would have been a major stimulus to its development. Even the small Shah 'Abdul 'Azim railway serving the shrine some 6 kms. south-east of Tehran was not opened until 1888 and suffered many vicissitudes even then.

These improvements gave travellers a more favourable impression of Tehran. Many Europeans spent several years in the city and appreciated its advantages. The modernisation of Tehran with the increased water supply from new qanats and the subsequent planting of many new gardens had a favourable effect on climate and it was even supposed that the summer temperatures had been reduced by several degrees, that rains now lasted longer into the spring and that showers had become more frequent in early summer. Tehran became, according to Basset, the most clean and healthful city in Persia.⁴⁹ Stack thought the place had great possibilities and could be made into a station not inferior to the best in the Himalayas.⁵⁰

The expansion of settlement in Shemiran largely accounted for this change. Whereas 50 years before there had been the merest sprinkling of villages there, there was now an almost continuous mantle of verdure stretching from Vanak east to Kamaraniyeh and from Da'udiyeh north to Tajrish and the foot of Tochal.

Further embellishments were added in the 1880's. The Maydan-i-Mashkh

was laid out for daily military reviews. Palaces and parks were built by courtiers including Zill-us-Sultan and Amin-ud-Douleh.¹⁸

The Sipah-Salar, Mirza Husayn Khan began a great mosque in the grounds of the Nizamiyeh palace which was completed by his brother in the 1890's. This mosque with a madrassah attached is still the largest in Tehran and the only one with any claims to artistic merit.

A horse tramway system was inaugurated and run by a Belgian company.(Fig.5)

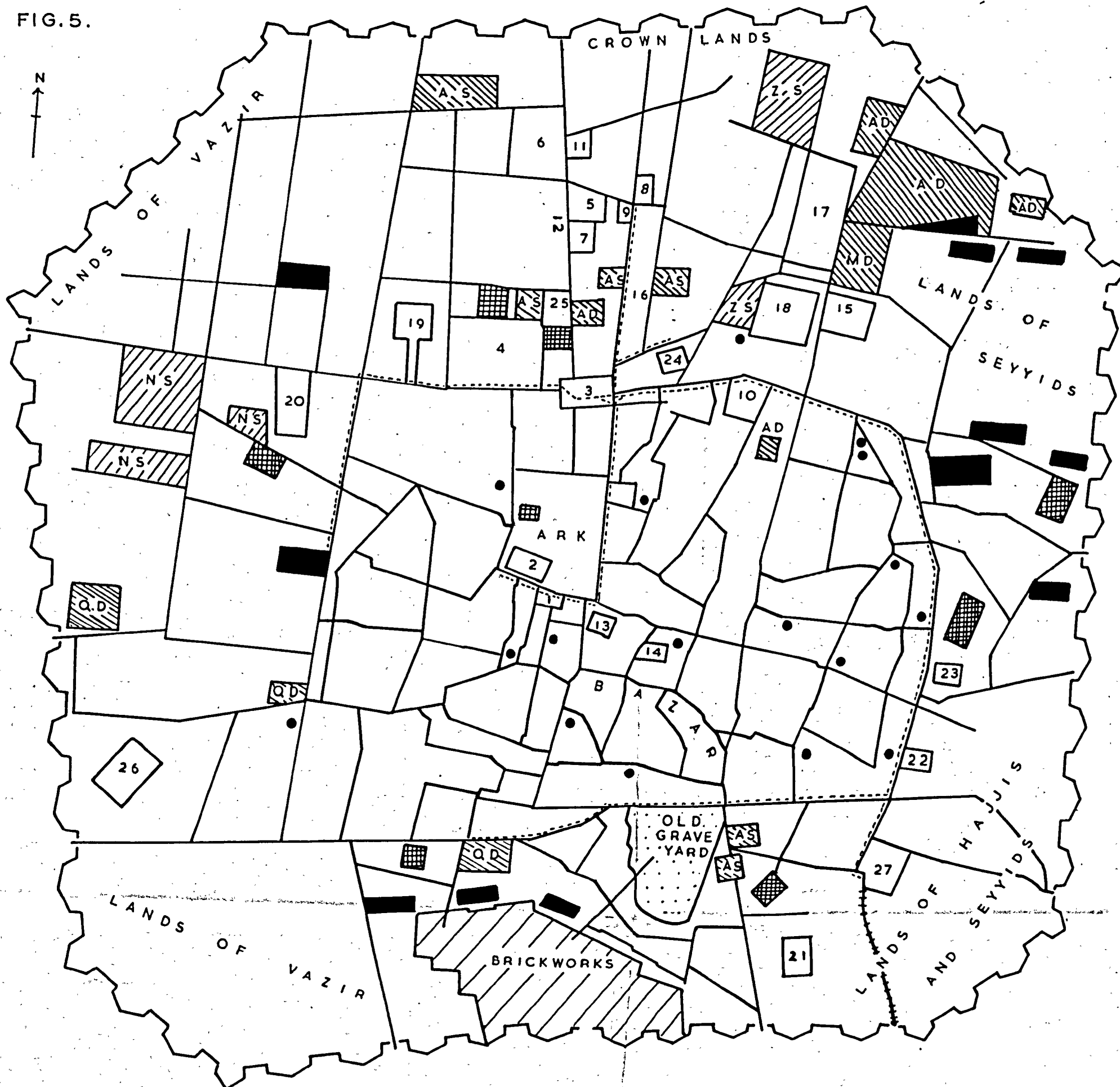
In 1891 Lord Curzon visited Tehran and left a very detailed description of the town.⁵¹ He remarks on the great changes wrought by Nasir-ud-Din who indeed made Tehran capital in more than name alone. However, even then the town had not grown enough to hide the squalid areas of dirt and rubbish which intervened between the walls and outskirts. The city reminded Mrs. Bishop of a man in shabby clothes preposterously too big for him and thought that the impression of decay and retrogression was unjust detracting from undoubted improvements which had been made.⁵² Once inside, Curzon was struck by the incongruous juxtaposition of old and new. Commerce was no longer confined to the covered bazaars, shops with glass windows and European titles lined the main streets. The bazaars, however, were disappointing for a European curiosity hunter as even there European goods seemed to be in the majority, Manchester goods, cheap prints, German cutlery, and Birmingham wares found a ready market.

Two Tehrans began to appear. In the north was the new city,

TEHRAN 1892 after map of Suleiman Khan and students of Royal College

REFERENCE MAP

FIG.5.



LAND OF ROYAL PRINCES
 ZS. ZILL-US-SULTAN
 NS. NAIB-US-SULTANEH

LAND OF HIGH MINISTERS
 AS. AMIN-US-SULTAN
 AD. AMIN-UD-DOULEH
 QD. QAVAM-UD-DOULEH
 MD. MUSHIR-UD-DOULEH

SQUARES

1. SABZ-E-MAYDAN
2. ARK SQUARE
3. TURKHANEH
4. DRILL SQUARE

BATHS

YAKHCHALS

BARRACKS

FOREIGN ESTABLISHMENTS

5. OTTOMAN EMBASSY
6. BRITISH LEGATION
7. GERMAN "
8. AUSTRIAN "
9. FRENCH "
10. RUSSIAN "
11. DUTCH CONSULATE

MOSQUES

13. MASJID-I-SHAH
14. MASJID-I-JAMI
15. SEPAH-SALAR MOSQUE

GARDENS

16. LALEHZAR
17. NEGARISTAN
18. NIZAMIEH

ROYAL ESTABLISHMENTS

19. ROYAL HOSPITAL
20. ARMS MAGAZINE
21. GRANARY

FACTORIES

22. FURNACE FACT.
23. CRYSTAL "
24. GASWORKS

12. "BOULEVARD DES AMBASSADEURS"

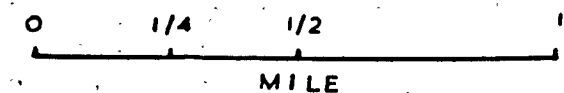
25. STABLES

26. FORTRESS OF THE VAZIR

27. LANDS OF THE RAILWAY STATION

→ SHAH ABDUL AZIM RAILWAY

---- HORSE TRAMWAY



one of paved, watered, and tree-lined avenues, the residence of Europeans and Persians of wealth and position who could be seen parading in their carriages. Here were modern shops catering for the rich, hotels, European restaurants and offices of European concerns such as the Indo-European telegraph and the Imperial Bank of Persia (after 1889). This was modern Tehran, a little showy, perhaps, in its attempt to acquire the attributes of a western city, but yet with originality. In the south old Tehran remained much as it had been in 1800 with its crooked, narrow, dirty alleys and their uncovered drains, with courtyard-type houses huddled together behind their blank walls. Among the houses were scattered the equally featureless baths, mosques and takiyehs of the old town. The shopping centre was the bazaar, those parts of it frequented by the poor being correspondingly mean and untidy. This dichotomy was to grow as the city developed. It is illustrated by the map of Tehran compiled by Solayman Khan under the supervision of Najm-ul-Mulk, the Mathematics professor from Dar-ul-Funun, from the surveys of students from 1868-88, published at Tehran in April 1892. The straight lines of the new street pattern contrast with the maze of alleys and cul-de-sacs in the old town. Information on the map is similar to that of 1858 with its emphasis on religious buildings and the naming of houses of famous men (Fig.5) Maps compiled from this illustrate features of late 19th century Tehran. If non-residential land use including gardens, industrial areas and waste-land is excluded, an impression of the extent of built up land can be formed (Fig.6).

The pattern of streets lined with shops corresponds almost exactly, as would be supposed. (Fig. 7) Residential development extended out from the old town to the south and north, to the north-west and outside the old Qazvin gate. Travellers record that there was little outside these walls before Shemiran, not even gardens. From a little way off the town could hardly be distinguished on a dull day. However, population had doubled since mid-century. As so often in the history of Persian towns, this period of growth was the reign of a strong and capable monarch. Tehran remained a royal capital, the seat of a court which endowed it with greatness. Nasir-ud-Din's assassination in 1896 was a blow to Tehran and marked the beginning of a period of retarded growth, if not stagnation, under the incapable rulers who eked out the Qajar dynasty for another quarter of a century.

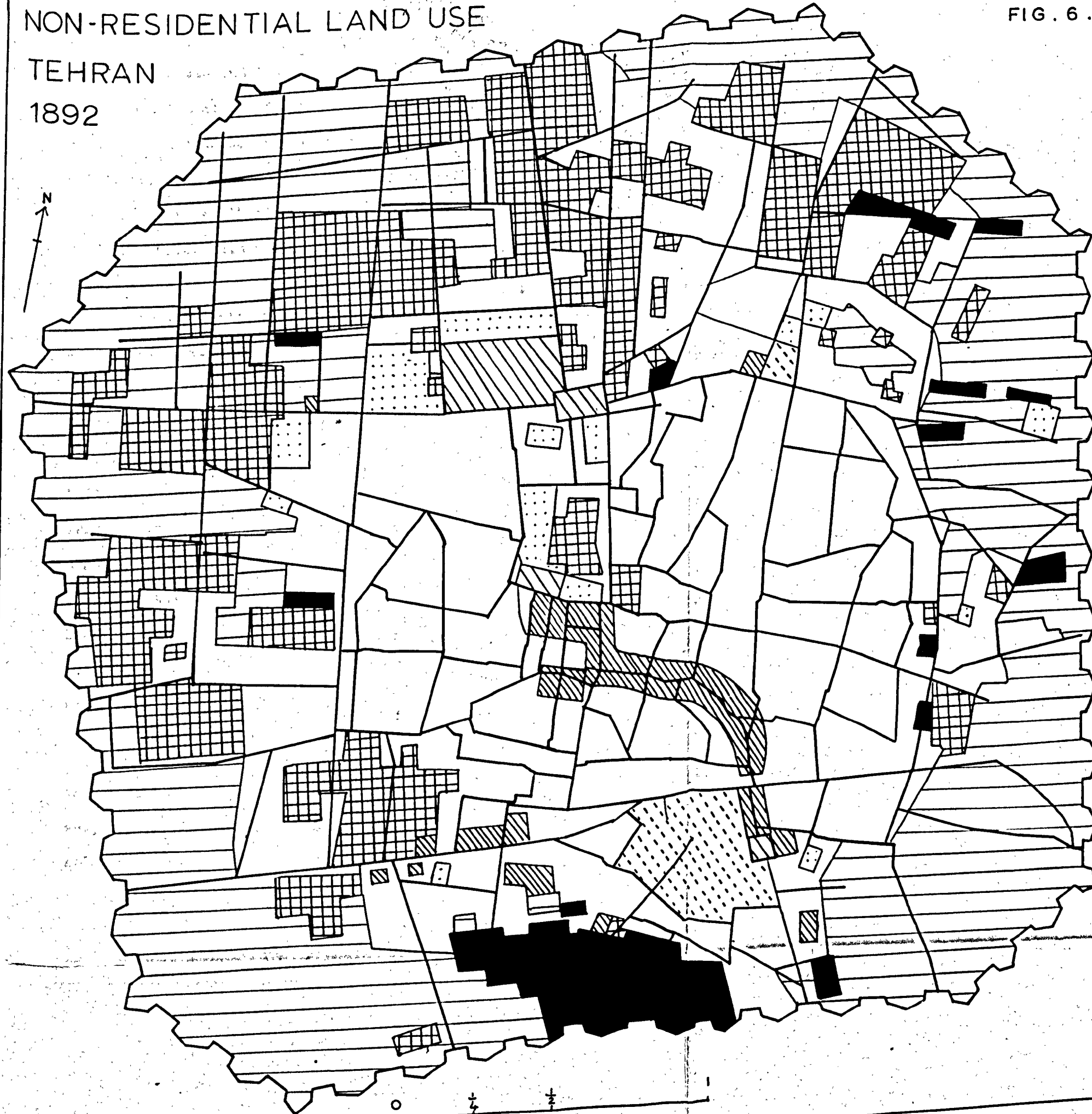
In Isfahan the process of decline continued, still the impressive distant view of its forest of trees and its soaring domes and minarets, but still the disappointment when the city gate was reached and inside miles of ruins mixed with fields and vegetable plots were seen. The ruins were not yet cleared away. Trade had not yet recovered its former importance and Vambéry speaks of magnificent shops used as stables or housing a melon-vendor and of small tradesmen losing their goods in too-extensive shops.⁵³ The streets were still in their former

NON-RESIDENTIAL LAND USE








TEHRAN

1892

FIG. 6.



KEY

-  GARDENS
-  OPEN LAND
-  GOVERNMENT BUILDINGS
-  INDUSTRY
-  SQUARES
-  CEMETERIES
-  COMMERCE

unpleasant state and the houses "of no appearance". Morel attempted to explain the state of Isfahan, saying that although Persians attributed the devastation to the Afghans, it was not solely their work but rather the natural consequence of depopulation following the removal of the capital and wars in the 18th century.⁵⁴ Also the sun-baked bricks did not long resist the action of time and heavy rains, especially in a country where natural degeneration was helped by private and public neglect and carelessness. Bricks from old buildings were taken for the construction of new and peasants used them to fertilise their fields for their saltpetre content. Restoration of ancient monuments was neither to the liking nor the custom of Persians. Rich men would rather spend large sums on building anew than to maintain the houses of their fathers. Nevertheless, occasionally a Persian lord or the Shah himself would restore a monument. In 1855 Gobineau saw scaffolding on the Masjid-i-Shah, following the king's orders, several years before, to repair it.⁵⁵ However, as usual, the money was being claimed but no work done. It even seemed possible that money would continue to be claimed even when the mosque no longer existed.

Isfahan was not, however, completely abandoned by the Shah. In the 1850s Nasir-ud-Din would often spend summer here.⁵⁶ His arrival was, however, viewed as a calamity as rapacious nobles, courtiers and soldiery seized everything which they fancied and paid for nothing.

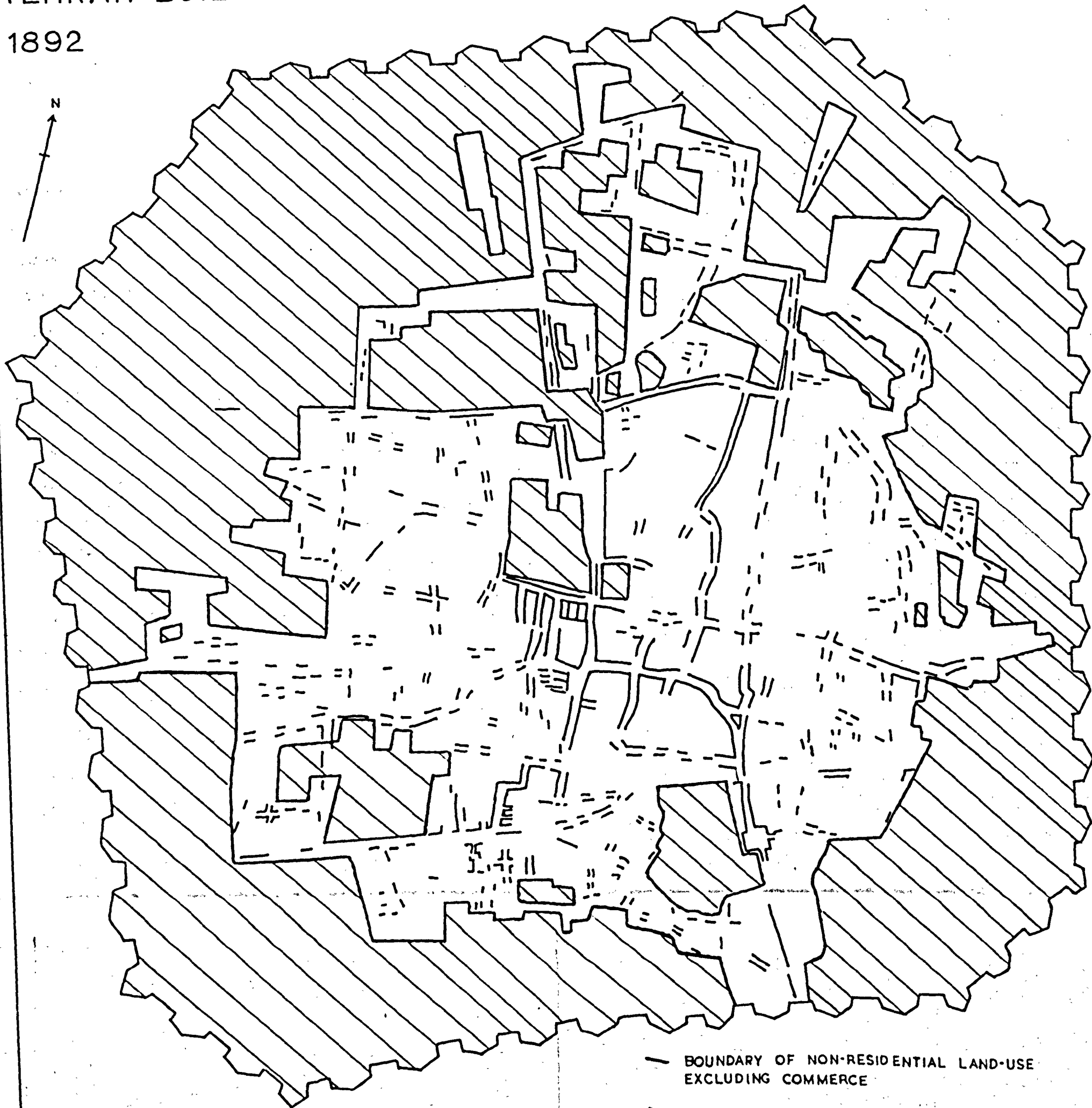
The inhabitants of Julfa went so far as to dismantle their summer-houses to make them uninhabitable. Royal patronage was thus not a blessing, but rather an annual and devastating raid.

Fears for the very existence of Isfahan were again voiced, fears that it would dwindle to the stature of a village, fears that what little was left of its magnificence would be lost through neglect. It was still possible to recognise the former greatness from the ruins of its avenues, squares, bridges and palaces, which made it even more difficult to accept its desolation. These fears, however, were not fully justified. Isfahan experienced a revival after 1866 during the governorship of Zill-us-Sultan, the eldest son of Nasir-ud-Din, but not his heir because of his mother's status. He established himself in the central palace, where he made a hunting-gallery to exhibit his trophies, being, like his father, passionately fond of hunting. The Chehel Sutun was used as a workshop by his tent-makers and a kind of university was set up in the Hasht Behesht. Although he is accused of encouraging vandalism by cutting down trees from the Chahar Bagh for building his Tehran palace and daubing the Safavid murals with plaster and red paint, he can be defended on practical grounds. During this period Safavid palaces such as the Namakdan were demolished and others suffered neglect. This shows indifference to the architectural heritage of Isfahan it does not negate Zill-us-Sultan's concern for the prosperity of the city as a

TEHRAN BUILT-UP AREA

FIG. 7.

1892



— BOUNDARY OF NON-RESIDENTIAL LAND-USE
EXCLUDING COMMERCE

== STREETS LINED WITH SHOPS

0 1/4 1/2
MILE

whole, to which his governorship undoubtedly contributed.

A severe ruler, he effectively suppressed brigandage and brought the turbulent tribesmen of the western provinces to order. This, with his efficiency in remitting revenue to Tehran led to his being given wider and wider powers until two-fifths of Persia was under his rule. He also built up an enormous personal army of 16,000 infantrymen and 6,000 cavalry in 1836.⁵⁷ He was anglophile and treated the Muslim clergy with contempt. In 1869 the Church Missionary Society began its educational and medical work in Julfa and was encouraged by the governor. Several Europeans settled permanently, although they were still forced to live in Julfa.

Despite its physical decay, Isfahan had always remained an important trading emporium, but now it had been overtaken by Tabriz. However, under Zill-us-Sultan, trade was revived and that with Europe, especially Britain, encouraged. Isfahan marked the northern limit of undisputed British trade ascendancy. Large quantities of British cotton goods, crockery, metal-wear, candles and tea were imported and sold in Isfahan and in return opium, carpets, curios etc. found their way to London markets.

Thus for a time Isfahan flourished as the capital of a great prince and resounded with the "pomp and circumstance of military rule". However, Zill-us-Sultan's severity won him many enemies in Tehran who

were jealous of his power. In 1888 he was stripped of all his powers except the governorship of Isfahan and the larger part of his army was disbanded reducing him to the status of a disgraced provincial governor with only a precarious hold on power, and Isfahan likewise lost in prestige.

At this time Curzon saw Isfahan and described its monuments.⁵⁸ The maydan had been used as a barracks, but its arcades were again deserted. Some restoration must have taken place as he saw trees around the square and a canal filled with water whereas both were said to have disappeared earlier in the century. A few stalls remained in memory of the great Safavid market. The Masjid-i-Shaykh Lutfullah retained more of its tilework and was in better repair than the Masjid-i-Shah although foreigners were denied entrance. The Ali Qapu was forlorn and deserted and the Chehel Sutun also unused. Some of the frescoes here had been obliterated with white paint but the main murals were untouched. Other palace buildings such as the Talar-i-Tavileh were being used for official business and the Hasht Behesht for accommodating notable visitors. The bazaar of the Chahar Bagh Madraseh had been used as stables but was then deserted. However, the madraseh itself was still one of the spectacles of Isfahan and "one of the stateliest ruins" in Persia. The Zayandehrud bridges were in good repair. The Masjid-i-Jami', on the other hand, was in decay and also the riverside palaces.

Of all the sights of Isfahan the Chahar Bagh struck Curzon as the most pathetic in the utter and pitiless decay of its beauty. It was now a ruined wilderness.¹⁸ Julfa was only a shadow of its former self and Wills considered it one of the curiosities of the east which would probably cease to exist in 50 years' time.⁵⁹ Although Curzon's famous description of life there as "cribbed, cabined, and confined" was not corroborated by all writers no one could deny the misery and apathy which had taken hold of the population. The young men left for India as soon as possible for their education and for service with merchants and few willingly returned. Left behind was a community of old people and women, living on remittances from abroad eked out by income from wine-making and sock-knitting. The community was not only oppressed by the Muslims but also torn by sectarian differences.

The Victorian travellers were voluble in the praise of the past glories of Isfahan but the city remained, at the turn of the century, still remarkable mainly for its ruins. Very few of the reforms and innovations which were changing Tehran had yet touched it.

Despite the continued acquisition of western features, Tehran in the 1900s still did not live up to its position as an imperial city. To many travellers there was not one building of note and the town

had little beyond its natural surroundings to recommend it. Without the presence of the Shah and court it would have been nothing. It was still possible to ride through the suburbs without seeing anything but blank mud walls and uneven streets; the bazaars were average but no more and the mosques were closed to foreigners. Tehran, in many respects a typical eastern city had suddenly covered itself, at Nasir-ud-Din's command with a western veneer, but as Bradley-Birt pointed out, western influences sat but lightly upon it.⁶⁰

A notable change was that the Bagh-i-Lalehzar which would have provided a much-needed open space in the present city, was broken into lots and built over. Its proximity to both the new quarters and the old made it a valuable site so that it soon became the main shopping centre, where European shops and offices could be found. There were photographers and bookshops, French and Dutch agencies, two large pharmacies, a press and so on.

Artillery square had ceased to be used solely by the army. On it were the offices of the Persian and Indo-European telegraphs and the splendid headquarters of the Imperial Bank of Persia. As for the army itself, here, as everywhere in the city Russian influence was felt, in the setting up of the Cossack brigades. Cossack guards could be seen on important buildings and public departments. The Maydan-i-Mashkh became the Cossack barracks and its gate was known as the Cossack Gateway.

In the south the Shah 'Abdul 'Azim railway station had been completed and was an imposing building with entrance hall, waiting-rooms, platforms, engine-houses and car-sheds, enthusiastically described by Shoemaker.⁶¹ Several modern factories had been founded but all had failed, one reason being the high cost of coal, which even then was of poor quality. Widespread industrialization in Persia awaited the use of oil as fuel. There were still no permanent amusements in Tehran, although a European Club had been founded on Boulevard des Ambassadeurs.

The style of building first adopted after Nasir-ud-Din's European trips became more in evidence in the early 20th century but largely among the rich. Better houses were now built of fired brick and ornamented with stuccoed plaster painted in various pastel colours. Wide verandahs were upheld with columns with moulded capitals and the roofs, often pitched and made of metal sheets were decorated at the eaves. Such a house would often stand alone in its garden but they were found in all parts of the town, even the bazaar area and can still be seen today. The glory of the interiors were the vast chandeliers and flamboyant ornaments. Muzaffar-ud-Din himself built such a palace at Farahabad near Doushan Tepeh.

However, the first two decades of the 20th century saw events in Tehran which not only led to fundamental changes in the city itself but also in the whole country. The revolution began with the 'bast'

of merchants in the Masjid-i-Shah in December 1905. This was a Persian form of sit-down protest in a place recognised as inviolable. A second bast of much greater numbers and effect took place in the British Legation grounds in July 1906 when some 10,000 constitutionalists camped out for two weeks. This led to the setting up of a Majlis or parliament in the Baharistan palace, the former Nizamiyeh of Yahya Khan in October and the signing of a constitution by Muzaffar-ud-Din in December. After the death of the Shah early the following year his successor Muhammad Ali tried to stage a counter-revolution but was forced to abdicate after the nationalists, aided by the Bakhtiari tribes, marched on Tehran.⁶² Sultan Ahmed, a young and weak king, succeeded to the throne.

During the First World War Tehran was outside the area of hostilities but under the control of foreign troops. Up to 1917 these were Russian who controlled the Caspian provinces and Azarbaijan. During their last year of ascendancy there was a failure of crops in north Persia due to drought and rinderpest which led to famine and bread riots in Tehran. This was partly alleviated by Russian distributions of grain, but the disturbances were also of a political nature. This famine and subsequent epidemics of influenza and typhus were said to have reduced the population of Tehran by 100,000 from 1917 to 1919. In 1918 English troops succeeded the Russians. A British force remained in Qazvin up to 1920 with the Persian Cossack

brigade. The Russian officers left in 1920. In February 1921 2,500 Persian Cossacks under their general Reza Khan marched on Tehran and occupied it. A new government was formed with Reza Khan as commander-in-chief and Seyyid Zia-ud-Din as Prime Minister. In 1923 the Shah left for Europe never to return and Reza Khan remained as virtual dictator until he was crowned in April 1926, founder of the Pahlevi Dynasty.

A product of the British occupation was a Military Report written by Capt. L. S. Fortescue⁶³ which gives a detailed description of Tehran with special reference to its strategic importance and vulnerability. In his opinion a more uninviting site for a capital city than the dreary waterless gravel slopes could hardly be imagined. Tehran was still a typical small eastern town with mud walls which were being destroyed as material was taken from them in the north for building and in the south for brick-making. They served only to oblige traffic to use the gates and the moat apparently saved the city from flooding after heavy rainfall. There was still a considerable summer exodus to Shemiran. Fine tree-lined avenues still bordered by high walls existed, but no properly made roads and no drainage. Their surface was of loose earth and water-worn stones which was by turns stagnant mud or choking dust. Underneath ran qanats which were likely to burst or overflow and fall in, ruining the road. Despite this there had been a great increase in the use of wheeled

vehicles instead of pack animals and motor cars were a common sight on Lalehzar. There was in addition to the tramways a cab service of droshkies on the Russian pattern. The main streets were lit by electricity from sunset to 11 p.m. In 1900 a German firm had sent experts to investigate a hydro-electric scheme for the Kan, Haft Houz, Paskaleh and Jajirud rivers which would have powered a tramway to Shemiran and lit the whole town but unfortunately this did not mature. In streets without electricity the 'Municipality', founded 1920, provided a few lamps but most of the lighting was done by shopkeepers. There was even a telephone service with 900 subscribers run by Persians and with good results.

Changes were taking place in the royal palaces. Already the Nigaristan was put to other uses. Qasr-i-Qajar became the Cossacks' summer quarters and Yusufabad was a gendarmerie barracks. The central palace had been neglected for those outside the city and was to many travellers undistinguishable as such. Houses were scarce and rents high as population increased and more Europeans came in demanding houses of high quality. Despite this the city still had an air of decay and dilapidation. Anachronisms like the walls and gates were neglected and looked shabby, ugly mud walls were still the main feature of the city. From outside, a red-painted iron roof occasionally appeared among the trees and the mud roof-terraces. Even the attempts at westernisation seemed to make the town less

interesting as the result was neither truly Persian nor wholly European. The early 20th century was for Tehran both morphologically and socially a period of transition.

In his report, Fortescue discusses Tehran's food supplies. Formerly local supplies were sufficient but population had then reached 250,000. Grain was produced nearby in Varamin Khar, Fashafuyeh which normally provided 85% of the needs, the rest coming from Savah, Sultanabad, Qazvin and in poor years from Damghan and Hamadan. Barley supplies were all local and there was often a small surplus for Qum. Grain for the government stores came from state lands, from taxes, and by purchase from landlords. Sheep, vegetables and fruit were fairly plentiful from surrounding districts, but wood was scarce and coal and charcoal very expensive. Water supply had always been a problem. It still depended on about 40 qanats, 5-8 miles long and 130-150 metres deep, running from the north and dependent on snow and rainfall in the mountains. The supply was uncertain and insufficient and in South Tehran its quality was bad as here small qanats were used which often contained water already used further north. A small amount came from the Karaj canal but over half here was lost by evaporation and absorption. Each house had a cistern filled at periods determined by strict procedures. Water was sold every New Year by the hour, the price varying with the season and with scarcity. Channels (joubs) running down the sides

of the streets were used for irrigation and by the poorer inhabitants for all their needs. Tehran was until mid-century the largest city in the world without a modern water supply.

Isfahan at the beginning of the 20th century was a half-dead city two-thirds ruined and only saved from complete annihilation by its situation and commerce. The dilapidated boundary walls sheltered fields of wheat and barley among the ruins and behind the shabby wreck of the Ali Qapu the palace was now a stretch of waste land and ruins containing fragments of tiles from which here and there a pavilion rose, standing but neglected. Up to 1900 Zill-us-Sultan lived in the palace but then he built a new palace in the western suburbs named Bagh-i-No. This was a great white palace in modern style with a superb garden and it was said that materials for its construction came from old buildings.

However the bazaars were crowded and commerce in a fairly healthy state. Trade had profited from the expanding commerce of England and India making Isfahan the most important city, commercially and politically, in western Persia, and indications for the future seemed good for trade. There were, by 1900, both British and Russian consuls in Isfahan and in addition to the C.M.S., a Catholic mission had set up a boys' school.²³ The prohibition on Christians living in the city was relaxed and this benefitted the Armenians.

Soon 30 Armenian merchants had shops in Isfahan and many artisans worked there. Armenians were employed in banks and the telegraph, but remittances from India still upheld schools and hospitals in Julfa.⁶⁴ People became used to foreigners as they had in Tehran 50 years before and in 1916 Fowle declared that a missionary lady could ride a bicycle down the Chahar Bagh in complete safety, an impossibility ten years before.⁶⁵ In all respects Isfahan became more forward-looking, seeing beyond her ruins and benefitting from foreign influences. More of the ancient buildings such as the Ayineh-Khaneh disappeared completely and those which survived were in a poor state, suffering from vandalism as much as time, but the town itself survived and prospered which was often thought unlikely in the 19th century. Just as the governor was the "Shadow of the Sultan" so the town was under the shadow of Tehran and would never again reach pre-eminence.⁶⁶ Thinking observers could not agree with the tendency to bemoan the decadence of Isfahan and lament over its vanished glory; Isfahan must look to the future to renew itself not by the re-acquisition of its former status but by finding and establishing new functions which would accord with the modern outlook of the country.

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Chapter 2R E F E R E N C E S (Continued)

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CHAPTER 3

TEHRAN AND ISFAHAN IN THE MODERN PERIOD

Part I 1926-41 The Reign of Reza Shah

The founder of the Pahlevi dynasty, unlike many of his predecessors, did not change his capital. To retain Tehran was the only logical possibility as Tehran was the only town equipped as a capital in the European sense. Having no royal or even aristocratic background the new Shah diverted attention from his modest origins and usurpation of the throne in the presence of Qajar princes, by turning Persian minds back to the Achaemenid era, when Persia was a strong and united empire under kings respected throughout the ancient world. Persians were encouraged to think of themselves as pure Aryans like those who lived before the Arab, Mongol and Turkish invasions. The dynasty was named Pahlevi after the language of the Achaemenids. The country was to be known throughout the world as Iran and the people as Iranians. Names such as Daryush, Sirus, and Jamshid became popular, and a wave of neo-Achaemenid and neo-Sasanian art swept over the country. Equally important in the campaign to unite Iran under its new leader was the increased centralisation of government and administration in Tehran. Ever since the constitutional revolution events in Tehran had swayed the history of the country but this became even more marked. Tehran was always first to receive any innovation in town-planning or government

and often the smaller towns were neglected in its favour. However, not one town of any size in Iran escaped the unmistakable imprint of Reza Shah's modernisation schemes. The character of Iranian towns today derives as much from the 1930s and 40s as from the previous centuries of common culture. Some towns received factories and hotels creating industrial and resort towns, types previously non-existent in Iran. Reza Shah's reforms penetrated all spheres of Iranian life and not only those directly concerned with town-planning had their effects on the cities. Even the unveiling of women led to a reduction in the number of public baths (from which unveiled women were banned) and the building of bathrooms in private houses. The adoption of western dress encouraged the establishment of clothing and footwear factories. Universal conscription brought new ideas into the smallest town and village. Modern medicine and better living conditions brought about a great population increase, and the centrality of Tehran so encouraged immigration that there it assumed the proportions of a population explosion.

Changes followed close on the establishment of the new dynasty. By 1928 the first thing to be seen on approaching from Karaj was no longer the tiled gateway but an aircraft hangar built soon after the commencement of regular passenger flights to Tehran in 1927 by a German company. However no roof would yet surpass the trees of the city's gardens. Reza Shah was living in the Gulistan but the Ark

wall was partly demolished and the offices of newly-formed ministries overflowed. Hardoin remarked "chaque année la cité imperiale se fond davantage dans la capitale"¹ Tehran was becoming less a court city and more a modern metropolis.

Lalehzar was still the main shopping street, narrow, straight, full of carriages and pedestrians. At right angles to it Istanbul Avenue, as yet unsurfaced, specialised in shops for fruit, vegetables, fish and meat. Cinemas had now appeared in Tehran. There were four in Lalehzar and one in Istanbul. There was, however, no theatre in the western sense. Lalehzar and Ferdowsi avenues contained modern hotels. Before the 1930s three had been sufficient for visitors requiring accommodation up to western standards. By 1935 there were ten, averaging 15 rooms each and all flourishing. Several had European managements especially German and Russian.

New embassies and consulates were opening and those already present found new quarters. By 1920 the Russians were in a large wooded compound near the British. At the same time the Americans bought land north of the walls. One of the first Pahlevi palaces was the summer resort of Sa'adabad on the slopes above Tajrish in a previously uncultivated area. Another was built on the new Pahlevi avenue which ran from the railway station 11 miles north to Tajrish. In the centre a new palace quarter emerged at the junction of avenues Kakh and Pasteur. First the ornate Marble Palace on the south-east

corner was built, as Reza Shah's reception palace and office.
 The north-west palace was built for the present Shah when Crown Prince.
 The other two palaces housed other members of the royal family.²
 The usual high walls were replaced here by railings giving a less formidable aspect, despite the fact that thick foliage still hid the buildings. (See Map A).

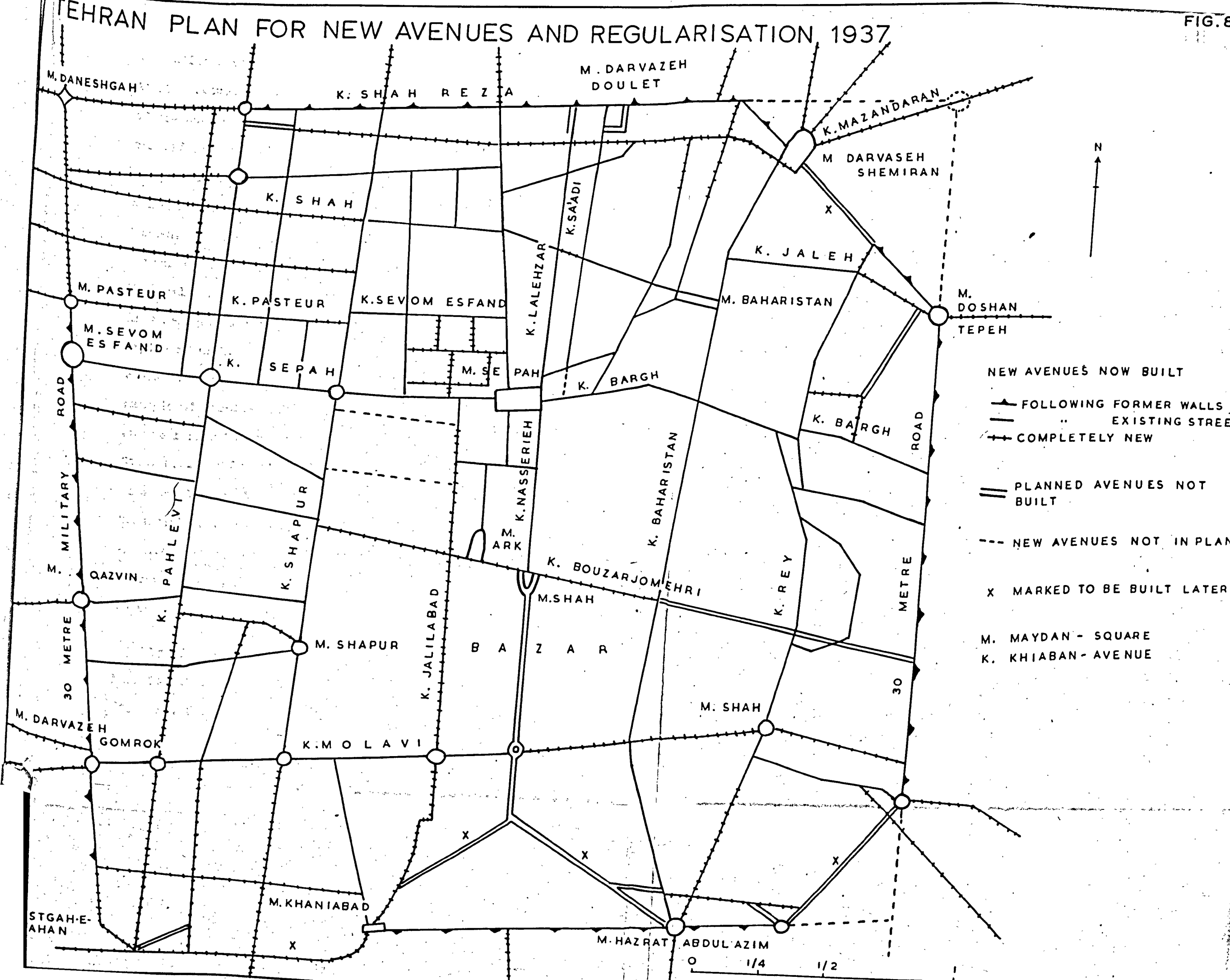
On the other hand the abandonment of Qajar palaces continued. Early in his reign Reza Shah turned Qasr-i-Qajar into a prison. The Nigaristan was demolished in 1928 and a teacher's college and art school built on the site. 'Ishratabad was replaced by barracks. Sulaymaniyeh and Doushan Tepah had long been in ruins and Sultanatabad, Aqdasiyeh and Najafabad were unoccupied and neglected, although later the two former also became barracks. Farahabad, as the most recent Qajar palace was renovated and converted for the Queen. The Niavaran palace of Sahab Qaraniyeh was also occasionally used, especially for visiting dignitaries.²

By the early 1930s work had begun on a new road system for Tehran. The maze of alleys and cul-de-sacs in the old town was ruthlessly cut by new avenues having little respect even for mosques. One, on Avenue Hafez, found itself bisected, the main building on one side and what remained of the courtyard on the other. Not all these were new; old streets and lanes were widened and in the new parts of the town streets were already wide and straight needing only surfacing. New avenues

also followed the lines of the walls. (Fig. 8) This plan took years to realise and is even yet incomplete. New streets were often unsurfaced for long periods and lined for years with the ruins of buildings which had been destroyed. This can still be seen in many Iranian towns where regularisation is proceeding. New street junctions were marked by squares and roundabouts which usually incorporated a statue of Reza Shah and a small garden. These were of value especially in the more crowded areas.

New roads encouraged motor traffic and thus it was soon obvious that the gates and walls could not be preserved. The rampart was already in a poor state and the gates neglected. Accordingly, the mid-1930s saw their demolition. The moat was filled in and the rampart levelled, giving space for new avenues and new buildings to line them. Few mourned their passing. Only later was the loss of the gates regretted when modernisation had deprived Tehran of almost all her characteristic monuments. As Tweedy remarked, the city was becoming modernised into monotony.³ It seemed that the bazaar was doomed to disappear in view of competition from modern shopping centres, but the area remained physically intact. The proposed avenues through it were never built and it survived by gradually assuming wholesale trade as its major function.

New public buildings to house the personnel of a modern state sprang up rapidly. Government departments were first housed in



the Gulistan and other Qajarpalaces nearby. The Ministry of Foreign Affairs occupied the north-west corner of the Ark (until the completion of new quarters on Avenue Hafez in 1937) and the Prime Minister had his office and held council meetings in the Badgir Palace. However, this was inadequate and unsuitable. Tehran was fortunate in having a large area of unused land near the centre, Drill Square or Maydan-i-Mashkh. This became the centre of administration, with large government buildings surrounded an open garden, the Bagh-i-Melli, or National Garden. Characteristically the Police, Gendarmerie and Army headquarters received priority. Neo-Achaemenid and Neo-Sasanian styles of architecture were used and the buildings decorated with reproductions of friezes and capitals from Persepolis. A striking example of Neo-Sasanian building is the Archeological Museum also on the former Maydan-i-Mashkh which is a replica of the palace of Ctesiphon. Departures from this style included the new Post Office on Sepah Avenue, the Opera on Ferdowsi and the Post and Telegraph headquarters on Sepah Square, formerly Tupkhaneh. Sepah Square was an extension of the new administrative area with the offices of the Tehran Municipality on the north, to the east the Imperial Bank, and to the west a large police station.

By 1934 there were 18 hospitals in Tehran,⁵ the largest being the Razi Hospital with 100 beds, the Municipal with 60 and Government with 80. The American Mission hospital was among the largest with 72 beds.

The numbers rapidly increased as more hospitals were inaugurated such as the Shahabad sanatorium in Shemiran, built on the site of a former palace and opened in 1937.⁶

Modern industry grew all over Iran but a large proportion was located in Tehran and its satellite towns. Most of the first factories were built and run by the government Plan Organisation. Examples are the Rey cement factory founded 1933 and employing about 1,000 and the Tehran silo opened 1938. Others were connected with the forces, such as the arsenal and cartridge factories.

The favourite project of Reza Shah was the Trans-Iranian railway, decreed by a law of 1925 and financed by a tax on sugar and tea. It arrived in Tehran in February 1937 linking the city with ports on the Persian Gulf and Caspian Sea. In 1940 work began on the Tehran-Karaj stretch, eventually reaching Tabriz. Coming so late, however, the railway had little effect on the city. Placed on the southern edge of Tehran, between it and the brickworks, the railway station never became a focus of activity. The large area of sidings stores, repair shops and offices behind holds up development in that direction, but this was already difficult with the derelict brickworks there. By the time the railway arrived transport by road was already established, aided by the cheapness of fuel for heavy lorries. The Trans-Iranian was a prestige symbol and engineering achievement but was never worth the funds invested, especially from the taxation of necessities. 4

Widespread electric lighting began in 1937 when the Municipal electric station was built near the Doshan Tepeh Gate square. In 1937 the factory produced over 2 million KW for lighting streets, houses and smaller factories. According to figures in Journal de Téhéran, $8\frac{1}{2}$ million KW were consumed in 1938.

Beneficial as all these changes were, a basic necessity for any large town and especially one in the Middle East had been overlooked, water supply. By 1940 Tehran's population exceeded half a million, but water supply still came mainly from 33 qanats and was distributed in unprotected gutters running along the smart new boulevards. Some qanats were privately owned such as the British Embassy's, known for its purity. Others had been donated to the public. The old Karaj canal was ruined and another channel under the Tehran-Karaj road was not used. Attempts to dig artesian wells had proved unsuccessful and had been abandoned. In 1921 Municipal investigation of a project to derive water from the Jajirud found it too expensive. Following a serious drought in 1926 a new canal from Karaj was built, 52 kms. long. The exit was at Jaliliyeh from which the familiar "joub" system led it to the town. Throughout the 1930s schemes were proposed and rejected and the situation remained acute. This was the greatest problem of the rapidly-growing Tehran.

By 1940 the first phase of modernisation was complete. The new outline of Tehran was traced by wide tree-lined avenues along which

building had taken place with some attempt at control. Although this was not strict, one-storey buildings were discouraged and even, ornamental facades, especially of stone, encouraged. The main avenues were lined with shops with the modern trappings of plate-glass and neon signs, but usually remained small specialised businesses in private or family ownership. In the new residential areas, the courtyard houses were giving way to more modern ones of two or three storeys. They were of fired brick, still plastered over often but without ornamental mouldings, standing to the north of a yard which contained a pool and small garden and still surrounded by a high wall and strong gate. Four storey blocks of flats were built and apartments above shops added, often inhabited by Armenians, who never sought seclusion like the Muslims. The distinctive 1930s style of architecture which was used for royal palaces down to back-street housing is still the dominant feature of Tehran. In the south, however, new building took the form of ribbon development along the new streets, leaving islands where the courtyard and bazaar were still the recurrent elements of urban morphology.

The changes wrought in the period were from the initiative of Reza Shah, whose abdication in the face of British and Russian pressure in the Second World War ended a 15 year period in which Tehran had changed more than in the previous century.

Many features of modernisation in Tehran also apply to Isfahan, although urban renewal here did not take place so early or so extensively as in the capital. Here the walls had almost disappeared by the 1920s, and the gates were being pulled down. This was not for expansion, as the walls were beyond the inhabited area, but rather the removal of ruins. By 1927 Isfahan had an air service from an airfield to the south. Modern hotels appeared in the Chahar Bagh in converted mansions with which this avenue was lined until the late 1920s. These were the residences of Bakhtiari chiefs and other rich men, yellow and white plastered with glass windows and shingled roofs.⁷

The new administration appeared in Isfahan characteristically headed by the army, setting up its headquarters in the Chehel Sutun. (Damage to the mural paintings here was probably done at this time). The Timurid gateway to the Chehel Sutun became the Officers' Club and the garrison of 12,000 men established barracks in the ruins of Farahabad. The old palace quarter provided a centre for administrative building as the Ark and Maydan-i-Mashkh had done in Tehran. The Education department took over the Talar Ashraf and the Opium Monopoly buildings north of the Ali Qapu. The police and gendarmerie built new quarters and a prison. The governor's palace survived but dates only from the Qajar period. Schools also encroached on the area. The Sa'adi boys' school was built in the 1930s. on the site

of the Talar-i-Tavileh and the Sar Pushideh palace was demolished, its site becoming the Ministry of Education sportsfield. Lands to the south were sold and built up privately. (Land here had already been sold in the late 19th century).⁸

Isfahan's new road system was not begun until the mid-1930s. The Chahar Bagh was one of the first to be regularised and surfaced. Shah Abbas's planning thus gave a good start to 20th century modernisation. Darvazeh Doulat was replaced by a large square in front of the new municipality. (Formerly this department was in the Ali Qapu). Opposite the Allah Verdi Khan bridge the Sarpol roundabout was laid out with a statue and gardens. New avenues branched east and west from the Chahar Bagh. Roads were built across the Maydan-i-Shah and the centre laid out as a garden much to the disgust of visitors. Tweedy saw the Maydan disfigured with telegraph poles to add to other indignities.⁹ (Map B) The extension of avenues into the north and east was, however, delayed and is still continuing.

The building of schools and hospitals in Isfahan went on in much the same way, although on a smaller scale, as in Tehran. The state took over the Isfahan and Julfa mission schools and so obtained, among others, the splendid Adab and Behesht Ayin school buildings.⁴ Clinics and dispensaries were attached to the larger factories. The Arts and Crafts School was founded in 1939 by the Ministry of Industry and Mines near the Zayandehrud. Here boys are trained in traditional arts and

crafts, which are thus preserved and revitalised. Many famous Isfahani craftsmen are graduates of this school and the prosperity of the crafts for which Isfahan is famous and which contribute to the tourist trade, can be ascribed to the work of this institution.

Thus far Isfahan experienced urban improvements in common with most Iranian towns, but in the sphere of industry and restoration Isfahan was distinctive in this period. In 1920 Isfahan had no modern factories, but 15 years later there were six large textile factories here with modern machinery using electric power. The tradition of textile manufacture was strong and Isfahan well placed for collecting raw materials and marketing. Sites for factories near the river were available and the water-supply adequate if not abundant. By 1941 there were ten factories spinning and weaving both cotton and wool as well as other modern factories producing matches, shoes, towels and hosiery. In addition a large silo and oil storage plant near the airport employed large numbers. The fact that Isfahan was not on the railway and not served by asphalted roads (until 1962) shows that this is not a disadvantage to an industrial town in Iran. Surplus electricity from the factories was used for street lighting. Industry contributed in many ways to the re-growth of Isfahan. Over half the textile products were exported from the city and most of the entrepreneurs and shareholders were Isfahanis. Trade and commerce were stimulated and Isfahan was still the second commercial centre of Iran. The first position was soon to

be usurped by Tehran but Isfahan was equal second with Tabriz.

The state of Isfahan's ancient buildings before 1930 caused despair of their survival and the prescription of complete rebuilding as the only hope of saving them. Rescue came, however, through the Archeological Department under André Godard. The buildings were closed, scaffolding erected and restoration begun on a scientific basis. In some cases work was urgent and difficult, as on the Masjid-i-Shah where shoddy and incomplete restoration, little more than camouflage, in the reign of Muhammad Shah, was discovered, and the main ayvan was in danger of being detached from the minarets and collapsing. The inscription on the base of the dome in the Madraseh Madar-i-Shah had fallen away completely and forgotten, so a new one had to be designed. Where decay was very advanced, as in Imamzadeh Karar, decorative panels were removed to the Tehran museum and a window from Darb-e-Imam was moved to the Chehel Sutun for safe-keeping. The ancient tile-making industry was revived and produced work equal in quality to that of Safavid times, especially mosaic work for the domes. However, not only had exterior adornment to be replaced but the structure itself in many cases strengthened and repaired. It was found that, despite their magnificence, Safavid buildings were not constructed on the sound principles which enabled Seljuq buildings such as the Isfahan minarets, to survive time, earthquake and neglect.¹⁰

By 1940 Isfahan had become the "Manchester of Iran" if this is

applicable to a city which contained some of the most beautiful buildings in Islam. Although modernisation had not progressed as far as in Tehran, the functions which enabled Isfahan to rise again, even if not to her former level of grandeur and importance had been established. A modern administrative centre had been created, the factories were flourishing and the blue domes and minarets once more arose, not now out of a sea of ruins but above a town which had been not dead but sleeping.

Part 2 1941-64 The Reign of Muhammad Reza Shah Pahlevi.

When the new king ascended the throne he was a young and inexperienced ruler and his country was facing threats of invasion and a severe financial crisis. Latterly Reza Shah had become increasingly autocratic, arbitrary and severe and the country had suffered. The state had been built on the basis of German advice, plant and capital. With the Allied occupation all Germans were arrested or expelled. The factories of Isfahan came to a standstill for lack of spare parts. Road surfacing projects were halted from a shortage of asphalt. Once the heavy hand of Reza Shah was removed many of his injunctions were ignored. The veil reappeared. The Muslim clergy regained their power and formed a reactionary group. During the war little building was undertaken in Tehran. Although population continued to increase the town had extended little beyond

the lines of Nasir-ud-Din's walls. The presence of foreign troops, British, Russian and American, however, brought new ideas. Greely, visiting Tehran in 1943 sums up the first impressions of Americans.¹¹ He was surprised at the lack of a water supply and sewage system despite the half million population. Reza Shah's public buildings were still impressive although some of the older palaces and embassy buildings vied with them. The bazaar was picturesque and "truly Iranian" with its narrow streets and bricked roofs, but on the other hand there was the ultra-modern Darband Hotel, created and once personally supervised by Reza Shah. Such strange paradoxes and the juxtaposition of old and new were the main features of Tehran in the 1940s. Although the visitor might be impressed by the resplendent buildings and broad and shiny avenues the city was one with a European face and an Asiatic body.¹²

The real growth of Tehran was post-war. The half million of 1940 had risen to $1\frac{1}{2}$ million by the 1956 census. Centralising influences increased and a civil service of enormous proportions was centred on the capital. Trade and industry flourished and drew thousands from other towns. The city grew rapidly physically as land speculation opened up many square miles in the north-east and west of the city for development. The unsettled period of the Mosaddiq regime discouraged all investment except in land. The influx of foreigners for trading and as advisors, especially Americans, created a demand for luxury housing.

in Shemiran, where villages rapidly became suburbs connected to Tehran by ribbon development along the Shemiran Road and Pahlevi Avenue. Rich Iranians followed the trend and permanent residence in Shemiran with the use of motor transport daily to work began to replace the former pattern of summer migration. Village shopping centres such as Qulhak and Tajrish expanded to cater for the needs of this increased and affluent population. The eastern and western suburbs were middle class in structure, depending on public transport. New building continued the style of a two or three storey house set to the north of a walled garden or yard, built of the fired bricks which the kilns of south Tehran were turning out in hundreds of thousands to meet the sudden demand.

Sir Clarmont Skrine revisited Tehran in 1955 after six years' absence and noticed many changes.¹³ The volume of traffic had greatly increased, especially buses - 500 had been imported with American Point 4 aid. Taxis were particularly numerous and despite anti-British feeling these were mainly British cars. Although work was in progress on a pipeline to bring water from the Karaj river, the water carts were still common on the streets.

The city centre was moving perceptibly north. It was no longer the bazaar although this continues to be the heart of the country's trade. Even Sepah Square was now outside the modern centre which was focussed on Firdousi Square where Firdousi and Reza Shah Avenues meet.

Takht-e-Jamshid Avenue to the north became the axis of the most modern and fashionable shops. In 1955 Skrine found only one first class hotel in Tehran, but within five years there were at least a dozen here.

The new reign brought more government building, this time on modern European style. In the 1950s the Ark site was built up with the huge Ministry of Finance block on the site of the harem and the Ministries of Interior, Industry and Justice in the west. On Ferdowsi the new Bank-i-Melli was opened with large gardens, tennis courts and a zurkhaneh for the employees. More recently some departments have moved further north, with the Municipalities headquarters on Avenue Villa and the Labour Department on Takht-e-Jamshid.

The City Park was opened in 1960. Formerly the district of Sangalaj, which had become the most congested and of bad reputation, it was avoided by Reza Shah's road system but later taken in hand and the larger part demolished. The park was laid out and around it modern buildings rose. There were plans for a new municipal headquarters here but they came to nothing; only the municipal library has been moved. This is the only large park in central Tehran. Plans for slum clearance in the so-called "Arab quarter" envisage a park there attached to working class housing.

During recent years Tehran has expanded rapidly. The central

areas date from the 1930s in fabric although skyscrapers such as the Bank Kar building and the Plasco Tower, completed in 1963, are beginning to rise above the tin roofs. High buildings are also found along Takht-e-Jamshid Avenue with hotels of 7 or 8 storeys, and the N.I.O.C. building is conspicuous from all parts of Tehran. There is only one large department store, Furushgah Firdousi, but modern shops are widespread. Fanciful modern architecture is a feature of the cinemas built largely in the north. The importance of the new centre along the axes of the Avenues Firdousi, Lalehzar, Sa'adi and Istanbul-Shah is illustrated in the pattern of land values.¹⁴ There are, however, specialisations within it. North Firdousi is the domain of the curio and carpet-seller, south Lalehzar of the jeweller, Istanbul is still a market for fruit, vegetables and fish and the offices of banks, insurance companies and foreign firms predominate on Sa'adi. Most of the new avenues throughout Tehran are lined with shops varying in quality from those similar to bazaar booths to those with air-conditioning and neon signs. There are signs of specialisation such as the congregation of shops selling auto parts in Amir Kabir Avenue. Street markets are found largely in the south such as the old clothes market of Shoush Square.

The bazaar is still a thriving centre although now largely devoted to wholesale trade, importing and exporting. It is still the shopping centre for the poorer but densely populated areas of

south Tehran. Little of the original brick vaulting remains, much being replaced by wood or metal roofing and in the more affluent areas with glass. In some cases buildings up to four storeys high line the street, still as narrow as before, and modern arcades lead from the main thoroughfares.¹⁵

Residence is still predominant in the landuse map of Tehran. The courtyard type still dominates the south and central areas. This often differs little from that described in the 17th century, with as few facilities. One of the poorest areas is outlined by the Avenues Amir Kabir, Sirous, Buzurgmihri and Nasir Khosrou, including the old Jewish quarter.¹⁶ This area illustrates the problems of much of south Tehran. Poor courtyard houses are intermingled with large old houses often containing up to 100 people. There is water but no electricity. The streets are still unpaved and too narrow for vehicles. The occupants are of the low income groups, apprentices, small shopkeepers, errand boys and craftsmen, both Tehrani and immigrants. One tenth of the land belongs to three mosques and cannot be sold. Most of the other landlords do not live there. Difficulties of rehabilitating such an area are great, not the least being that of housing population in relation to work. Several times plans have been put forward for the demolition and rebuilding of the Arab district with the extension south of Sa'adi Avenue to Buzurgmihri with a large circle where they intersect.

Plans for a planned community of working class housing with all facilities have as yet come to nothing.

There are worse slums to the south in the Shoush and Moulavi area including the vast open pits of old brick works which are still inhabited, such as Goudeh Sabunpazha and Goudeh Arabha. However the decree to abolish such eyesores is, in the words of the mayor "bogged down in red tape somewhere in the Interior Ministry!"¹⁶

Planned suburbs exist in Tehran as extensions rather than redevelopment and have been undertaken by bodies such as banks, ministries and private real estate companies. South of the railway station Javadiyeh is a workers' colony of small but adequate houses well placed for factory workers. The reclamation of old brickworks would provide valuable land for such badly needed projects to re-house slum dwellers near their work. Large tracts of development in the north-east include the new suburbs of Tehran Pars, Tehran No and Narmak. (Map A)

In Tehran Pars the bank Sepah had built and rented homes to its employees. The Zoroastrian community has created a new quarter with help from the Bank of India and the Bank Melli has 300,000 sq. metres for building. These are mostly middle-class housing, pleasant and well laid-out. Tehran Pars and other suburbs have been criticised as being dependants rather than satellites of Tehran,¹⁷ which having their own services would relieve pressure on central facilities and on transport. Building being of a speculative

nature, the provision of services has sometimes lagged, but there are shops, schools, and entertainments including a drive-in cinema and lido in Tehran Pars. The Sahab Qaraniyeh housing scheme in Niavaran undertaken by the Development Bank is on a smaller scale but has a thriving shopping centre, its own powerhouse and water treatment plant, post office, service station and bank as well as schools, park and playground. Development in the west includes Shahr-Ara behind the Pahlevi hospital built by a large company of shareholders and the incomplete colony of the Iran Insurance Company. The Kan project, completed in 1964 for housing civil servants, comprises 200 houses and 1,000 apartments in large blocks. This also, however, is envisaged as a dormitory suburb although it has its own services and the area is suitable for the development of industry which has already begun to congregate along the Karaj road. In view of its function, the site so far from Tehran when much open land remains within the city limits is criticised.¹⁸ Planned neighbourhoods and redevelopment within the city would be more advisable. This, however, could only be undertaken by municipal action as redevelopment is not the sphere of the speculator and municipal plans in Tehran rarely reach fruition. In Kan the lack of trees gives the bare appearance of a building site, and there has been little attempt to segregate vehicular and pedestrian traffic. More thought on siting, landscaping and lay-out in the new suburbs is needed and plans for the provision of a green belt

cannot be delayed if Tehran would avoid the physical and social ills of urban sprawl.

Tehran's extension to the north has been in a piecemeal basis in the form of more luxury class housing. Speculation has reached the level where luxury flats remain tenantless while working class housing is sadly lacking. The suburbs between Tehran and Shemiran, such as Abbasabad, are very new and it is common to see houses standing alone in what is still practically desert land, and roads still unsurfaced. North of the Abbasabad road the military occupy a large area which will probably never be used for housing. The gravel hills of this area create problems of water supply. The northern suburbs have no piped supply and rely on wells, qanats or tankers bringing town water. Ribbon development along Pahlevi Avenue is not complete, there are open spaces north of the television station like the Pahlevi Foundation park. Suburbs such as Yusufabad and Vanak, however, may be expected to grow. Along the Shemiran road there is more continuous development, housing extends either side up to Tajrish. In general rents rise northwards, except for old village centres. Both roads are lined with shops, in the village centres are food shops but also prominent are ultra-modern shops selling furniture, hairdressers, restaurants and such innovations as an Autobank, miniature golf and supermarkets. The Shemiran road radio station dates from the Reza Shah period, but the Pahlevi Avenue

T. V. station is only some six years old.

Tehran now covers an area of about 60 sq. kms. an increase of 44 sq. kms. from that inside the 1860 walls. The area brought up for speculation is over twice that of the city itself. However, the rate of building is slackening since the economic crisis of 1962. In the last 30 years Tehran has grown more than in the whole of its previous history. It has joined the ranks of "Million cities" and is a primate city, having 10% of Iran's population.¹⁹ In its morphology it has become more varied and complex than ever before. However, despite its great growth, many features of townscape which can now be observed owe their form to historical antecedents and Tehran is not the town without history which many residents and visitors claim.

During the last 25 years Isfahan has reinforced the three functions for which the foundations had been laid in the Reza Shah period, tourism, industry and provincial government. Restoration and even discovery of ancient buildings still continues. The Daylamite gateway of the Masjid-i-Hakim was recently discovered and the Shaking Minarets have been recently almost completely rebuilt, but retain the feature for which they were named. New frescoes are still being uncovered in the Chehel Sutun. The use of the



Atishgah as a water-tower is a lapse in a story of careful achievement. The comfort of tourists is also being looked to. There are two first class hotels and several others. The new Shah Abbas hotel incorporating the caravanserai of Madar-i-Shah is still incomplete. The surfacing of the roads from Tehran and on to Shiraz has helped tourist traffic although facilities along them leave much to be desired. Daily air services connect Isfahan with many Iranian towns, but the only international flight passing through is that to Kuwait. The Master Plan envisages that a new airport to the north will be necessary for increased traffic and for greater safety. Although the plan considers a rail link there is little chance of this in the immediate future, and in fact little need for it. Isfahan is somewhat lacking in entertainment facilities for tourists. Far more Iranians visit Isfahan than foreign tourists, who would be content with the historical sights. Walks along the banks of the Zayandehrud and on the Chahar Bagh avenues are popular, and the Khaju Bridge is still used as a pleasure pier.

In response to the increased tourist trade many curio and antique shops had sprung up in the last ten years in the Maydan-i-Shah and southern Chahar Bagh. Through them local crafts such as engraving, cotton-printing, miniature painting and tile-work have been given a new impetus and antiques of all kinds brought to light. As in Tehran a large proportion of these merchants are Jewish or Armenian. Craft-work is carried on in the bazaar or in workshops attached to the shops.

It varies very much in quality and there is room for improvement. There are also curio shops in the Qaysariyeh Bazaar.* Carpet shops, as well as hand-printing works and gaz factories are still largely bazaar-centred. These workshops, where ancient crafts are still practised, could also become tourist attractions.

Industry has expanded considerably although textiles are still the main products, there being now 25 modern textile factories employing 18,000 in Isfahan. However, there are still over 25,000 hand looms still in Isfahan and area.** New additions to the industrial structure include soft-drink bottling, oil-milling, cement-making and fruit and vegetable canning. However, Isfahan has none of the unpleasant characteristics of an industrial town. Factories are usually one-storey and surrounded by trees.

Isfahan's importance as a provincial capital is shown in the new administrative buildings. New banks with tasteful tile-work panels line Avenue Sepah, and a new telephone exchange and P.T.T. headquarters have recently opened. ✓ In 1950 the University of Isfahan was founded, at first only a medical school near the Maydan. In 1958 the Faculty of Letters was added in the western suburbs. Now new building is taking place near the site of the Hizar Jarib. At

* The distribution of curio shops in Isfahan is illustrated by maps in Chaps. 6 and 7

** Handlooms are still in use as they produce special types of cloth .. especially for sale to villagers.

present there are 750 students, the majority studying languages and literature. (Map B)

Isfahan today has an air of prosperity. The Chahar Bagh is lined with shops, those south of Doulat square mainly of the modern style. In the avenues to the west shops are usually more old fashioned. The southern part of Shapur Avenue has been taken over by vehicle maintenance workshops and spare parts dealers. Huge yards serve as modern caravanserais for modern caravans of heavy lorries. The Chahar Bagh and former palace quarter including the Maydan are the centre of modern Isfahan. (Map B) To the west are modern middle and working class suburbs. The grid pattern of streets here is partly that of 17th century Abbasabad and partly modern. Here modern houses are mixed with former village clusters and west of Avenue Khayyam buildings are almost purely rural in form, mixed with fields and gardens. To the south-east are similar suburbs but residential areas are mixed with the large compounds of factories and schools around the axis of the new Chahar Bagh, as yet uncolonised by shops.* Land values being lower there is not the speculative building as in Tehran. North-east Isfahan remains very much as it has been for 400 years. Few new avenues run through the maze of narrow streets and courtyard houses intermixed with mosques, baths and local bazaars, some new but mostly old. Jubareh from which

* One such suburb is that of Tabarek or Pa Qala' discussed in Chap. 4 Part 1. Isfahan citadel.

most of the Jews have migrated is the poorest, most unpleasant and unhealthy part of Isfahan. Houses are low, often underground with little light or ventilation and neither electricity nor water. The streets are unpaved, narrow and dirty, unsuitable for motor traffic. This applies also to much of Dardasht west of the Masjid-i-Jami'. Much industry such as hand-weaving and oil-pressing is still found here. A detailed study of its functions and population structure must precede replanning although improvements are badly needed.

Julfa is still inhabited by Armenians although their numbers have decreased and they are now intermixed with Muslims. New buildings are found along new roads such as Nazar, but on the whole housing is old, many houses dating from the 18th and even 17th centuries, proving the assertion that the Julfa houses were better constructed than those of Isfahan. They are still in good condition and could more easily be modernised. Many factories have also been established south of the river including the large cement plant well concealed behind a range of hills. To the south-east new suburbs have developed near the Takht-i-Poulad cemetery and airport.

Water supply in Isfahan has always been a lesser problem than in many Persian towns. However, the difficulty is not of supply but of purification. Water is still drawn directly from the Zayandehrud and from private wells. The flow of the river has been much increased

since the opening of the Kuhrang project in the mid-1950s, but largely for irrigation. Drinking water for the next 25 years has been assured by recent surveys,²⁰ but the laying of pipes has just begun. A modern sewage system is also being undertaken.

The Isfahan Master Plan underlines many of the planning problems of the city. They are, in some respects, less than those of the average European town. Thanks to its historical heritage, Isfahan is supplied with an administrative centre - the palace, a central open space - the Maydan, wide shopping streets and promenades - the Chahar Bagh avenues and riverside walks, a wholesale trade centre - the Bazaar and well-defined and accepted quarters which could be developed along modern neighbourhood unit lines. Julfa is valuable as a satellite and the advantages for industry are obvious. The improvement of agriculture in the oasis will provide more raw materials and greater food supplies for the growing population. With careful husbanding of her resources, a realistic programme of urban reforms and improvements and a thorough realisation of her function and status in the modern urban hierarchy of Iran, the future of Isfahan is assured.

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P A R T I I

THE EVOLUTION OF CHARACTERISTIC MORPHOLOGICAL FEATURES OF TEHRAN AND ISFAHAN.

Having now traced the historical development of the two cities through periods of growth, decay, and stagnation; certain morphological features within them may be examined in detail to show how these have aided in, or reflect, the evolution of the cities. These have been chosen as being typical of Persian towns as a whole, or of those which have, at some period, had a large degree of administrative importance.

CHAPTER 4

DEFENCES

Part I

Cities such as Tehran and Isfahan have long histories of successive wallings. The necessity for reconstruction has arisen through the acquisition of status, natural growth and damage during wars, not to mention gradual decay through time and by reason of the materials used. Not only does the position of walls, gates and forts change in time, but also their composition, appearance and even function; defence has usually, but not always, been the prime consideration.

The early inhabitants of Tehran appear to have defended themselves adequately without walls,¹ and even as late as 1403 Clavijo asserted that there was no town wall although Tehran was "a very large place".² It needed the patronage of a king before the first walls were erected. The second Safavid, Shah Tahmasp, presumably wishing to strengthen settlements near his capital, Qazvin, walled Tehran during his reign, 1524-76. According to Zinat-al-Majalis this wall was one farsakh in length.* Sani'-ud-Douleh in Mir'at-ul-Buldan corroborates this giving the length of the wall as 6,000 gam,

* The Persian unit of length, a 'farsakh' or 'parasang' is generally considered to be approximately four English miles, which would equal the number of paces mentioned.

or paces.³

These accounts add that the wall had 114 towers, the number of suras in the Koran, and under each tower the text of a sura was buried, possibly for astrological reasons. * **

There were four gates - Darvazeh-i-Hazrat 'Abdul 'Azim, Darvazeh-i-Shemiranat, Darvazeh-i-Qazvin, Darvazeh-i-Doulab. As the length of the early 19th century wall is also about 4 miles so it is reasonable to suppose that these gates were identical with those of the same names on the 19th century maps. They also represent the ancient routes to and from the city. Shemiran was early appreciated for its climate and waters and the ebb and flow of people seeking its refreshing coolness in summer would require a gate to the north-east. The Doulab gate served the busy road to Khorasan used by caravans of merchandise and pilgrims, with easy access to the bazaar area. This gate was named after a satellite village of Tehran about a mile to the east. The Qazvin gate served the western route to Qazvin and Tabriz and between them the two last-named gates connected Tehran with the great east-west route along the southern edge of the Elburz. The 'Abdul 'Azim gate led directly from the main bazaar on what is perhaps

* Texts from the Koran are considered by many Shiite Muslims to have magical powers. See B. Donaldson, *The Wild Rue*. London 1938.

** Minorsky, op.cit. states that exactly 114 towers figured on Berezine's plan of 1842. However on the maps available in this study, 105 towers are shown.

the oldest route way from Tehran.⁴ Through this, pilgrims went to the shrine of 'Abdul 'Azim and Qum and also traffic to Isfahan and southern Persia. The absence of a gate on the north and north-west reflects the lack of routes striking off in this direction, and the residential nature of Sangalaj.

The appearance of the defences built by Tahmasp is not recorded, but the implications are that their outline was an irregular square, similar to that of the 19th century. There are no records of outworks or other fortifications and the wall was probably a single one of sun-dried mud and brick bastioned by the towers already mentioned, some 30 ft. high, tapering from the base and similar to the Isfahan wall of this time, although less elaborate. Outside there would have been a dry moat formed by the excavation of earth to build the wall, although early writers also assert that earth was taken from borrow pits in Chal-i-Maydan and Chal-i-Hisar,* thus giving the quarter names which still survive.

The gates were probably not elaborate, but protected by towers and with a causeway over the moat. Herbert⁵ and Stodart⁶, writing in the 1620s, mention that the town was walled but add no detail.

The defences of Tehran were strong enough to resist the attacks of the Afghans for some time. When the city was eventually taken

* Chal - a Persian word meaning excavation or hole.

Hisar - from a Turkish word meaning castle.

the Afghans set about to rebuild and modify the city's defences being careful to ensure their means of retreat. According to Mir'at-ul-buldan, the Afghans built the gates Darvazeh-i-Doulat and Darvazeh-i-Ark.³ These would seem to be both the same, namely the gate later known as Doulat leading from the Ark. This indicated a need for access directly from the Ark to the north.

Little information is available on Tehran during the 18th century, but Hanway, who visited Persia 1743-8 described Tehran as "enclosed with a wall of earth which has many round turrets, but the whole is much decayed."⁷ This was only to be expected during the anarchy of the Nadir Shah and Zand period when repeated attacks were made on Tehran.

Tehran became capital in 1786 and Agha Muhammad Khan completely renewed the fortifications of the city. By 1796, the last year of Agha Muhammad's reign, Olivier could say, "ses murs present l'aspect d'une ville neuve ou entièrement renouvelée".⁸ The new wall was also built of earth, but thick and high, and its ditch wide and deep. He implies the existence of four gates by saying that the town was square with a gate on each face, and before each gate was a great round tower as an outer defence 300 paces away, with a terrace for cannon. Ker Porter⁹, Dubeux¹⁰, and Flandin and Coste¹¹, also describe these large circular towers or "fortins" encircled by their own ditches. They survived until the new walls were built.

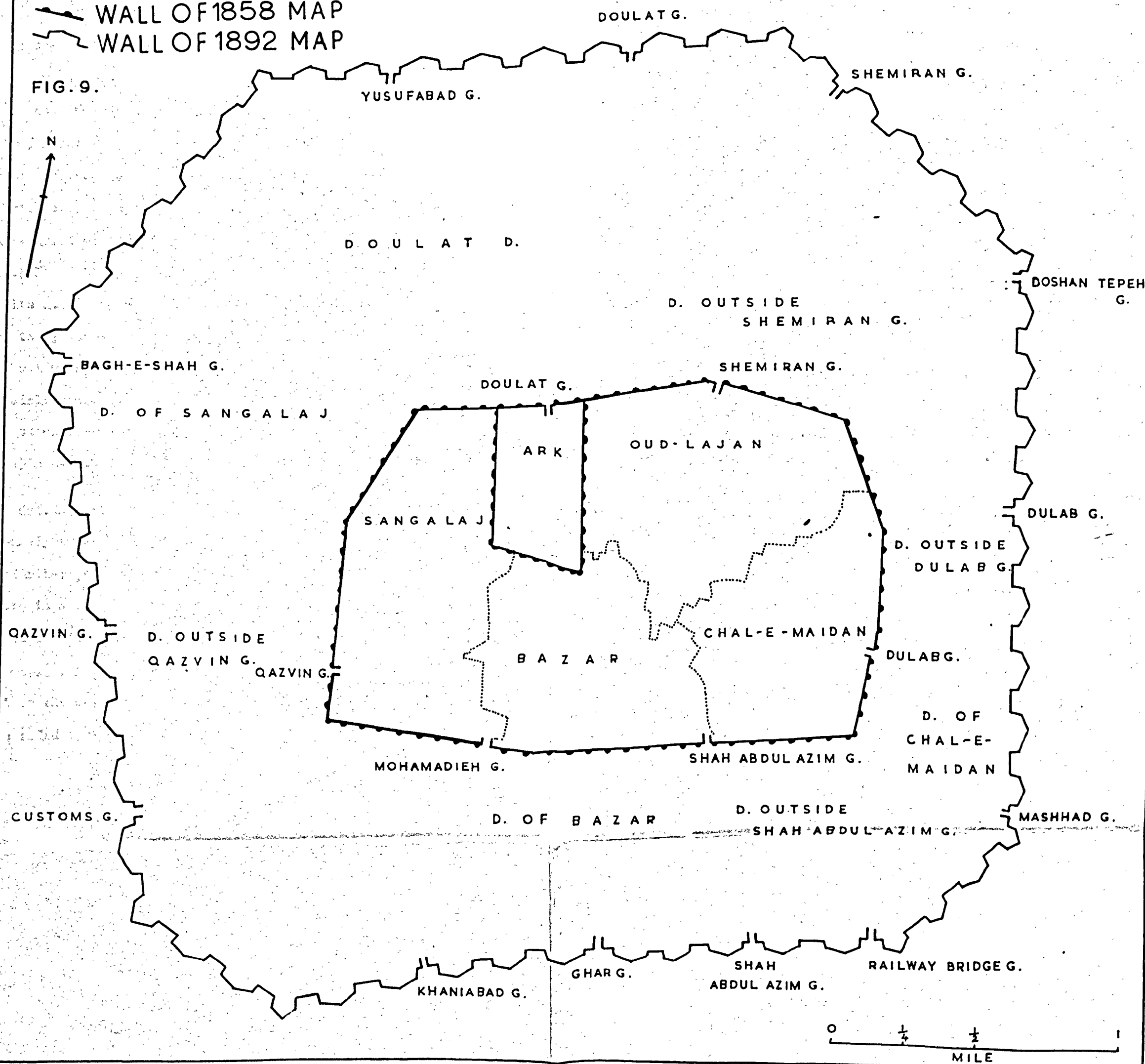
There is difference of opinion as to the number of gates in Tehran in the first half of the 19th century. Some travellers say four, including Dupré who alone lists them: Kazwin, Dewlèt, Kasrei Kâdjâr or Tchimran, Châh Abdoul Azem (sic)¹² This is obviously faulty in omitting the Doulab gate. Others, including Ouseley¹³ and Morier¹⁴ give the number as six. In addition to the five gates already mentioned as existing in the 18th century, another must have been added before 1858 (Fig.9), this was known as the New Gate or Darvazeh-i-No. However, according to Nijeholt¹⁵ and the maps of Krziz and E'tezad-as-Saltaneh, it was the Muhammadiyeh Gate named after Muhammad Shah. No doubt it was the New Gate in popular speech, with the official name used on maps etc. The New Gate is singled out by Binning as being the only one with any pretention to elegance.¹⁶ It was "the finest portal of Tehran although neither the materials nor style of architecture are worthy of commendation", built chiefly of brick with "a large grotesque representation of Rustam and the White Demon in coloured tile-work". The gates were all very similar. Morier described them as inlaid with coloured bricks and figures of tigers and other beasts in rude mosaics.¹⁴ The entrance was lofty and domed, "better than any other of the fortified places of Persia." Many authors mention coloured bricks, tile mosaics and ornamental turrets. They incorporated guardrooms and custom-houses especially those near the bazaar, and causeways over the ditch, now 20-30 ft. deep and 40 ft. broad.

TEHRAN WALLS AND GATES

G. GATE
D. DISTRICT

WALL OF 1858 MAP
WALL OF 1892 MAP

FIG. 9.



The length of the new wall was probably the same as that of the former one. This is borne out by observations through the 19th century when 4 miles or 5-6 kms. are often quoted. Descriptions of the wall and opinions as to its efficacy vary however. As early as 1805 Jaubert described the fortifications as "mediocre"¹⁷ and Morier declared that in parts the ditch had fallen in and was supported by brickwork.¹⁴ Kinneir considered the wall with its towers "strong" and remarked on the "noble dry ditch with a glacis between it and the wall."¹⁸ Not much later Fraser described the wall as "dilapidated" and its guards as "squalid".¹⁹ In 1820 according to Gordon, they were in "pretty good repair".²⁰ After this the general opinion of them was poor, all agreed that they were of little military use and certainly could never withstand an attack with European arms. This lack of maintenance perhaps reflected the comparative peace of the mid-19th century, after the treaty with Russia.

Col. Stuart (1835-6) leaves a good description; "The walls are immensely thick and strengthened by mounds of earth. The gates are further protected by earthworks and the walls flanked by small towers in a ruinous condition. The walls are of mud, their summits jagged and finished by banquettes. The counter scarp is very much the worse for wear and the earthen mound between the scarp and wall foot is the only solid part of the defences".²¹ Ussher at the same time added that the deep ditches were nearly filled up with dirt and

rubbish.²² Goldsmith was even more critical; he called the wall "mean", the ditch "clumsy and uneven" and the whole thing "ill-calculated to resist determination if provided with a pop-gun".²³

These walls continued to decay until demolished by Nasir-ud-Din in the 1860s. By then the city had spread outside them, but a new walling was not^w strategically necessary. The scale on which the new walls were laid out was lavish, the space enclosed being never closely built-up. However Nasir-ud-Din had many ideas for improving and embellishing his capital and the new walls were among his greatest undertakings. The new rampart was constructed at an average distance of a mile from the old, laid out by General Bülér after Vauban's system, copied from the fortifications of Paris at that time (Fig.9). It was 11 miles in circumference, with 12 gates. The ramparts with 58 spear shaped bastions were built from earth alone with no masonry work and no guns. The outer defences were a ditch with a steep outer profile and inwards, a sloping bank up to 40 ft. high. The ditch was first dug prior to 1870, but, according to Curzon, was deepened in 1871, the labour being hired with money from England given by the Persian Famine Relief Fund.²⁴ The work was finally completed in 1874. Without guns these walls could never be useful for defensive purposes, and the type of construction was unsuitable for Persian conditions. They seem to have served no other useful purpose but to facilitate the collection of taxes on merchandise.

In 1873, March observed that the debris was not being made into proper slopes, but "thrown up anyhow in a confused heap"²⁵ and Arnold remarks "for the most part there is no wall, only an irregular trench at the side of which sand is carelessly heaped".²⁶ At the same time Anderson added that in several places the wall was in a most ruinous condition; heavy winter rains washed down the embankments.²⁷ There was little attempt at maintenance or repair.

By 1903 the walls were described as "a hollow pretense" and smugglers could easily cross the tumbledown ramparts. By 1920, due to the dilapidation of the walls, even energetic travellers could no longer walk along on them. A useful feature of the fortifications was recorded by Fortescue.²⁸ The moat served as a receptacle for flood-water after a cloudburst; otherwise Tehran would have been flooded. Apparently it was in some places full to overflowing and the gates had to be shut up and banked. Clapp's is the last full description of the walls before their demolition and the filling-up of the ditch, in the mid-1930s. The walls was "an ugly rampart or embankment of gravel, on the outside an ancient moat or ditch 100 ft. wide, 50 ft. deep."²⁹

More impressive to the travellers were the new gates. Their names are given by Browne, Fortescue, and the 1890 map. (See appendix I). The Shah 'Abdul 'Azim, Doulab, Shemiran, Doulat and Qazvin gates are named after their predecessors on the old walls and lie opposite them.

The successor to the New or Muhammadiyeh gate is Khaniabad on Fortescue's list, named after a village to the south-west, but Browne gives the old and popular name, Darvazeh-i-Nou.³⁰ Of the new gates Doushan Tepah, Yusufabad and Bagh-i-Shah led to and derived their names from Qajar gardens and palaces. Horse races were held around the Bagh-i-Shah and its gate in Browne's list as Darvazeh-i-Asb-Davani (Race-course Gate). Browne appears to have given the popular names, whereas Fortescue and the map have the official names. The thirteenth gate, mentioned by some writers and appearing on the map, is the Darvazeh-i-Pol-i-Rah-i-Ahan or Railway-bridge Gate, the place where the Shah 'Abdul'Azim railway, inaugurated 1888, emerged from the walls and crossed the ditch. (Fig. 9).

Not all the travellers appreciated the architectural style of the new gates. They are described as "gaudy", "crude and ill-executed", "tawdry", "fanciful but inartistic". They were all of similar design, but yet all different in ornamentation and detail. More enthusiastic descriptions come from Orsolle, "une porte formée de trois hautes arcades à flèches élancées, et revêtue de nakadjis (naggashi-paintings) vivement coloris".³¹ Shoemaker mentions the green and white tiled archways with a gaily coloured representation of the Persian Lion above, and adds that the twelve stately and gaily decorated gateways made a brave show.³² A prominent feature were ornamental minarets - "un fouillis de tourelles", "pointed arches and slender minaret-like spires",

"colonettes fuselées." The tilework picture of Rustam from the old Darvazeh-i-Nou may have been moved to the Shah 'Abdul'Azim gate where such a picture was seen by Stack in 1882.³³ The gates were appreciated as picturesque if nothing else until their demolition in the 1930s which was generally regretted by travellers and residents. These gates were also closed at nightfall and guarded until the 1920s at least.

With the modernisation schemes of Shah Reza, the gates and walls of Tehran were an obstacle to road-building and were removed. By 1936 only four gates remained and none by 1939. Morton in 1945 saw barriers of debris from the walls, lately torn down and the building materials re-used.³⁴ Some of the tilework from the gates was used in later buildings, but it was agreed to be of little value. The ditch was filled up with earth from the rampart and the land levelled, Harris describes this process, but his assertion that the land was being built over with small brick villas like a London suburb is misleading and inaccurate.³⁵

The form of the ramparts was preserved longest in the south near the brickfields, but now all surface expression has disappeared. The outline of both ramparts can, however, easily be traced on modern maps with reference to the old. A noticeable degree of correspondence is evident between the alignment of the wallings and the modern street pattern. (Fig. 8)

It may be assumed that Nasir-ud-Din's demolition of the former wall was complete. Streets corresponding to its alignment appear on all sides except the north-west and south-west, with important street junctions on the sites of the gates. The regularised and widened street pattern reinforces the outline. Similarly the later walls gave rise to boulevards in the true sense of the word. Here the roads took the place of the ditch and the rampart provided the site for lines of buildings with the typical facades of the 1930s, so common on the new 30 metre thoroughfares. This pattern again can easily be discerned on modern maps and air-photos, and the roughly square outlines of the two walls have served as the basis of the north-south - east-west grid which is the dominant street pattern of modern Tehran. Former gates have become main street junctions and roundabouts, often retaining the name of the former gate e.g. Maydan Qazvin etc.

Because of its different history Isfahan has had a very different experience of fortification. Early records state that Jay/Shahristan had a wall with 100 towers. Ibn Rustah, 9th century, names the gates of Jay, - Bab Khour or Bab Zarim Rud, Bab Asfij, Bab Tirah, Yahudiyeh gate. Muqaddasi in the next century describes Yahudiyeh with twelve gates. In 1052 Nasir-i-Khusrou says Isfahan as a whole was surrounded by a wall $3\frac{1}{2}$ leagues in circuit, with battlements and

a gangway running along the summit, built by Rukn-ud-Douleh the Buyid monarch, and modified by his son Asad-ud-Douleh and Tughril Beg the Seljuq.³⁶ It is extremely difficult to postulate the positions of these early walls as no map evidence is available of the location of the twin cities, Jay and Yahudiyeh.

The earliest European travellers before the Safavid era give little information about the fortifications. According to Barbaro, Isfahan was "walled about with mudde and ditched having about 4(?) miles in circuit", and Contarini at the same time mentions a wall of earth, similar to that seen in other towns.³⁷ It is only, however, with the reign of Shah Abbas I that Isfahan as it appears today came into being. Herbert mentions twelve gates which may correspond to those of Yahudiyeh (Muqaddasi). However no assumptions can be made as 500 years of intermittent warfare separate the two descriptions. Isfahan was nine English miles in circumference, oval in form, with a wall "of no force against cannon".³⁸ Four of these gates had been lately shut up, including Gouidest and Chaly (sic)* which are not heard of again. Dar Mergh is also mentioned, the Der Mark of Tavernier³⁹ and Thevenot⁴⁰ and Derwazeh Murguy of Kaempfer⁴¹ which according to him was closed in order to arrest the progress of plague.

* Names of gates in this section are given as by the travellers with no attempt at correct transliteration and translation. See Appendix I.

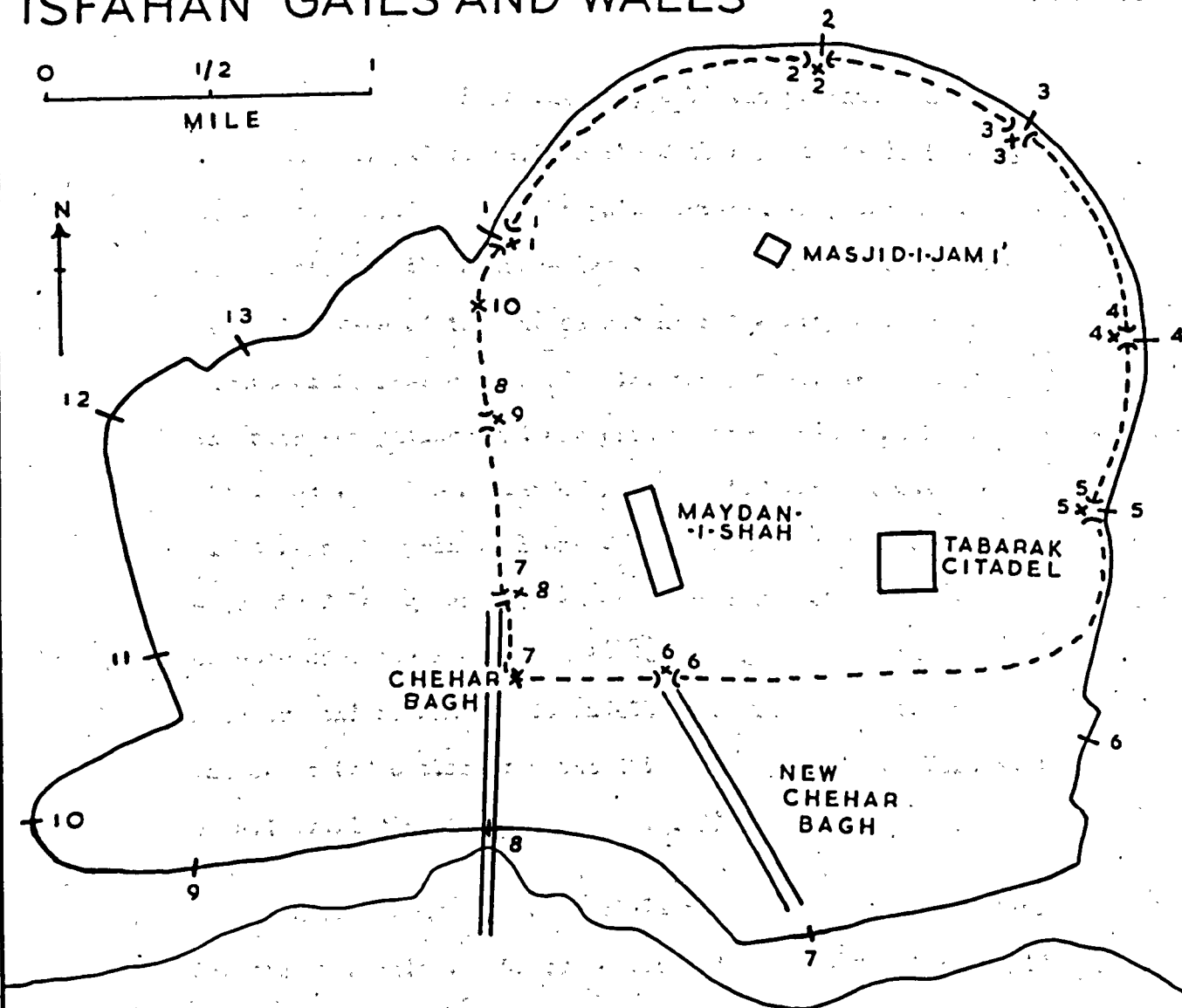
The name could be derived from the Persian word for death. The fourth gate closed was the Cherbagh gate "lately made into a royal garden". This name does not re-appear until Cost's map of 1840, although there must have been an opening from the Chahar Bagh to the Allah Verdi Khan bridge. Chardin also affirms that four gates out of the original number had been closed for superstitious reasons.⁴²

A table of the names of gates given by Herbert, Tavernier, Thevenot, Chardin, Le Bruyn and Careri shows there is considerable agreement on the names and positions of Isfahan's gates during the Safavid period (Appendix I) (Fig.10). Dar-i-Dardasht, Joubareh and Tokchi led north to Qazvin, Qum and Meshed. On the west the gates of Kherron and Seyyid Ahmadian led east to Yazd and India. These five gates were very likely on the sites of those of the same names on Coste's map, as they enclose the oldest part of the city, and their location agrees with the descriptions of travellers. The Hasanabad gate in the south led to Shiraz across the Khaju bridge, alternatively known as the Hasanabad or Shiraz bridge. The distance of this gate from the river is not mentioned by Chardin, but the suburb of "Cadjouc" lay between and so the gate lay much further from the river than Coste's Khajou gate. (Fig.10) This gate was at the end of a bazaar and Chardin claimed that it was the oldest gate in Isfahan being named after the ruined palace of Hasan* built 450 years before.⁴³ Dar-i-Doulat or Dar-i-Shah and Dar-i-Lumbun on the west

* This Hasan was the Ussun Cassan of Barbaro etc., an Aq-Qoyunlu or White Sheep Turkoman ruler, came to power 1468, died 1479.

ISFAHAN GATES AND WALLS

FIG. 10.



19 TH CENT. WALLS MOREL & COSTE			17TH CENT. WALLS (RECONSTR.)		
GATES	CHARDIN 1670	LE BRUYN 1703		MOREL & COSTE 1840	
1	DEREDECHTE	1 DARIDEFT	1	DERDECHT	1
2	TOKCHI	2 TOGT-SJIE	2	TOKHTCHI	2
3	JOUBARE	3 SJAEBARN	3	DJOUBAREH	3
4	SEIDAHMEDION	4 SEYDACH-MOEDJOEN	4	SEID AHMEDION	4
5	KHERRON	5 CYKAROEN	5	KIARROUN	5
6	HASSENABAD	6 HASSANABAET	6	ZILLEH	6
7	DEULET	7 HADJSJIE	7	KHADJOU	7
8	LOMBON	8 DOULET	8	TCHARBAGH	8
		9 LEMBON	9	MARNOUN	9
		10 NAVV	10	SIPOULEK	10
			11	DJOUHOUZAN	11
			12	BIDABAD	12
			13	KIARROUN N.W.	13

led to Hamadan. Here the city wall was probably the same as, or very near the palace wall as the Chahar Bagh itself is called a suburb by Chardin. Le Bruyn's Dervazeh Now, Dervazeh Lamboen and Doulet are "of the Chiaer-baeg". Chardin adds that the Imperial or Doulet gate of the palace was near the city gate at which the suburb of Abbasabad began. Tavernier and Thevenot's Der Vasselchab was near the palace, and are perhaps the same as Herbert's Tebriz-about gate. The number of gates quoted varied, but the above eight were the principal ones. In addition Chardin says there were six false gates or openings, the addition or omission of one or more of these would lead to differing totals, and names quoted by some travellers and not found elsewhere perhaps refer to these. The suggested outline for the 17th century walls of Isfahan is based on all available information. (Fig. 3)

Although they give several lists of names, few travellers describe the gates. Careri speaks of them as "petites, malfaites, couvertes de fer."⁴⁴ They cannot have been very impressive. Neither apparently were the walls themselves, although more fully described. Provins says they were "muraîles de terre simples, prise au pied de celle-ci et de la terre on a fait des fossés."⁴⁵ Tavernier also describes walls of earth and pitiful towers without battlements or platforms, bastions or redoubts or any other fortification.³⁹ The moats were also bad, neither broad nor deep but

always dry and in places people had beaten down great gaps in the wall in order to reach the city by the nearest way. Chardin remarks significantly that the wall of earth was badly kept, covered by houses and touched by gardens inside and outside, so that in several places one had to search to find it.⁴² Thus several travellers were led to say that Isfahan had no walls, one of them being Pouillet who said there were walls only in parts near the palace.⁴⁶ Le Bruyn also adds "on ne saurait distinguer la muraille que la (Isfahan) separe des fauxbourgs, parce que les maisons y sont jointes".⁴⁷ Isfahan was thus very weakly fortified and the last record before the Afghan invasion, given by Bell, sums up the poor state of the town's defences. "The city is almost quite defenceless, with only a slight wall around it, built of sundried mud and broken down in many places."⁴⁸ Estimates of the length of the wall were thus arbitrary. Attempts were made in hours, paces, kilometres and miles. The 20,000 paces of Chardin, and under 12 miles of Careri would seem the most realistic; Lockhart also suggests 11 miles as being a reasonable estimate for the circuit of the walls at this time.⁴⁹

The fate of Isfahan's walls during the 18th century is uncertain. Kinneir asserts that they were entirely destroyed by the Afghans:⁵⁰ They obviously wrought great damage, but at some stage before Coste made his map the walls were rebuilt and extended to include the southern and western suburbs. One of the few pieces of information concerning

this period only confuses the problem - on his return from harrying the Zands in Fars, Agha Mohammed Khan Qajar is said to have dismantled the fortifications of Isfahan. Little light is thrown by travellers in the early 19th century. Dupré states the wall was of earth, with towers, but no cannon, and in ruins in some parts.⁵¹ His list of 13 gates agrees in names and positions with those of Coste's map. Ouseley says there were 12 gates.⁵² Briand speaks of walls "fort basses et peu solides",⁵³ and Gordon, while noticing regular gates which served as custom-houses says that if there was a wall around the city it was imperceptible.⁵⁴ Many writers of this time are completely silent on this subject. Of course, Coste's map may exaggerate the importance of walls on the west and south. However the existence of gates there, mentioned by several travellers, would presume some kind of walling, however insignificant.

Being the only known map of Isfahan before modern sources, Coste's map affords the basis for a reconstruction of the fortifications of Isfahan in the mid-19th century. Even if correct, however, this map has little value other than as a historical reconstruction, as nothing of either gates or walls remains today, nor has remained within living memory, except for one or two gates. Madis could represent ancient ditches in the south-west and east near Tabarak and the foundations of the boulevard along the river may be debris from the wall. Often it is even difficult to recognise a street pattern leading to a former gate except in the old town. (Map B).

Accounts of Isfahan's walls during the 19th century point to increasing dilapidation. Texier gives a detailed description of their construction, of sun dried brick, with towers and castellated, but comments on their poor and unworthy state.⁵⁵ The gates were "d'une simplicité plus que rustique." Again houses up to and attached to the walls are described. Ussher speaks only of the remains of walls.⁵⁶ Arnold says the walls were "broken into heaps of dusty ruin"⁵⁷ Fréde that the walls "s'écroulent peu á peu et s'affaissent comme des tas de boue,"⁵⁸ and so on. By the 20th century they were of little significance in the townscape although some gates remained until the 1920s. These were deliberately demolished by Reza Shah but the walls were simply eroded away by weather aided by the depredations of people seeking handy building materials.

In this account of the fortifications of Isfahan and Tehran certain features associated with walled towns in general can be noted. In the mid-19th century the walls of Tehran were an obvious impediment to growth, and expansion was necessary; but those of Isfahan cannot be said to have had such an effect, as suburbs had already developed and then the Afghan invasion so affected the town that such pressures were never again felt. It is significant that in both towns periods of comparative peace - 18th century in Isfahan and 19th in Tehran, were times when fortifications were allowed to decay. These were also the middle and final periods of the Safavid and Qajar

dynasties respectively. The effect of walls on land values has only been felt in very modern times - in Tehran in the 1930s - when the removal of the walls equalised prices inside and outside. Before this property outside the walls was often more valuable than inside, like the fashionable Abbasabad and Khaju suburbs of Isfahan and Amiriyeh in Tehran.

The citadel is another feature of Isfahan's fortifications. When Timur conquered Isfahan in the 14th century he occupied this, the Kal'ah Tabarak. Its origin is uncertain. Godard states that it was built by Rukn-ud-Douleh the Buyid and his son Fakhr-ud-Douleh, or by Azud-ud-Douleh, by Malik Shah the Seljuq in 1080, or several others, perhaps all contributing to its building and maintenance. According to the legend, King Kai Kaus of the mythical Pishdadi dynasty built it prior to the rise of the Achaemenids. Della Valle described a castle with a high thick wall of earth, but no ditch,⁵⁹ and Herbert a large castle towards the outside of the city, unflanked, but moated about and with several houses within which guarded its treasure; also ice was stored there.⁶⁰ Chardin goes into more detail about the "Teberrouk" fortress* which was attached to the town walls.⁶¹ By then

* The derivation of this word is uncertain. Both Chardin and Kaempfer thought it meant Castle of Benediction (from the root "baraka"). Langlès thought it was Qalat Berg, meaning arsenal. There is a legend which names it after a jinn and another theory that it is named after the district of Tabaristan in northern Persia.

more elaborate fortifications had been developed. The wall, describing an irregular square, 1000 paces across, was high and crenellated, of earth with plaster outside. There were round towers, a ditch and a rampart 35 ft. thick, a lower "avant mur" and a courtina, used as a prison. Each tower had a name. Inside the walls were 307 houses, a drill square, mosque, and bath and 40 cannon. The residence of the Vazir was here but he appears to have preferred to live elsewhere. The royal treasure, including armoury was in the "donjon" or Nazir-khaneh. The castle appears to have changed shape in the 17th century. Chardin called it a square, whereas Tavernier⁶² and Careri⁶³ writing afterwards, both describe it as twice as long as broad. On Coste's map it also appears as a square. Perhaps Tavernier and Careri were considering the extension from the town walls also, as both say it was joined to them to the south. Careri adds that within the walls were bazaars, slaves' quarters and the rarities collected by the king. (It was, however, of little significance and its towers pitiful). Le Bruyn discloses that the walls were in such bad condition that the defensive cannon could not be fired for fear of knocking them down.⁶⁴ Later the walls became shattered, and foreigners were not allowed in, perhaps because the interior was even more dilapidated. The citadel was thus in no state to resist the Afghan attack.

By 1810, Ouseley said the ruined walls were but heaps of clay, but

from the size, thickness and height of the towers and bastions, he supposed it to have been a fortress of considerable strength.⁶⁵ Few 19th century travellers even mention the castle or its ruins, except Texier⁵⁵ and Nijeholt⁶⁶. The old fortress was of irregular shape, built of earth with round towers, but in a state of complete decay and set in the most devastated part of the town. Even Curzon could only remark on the glowing accounts of 17th century authors, and the surviving walls which were little more than lumps of clay.⁶⁷ In the early 20th century some use had been found for the site when Aubin saw the menacing front of ditches, towers and crenellated walls, enclosing a cultivated field.⁶⁸ Godard corroborates this⁵⁹ and Lockhart⁶⁹, also writing in the 1930s, says that then the walls were being rapidly demolished for building materials. Many people in present-day Isfahan know nothing of the citadel, although the district is known as Pa Qal'eh (at the foot of the fortress) or Tabarak. Of the enclosure itself nothing remains except a deep moat on three sides, very distinct on air photos and impressive on the ground (Fig. 11). The sides of this ditch are vertical, about 30 ft. deep, and twice as deep as wide. They are not obviously part of the madi system although containing water. There is no trace of walls except to the south where a fragment of high, thick mud walls, with four bastions, is perhaps part of the former outworks. The bridge at the north east corner with a pointed arch is perhaps original.

Housing outside the ditch is fairly new but inside is a completely new suburb, the streets are on a grid pattern and surfaced in the north. Development is more regular than in the older areas and the houses mostly of the modern Persian style. There are new shops, a new bath and mosque. Much development has taken place between 1958 (air photo) and today.

This fortress therefore seems never to have been part of the defences of the town as such, but rather a royal treasury and arsenal, including barracks and magazine, rather like the Tabriz and Shiraz citadels, although there the governor was usually resident. They were strong points perhaps as much for the internal security of the regime as for the defence of the city from outside attacks.

Part 2 Palace Quarters

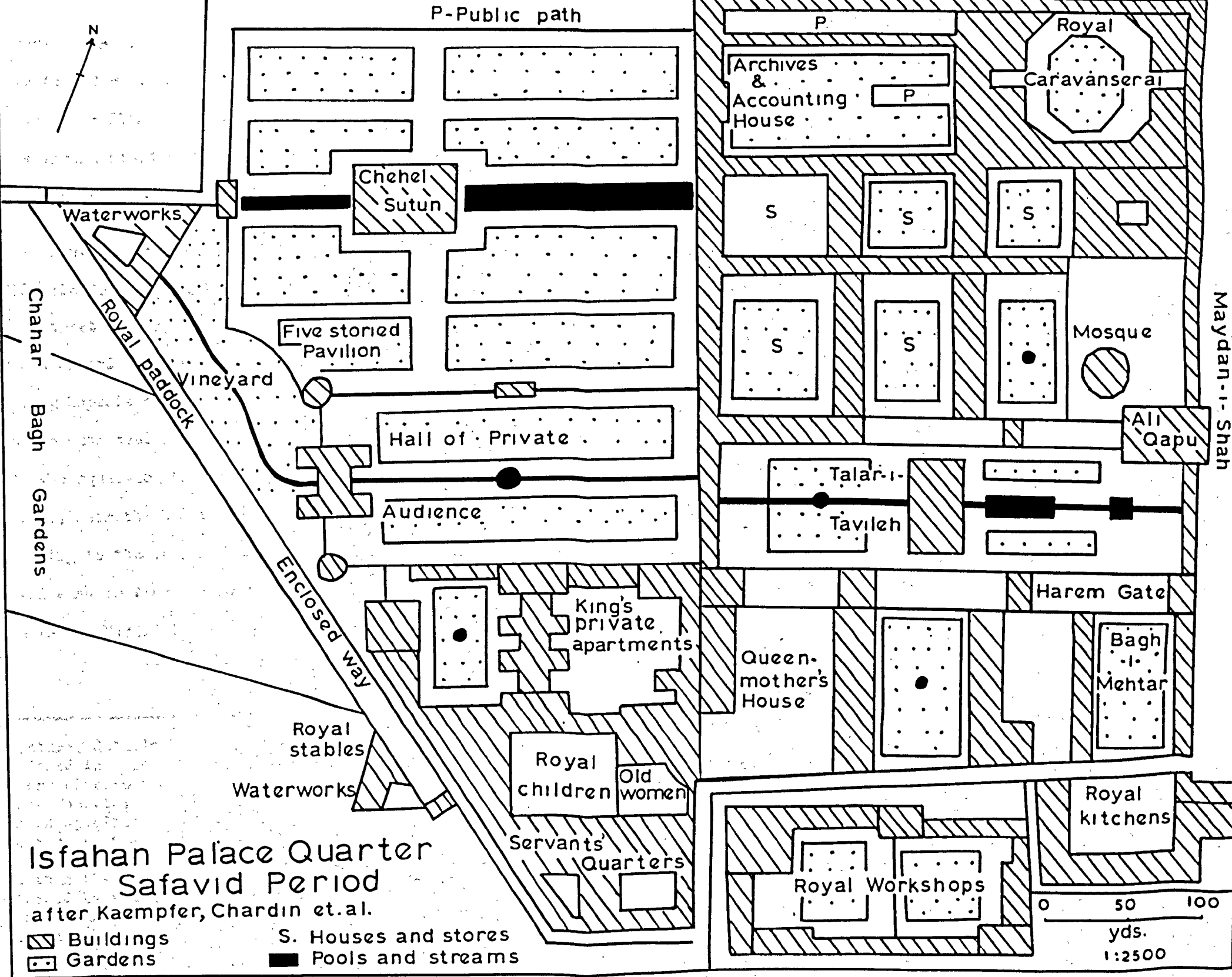
The definition of a capital today is expressed, in urban morphology, as enclaves of government buildings, often imposing and monumental, symbolising the authority of the ruling body and pre-eminence of the city. However in the time of autocratic royal rule all power was vested in the king, and his residence was more than just a palace, but the nerve centre of rule and administration. It was elaborated to become a city within a city, a palace quarter and government enclave, often at the same time being a citadel defending the monarch and his entourage from external enemies and internal revolt.

Such features were prominent in Tehran and Isfahan when they were flourishing capitals of monarchic states, and have had a lasting effect on urban morphology.

Even before becoming capital both towns had fortified palaces, the seats of local governors. The Tabarak citadel in Isfahan fulfilled this role in the 14th century. No doubt the Buyid princes before this had their strongholds but no trace remains. There was a Timurid palace on the site of the present Maydan-i-Shah and a Seljuq palace on the old square¹⁰ but only in the time of Shah Abbas I did a palace quarter come into being. Similarly with reference to Tehran, della Valle⁷¹ said "the Khan resided here" pre-supposing a palace, and Herbert⁷² said the Duke's house, with the "buzzar" was the finest building in the city. This ruler was a Safavid governor. Although Shah Tahmasp walled Tehran, it is not recorded if he built a palace here. A royal palace and garden called the Chahar Bagh was built in Tehran in the 17th century probably by Shah Abbas I and later added to by Shah Sulayman. It was almost certainly on the site later occupied by the Ark. Karim Khan Zand seriously considered making Tehran his capital, when in 1760 he ordered a seat of government to be built here "to be a rival to the palace of Chosroes at Ctesiphon."⁷³ An audience hall, harem and barracks were built and a garden named Jinnat laid out. However Shiraz was definitely chosen as capital and the administration moved there.

Detailed descriptions of the palace quarter of Isfahan are not found until 1630 onwards. The Sherleys, Herbert and Provins say very little about the palace itself while describing the court. However from the full accounts of Chardin,⁷⁴ Pouillet,⁷⁵ Struys,⁷⁶ le Bruyn,⁷⁷ and a drawing by Kaempfer,⁷⁸ reconstruction of the palace quarter can be made and mapped (Fig.12) The palace occupied a large area between the Maydan-i-Shah and Chahar Bagh. Chardin exaggerated its size saying it was $1\frac{1}{2}$ leagues around. Le Bruyn's $\frac{3}{4}$ league, or about 2 miles, is more realistic. It had its own wall which varied in composition and height, being, in the east, part of the maydan with arcaded galleries, on the west, the garden wall of the Chahar Bagh, and to the south at its most formidable, 40-50 ft. high outside the harem. There were at least five gates, the most important being the Ali Qapu. This was, besides a gate, a palace and a grandstand. There are rooms on five storeys with two winding staircases, and the whole rises to over 150 feet, being still the highest building in Isfahan. The rooms are generally small, with windows and fireplaces, and were decorated with paintings in Persian and Chinese style. The top floor had plaster niches in the walls shaped like bottles and flasks and variously described as cupboards to display porcelain or devices to improve the acoustics when music was

FIG. 12.



played there. In front of the top three storeys was an open balcony supported by wooden columns formerly gilded and inlaid, as was also the ceiling. There was a pool in the centre and formerly a throne stood here from which the king watched polo and other displays in the maydan, and gave public audience.*

To the south was the Harem gate, also facing on to the maydan. There is little description of this and its place today has been taken by a street leading west where the arcade is broken. Chardin, le Bruyn and Careri all mention the Kitchen gate to the south, also named Moerbag Kapesie or Der Modbarh.** This may be compared to a tradesmen's entrance. On the north was the Gate of the Four Pools leading to the square of the same name, at the north-east corner the Imperial Gate, near the Doulat gate, and there were also one or two portals leading to the Chahar Bagh, probably small garden gates, used by women and eunuchs from the adjoining harem. A secret passage from the palace to the Masjid-i-Shah is also mentioned but it is not known of today.

* Architectural details and dimensions of the Ali Qapu and other buildings may be found in Pope's Survey of Persian Art, Vol. 2. Several travellers discuss the name Ali Qapu, and its religious significance, including Chardin, Vol. 7 p.368-86; Tavernier, 4th book, p.152 and Curzon op.cit. Vol.2 p.30-31. It was no doubt venerated as a place of sanctity and "bast" or sanctuary, but the word "ali" is far more likely to be the Turkish word meaning "highest", therefore "Sublime Porte", than the name of the prophet's son-in-law. This idea is strengthened by the existence of other gates with the same name, in Qazvin and Tehran, for instance. Careri's "Porte de Justice" was probably the Ali Qapu as Chardin adds that in a hall just after the second threshold, the president of the Divan administered justice.

** The area to the south is still known as Posht-i-Marbaq, or Behind the Kitchens, today.

Inside the Ali Qapu gate was the Talar-i-Tavileh or Long Hall set in a garden of plane trees. This was elaborately decorated with a mosaic ceiling, wooden columns painted and gilded and mural paintings of horsemanship, but was also used as stables because displays of equipment were laid out for visitors. The larger apartments however were used by the King for receptions. In 1891 Curzon said the Talar-i-Tavileh was used for official business,⁷⁹ but earlier in the century it was still stables.

In the north-east of the palace enclosure were the king's workshops or "karkhaneh". This was a series of galleries like bazaars where work was done for the court. Pouillet also mentions a great covered market in the palace, and Tavernier the Royal Manufactory. The Coppersmiths' Bazaar of Coste's map could be a direct descendant of the royal karkhaneh. Besides workshops there were also places for storage in this area such as the library and the depository for robes of honour (of which 8,000 were given annually according to Chardin) coffee, chests, pipes, tallow torches and wine. The latter was in a great vaulted hall decorated with porphyry and jasper.

The largest and most magnificent building in the palace according to Chardin was the Chehel-Sutun or Hall of Forty Pillars. This was originally built by Shah Abbas I. Krusinski said it was destroyed by fire about 100 years later in the reign of Shah Sultan Husayn, who rebuilt it on the same pattern. However all accounts of it both before

and after the fire are remarkably similar and although Godard did find evidence of fire in the roof, the hall was not completely destroyed.⁸⁰ The pavilion was set in a garden, with a talar supported by 18 pillars 30 ft. high. The ceiling was of mosaic and the pillars shaped and gilded. Behind this were small rooms at the side of a porch leading to a great hall 30 by 15 paces. The walls were faced with white marble decorated with moresques in gold and blue and paintings of royal battles and feasts, and set with multi-coloured crystals. There was a marble pool inside, four fireplaces, and the throne on a platform. Chardin describes an audience here with grandees and ambassadors thronging the halls. Few of his contemporaries describe the Chehel-Sutun in detail, probably as it was only one of several such sumptuous halls.

In the 19th century this building was, with the Ali Qapu and Hasht Behesht, one of the few remaining Safavid monuments. To Morier it was beautiful beyond description.⁸¹ He first mentions the pool in front of the building. He adds that the exterior was neglected, but the interior repaired and still used as an audience hall. Many writers are concerned to discuss the name of Forty Pillars when there are only 18.*

Near the Chehel Sutun was a five-storey octagonal building, each

* Curzon discussed this, op.cit. Vol 2 p.32. It seems most reasonable to agree that forty here is a numerical title to express size and magnificence rather than actual numbers. There are many examples of this - Thousand Acres, Forty Maidens, etc.

floor held up by four pillars, with a pool in the centre. There are not many references to this however, although it must have been a prominent building.* The tower referred to several times in the 19th century in a similar position, was part of Fath Ali Shah's palace and not original.

The only other prominent feature discussed by Chardin is the harem, which was over a league around, with walls so high "que aucun monastère en Europe en ait de semblable." However, Chardin obtained his information from workmen, eunuchs and women peddlers who were familiar with the interior lay-out. The harem consisted of four great courts (as on Kaempfer's plan). The first was the private apartments of the king and his favourite wives, with several pavilions representing the work of different kings. These were all set in gardens with great pools, one called the King's Sea. Around the enclosure were rooms for women of lower class, servants and eunuchs, and to the south kitchens, baths, shops and other necessary institutions near the Kitchen Gate. The second court was "un lieu enchanté et fait pour la volupté seulement", with streams, pool, pavilions and paradise-like gardens. The third court was for the children of the royal household and perhaps a retreat for women during and after pregnancy, and the last was for old women, women out of favour and the

* Kaempfer's plan, op.cit. does not show such a building but only a large round tower, like a pigeon-tower to the south of the Chehel Sutun.

wives of former kings. The quarters occupied by the king himself were lavishly decorated and spread with rich carpets, but where visitors could not penetrate, and the king had no cause to venture, less care was taken in embellishment or maintenance. Des Landes said there were over 500 women in the harem, wives, concubines, servants and female officials. Several other writers mention the harem as occupying a large area but few have any details. Olearius⁸² and Struys mention the "Deka" or private royal apartment probably one of those in the first court.

For the rest, Chardin described several buildings in their gardens and further shops and workshops.

Many of Chardin's contemporaries were unimpressed by the palace of the Grand Sophy especially those used to the more solid splendour of Baroque Europe. Tavernier saw nothing of beauty in the gardens or buildings. Thevenot thought the palace mediocre, compared with hundreds more beautiful in Isfahan.⁸³ Pouillet was especially scathing. He says the palace was one of the best-constructed buildings in Persia but would not pass in Europe as a toll-house, and that the gardens had none of the beauty much spoken of. All, however, agree on the great extent of gardens within the enclosure and the proliferation of buildings of all kinds making it a self-contained enclave rather than simply a palace.

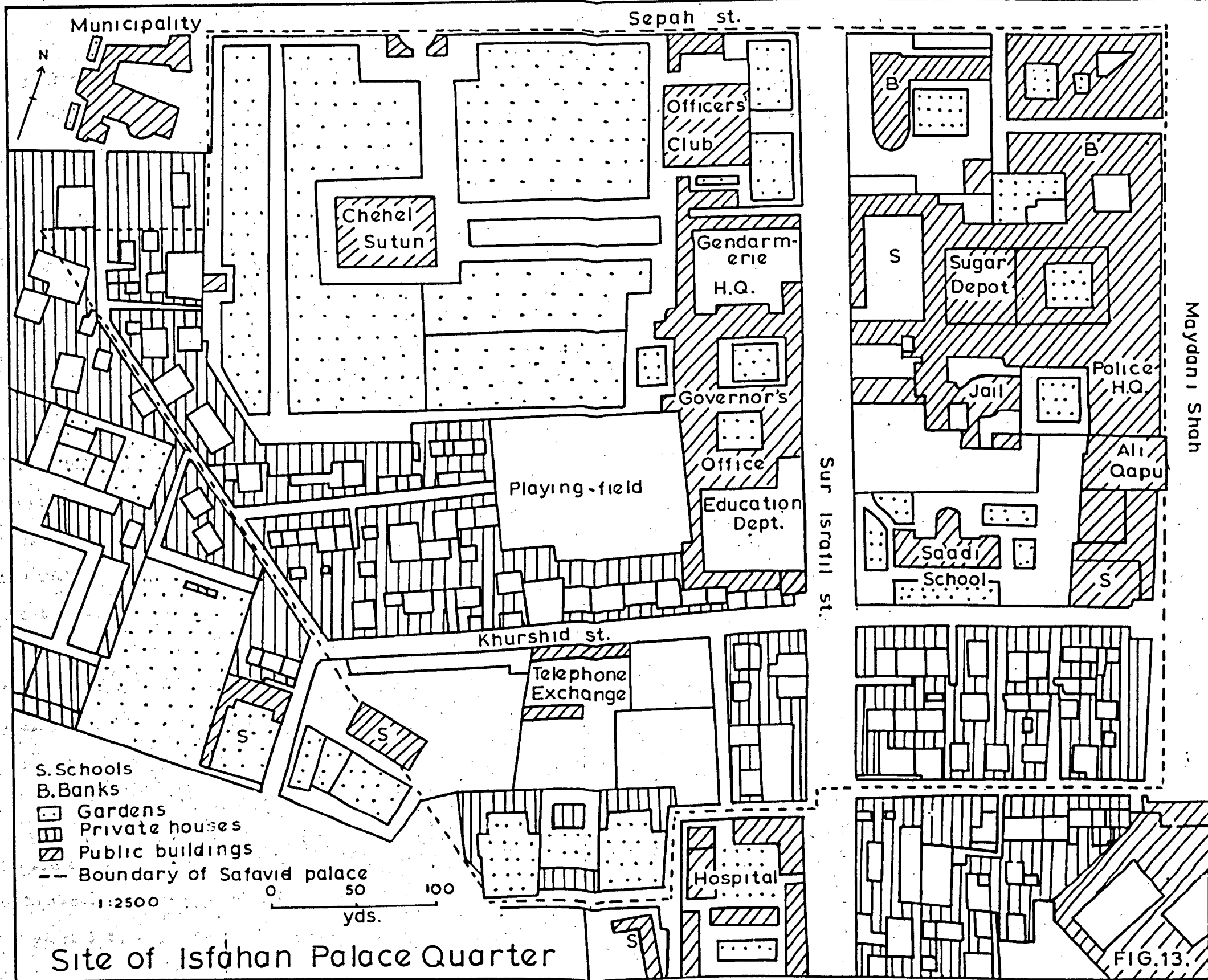
After the Afghan conquest their rulers occupied the palace. It is customary to ascribe wholesale destruction to the Afghans but they seem to have done little damage to the palace.

In the early Qajar period several additions and improvements were made to the palace. A strong governor, Hajji Muhammad Husayn Khan was appointed, interested in urban embellishment and Fath Ali Shah liked the town. A new palace east and south of the Chehel Sutun was built consisting of apartments in gardens with summer quarters excavated in the ground under the great rooms. Morier remarks that there was much sameness in the arrangement of rooms and distribution of grounds throughout the palace, a feature marked in Chardin's description. Kinneir thought that the new palaces equalled the old in elegance.⁸⁴ but Ker Porter called them "gorgeous structures but of heavy and discordant taste",⁸⁵ Some of the older palaces were being maintained, such as the Chehel Sutun, but others were neglected. The Ali Qapu was deserted and sinking rapidly into decay. Flandin refers to "debris dorés" and says that decay had set in soon after Shah Abbas's death when his successors had allowed the greater part to fall to ruin and left only the pavilions in gardens where they themselves lived.⁸⁶

The new palaces included the Naranjistan or Orangery, a square pavilion with a cupola, the Anguristan or Vine garden, the 'Imarat-i-Sader and the Sarpush-'Imarat. All were painted, gilded and set with mirror-work. Each palace again was in a private walled garden.

The zeal for restoration however did not last and in the latter 19th century signs of decay became more evident. The Ali Qapu was decayed, tattered and defiled, the Chehel Sutun, which Arnold described as a mixture of the barbaric and the tawdry, became the work-shops of tent-makers; at a distance the effect was pleasing, but the whole was unwashed and grimy.⁸⁷ Even the few clumsy attempts at restoration marred more than deliberate vandalism. After the disgrace of Zill-us-Sultan and the growing interest of his father in the modernisation of Tehran, little was done to arrest the ruin of the Isfahan palace. Many of the buildings like the Talar-i-Tavileh, already mentioned, became the offices of government, a fact which did not help to preserve their beauty. By the turn of the century most of the buildings were heaps of rubbish with here and there a fragment of tilework. By 1925 the Chehel Sutun was a military headquarters and the palace gardens were "mere cornfields, nothing worth looking at".⁸⁸ All the buildings except those used by the governor or his staff were in utter ruin by the time Reza Shah began his urban modernisation schemes.

The only Safavid monuments preserved today are the Ali Qapu, Chehel Sutun and Talar Ashraf, now used by the Ministry of Education (Fig.13) The Talar-i-Tavileh was replaced by the Sa'adi school about 1930. Part of the Qajar palace remains, used by the governor, but the Orangery has disappeared to become the site of the telephone exchange and the



graceful pillars of the Sarpushideh palace now adorn the gardens of the Chehel Sutun, its site being a sportsfield. Much restoration under the Department of Antiquities has gone on in the buildings which have been saved, and the paintings of the Ali Qapu and Chehel Sutun are being uncovered as far as possible. It would be impossible to replace gilding and mosaic work, but the fabric remains impressive.

The royal Bazaar and workshops and the courts of the harem have disappeared without trace, as has the encircling wall with its gates. However their removal has released land for building modern constructions, still along shady gardens. In the 1930s several schools were built in the south and more recently banks have appeared in the north-east. Private housing also exists within the old enclosure. The palace quarter has become an enclave of administrative buildings such as ministerial offices, police and gendarmerie headquarters, educational establishments, banks and historical monuments. The vast extent of gardens has allowed it to remain open and uncrowded. Few cities have this advantage of an uncluttered city centre, which greatly eases the problems of future planning, a fact eagerly taken up by the Master Plan report.⁸⁹

The Ark of Tehran offers many interesting comparisons in composition and development. As needs were similar so similar institutions arose, even 200 years later. The first need was defence. The palace in the

north of the city was extended and walled by Agha Muhammad to make it a citadel as well as a residence. Here the two roles were combined, in contrast to Isfahan where the citadel was separate. Building was continued by Fath Ali Shah. The early 19th century writers remark on the height and strength of the mud walls and towers which Kinnear considered stronger than those of the town.⁹⁰ The deep and wide bridge was crossed from the gates by drawbridges. There were two main gates, as shown on the 1858 map (Fig.14). One was the Doulat Gate and the other the Dar-i-Sa'adat joining the Ark to the city. Inside were all the royal establishments forming again a city within a city, even further isolated in this case by the strength of the walls. Little of the grandeur of royalty could be guessed at from the forbidding blank wall, and the entrance, through several dark passages, was also unimpressive. Just inside the rampart was Ark square, an open, unpaved expanse containing pieces of cannon, including the famous Pearl Cannon, whose precincts were "bast" or sanctuary. To the south was the palace wall, but on the other three sides were low mud structures - quarters for soldiers. Tancoigne saw small trees and turf in the square which was crossed by a rivulet, where barbers operated.⁹¹ Money compared it to a farmyard.⁹² In the centre was the executioner's pole, sometimes bearing the head of a victim. The Maydan-i-Ark was the scene of public salaams at Nou Ruz and the Passion plays of Muharram were performed here in tents. There were two gates both decorated with

KEY TO FIG. 14

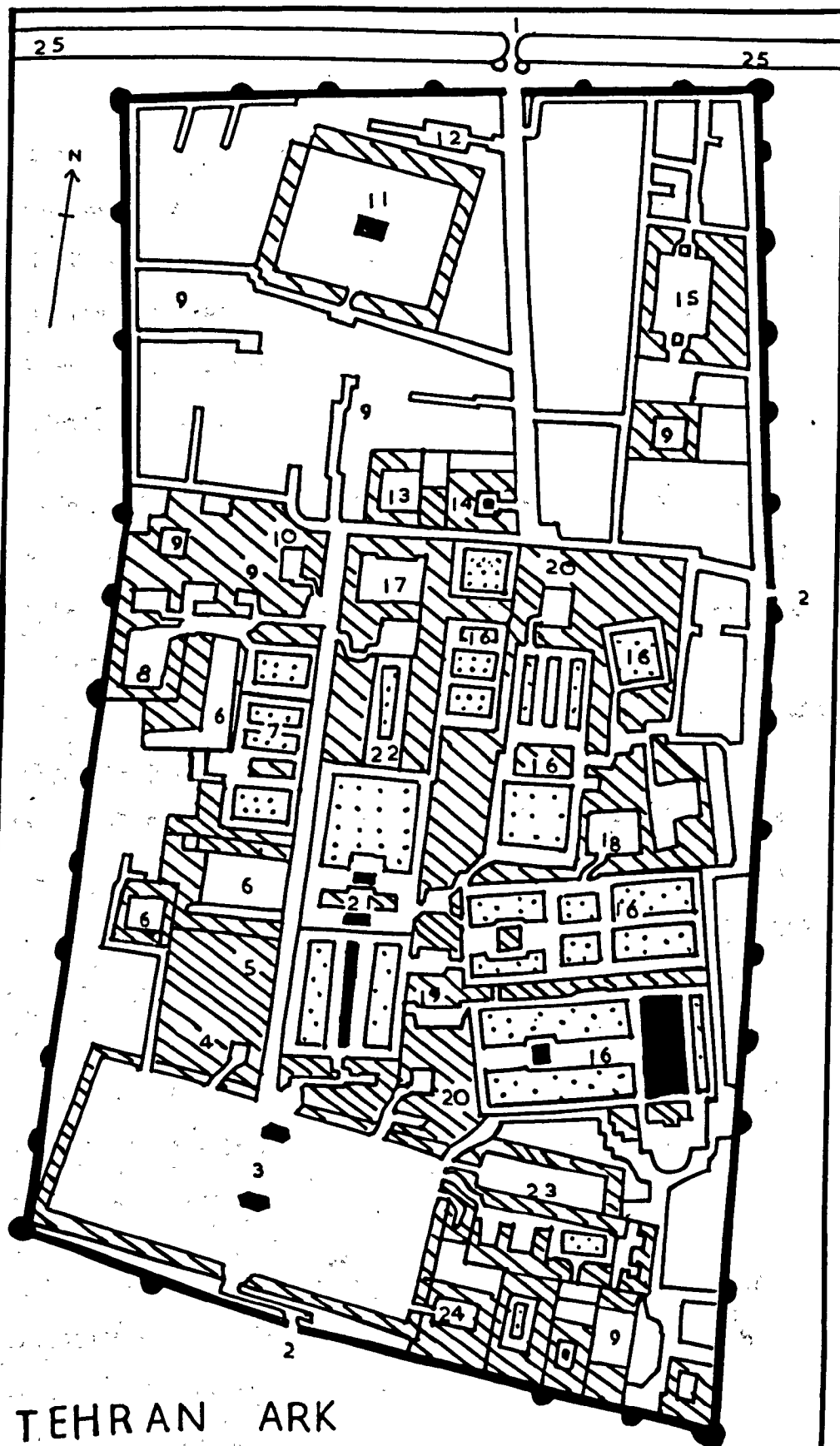
TEHRAN ARK, AFTER MAP OF 1858

- | | |
|-------------------------------|-------------------------------------|
| 1. Doulat Gate | 14. Madraseh |
| 2. Ark gates | 15. Dar-ul-Funun College |
| 3. Ark Square | 16. Royal apartments |
| 4. Archives | 17. The Keeper of the Seals' office |
| 5. Cannon-house | 18. Spice house |
| 6. Stables | 19. Treasury |
| 7. Commander-in-Chief's house | 20. Towers |
| 8. Takiyeh | 21. Hall of Audience |
| 9. Houses of courtiers | 22. Sun Palace |
| 10. Council Hall | 23. Store |
| 11. Royal Granary | 24. Robe House |
| 12. Coach house. | 25. City Walls. |
| 13. Russian Minister's House | |

Gardens stippled

Royal buildings ruled

Pools in black.



coloured bricks. One led to the bazaars and the other opposite led to the palace proper. This, strictly speaking, was the Dar-i-Shadet, not the outer gate. Above this gate was a balcony for audience and the Naqqareh-khaneh, the musicians' gallery, from which night and morning blared forth the salute which fell so discordantly on the ears of Europeans.

Another series of dark and unpleasant passages led under this gate to the second court. Here were trees and flowers, pools and fountains with the throne-room at the end, an open talar overlooking the garden but shaded with elegant arcades. Stuart called it a "shabby pavilion of brick".⁹³ It was, however, decorated with mosaic tilework, and a great profusion of ornamental glass. The throne was of carved alabaster, the Takht-i-Marmar brought from the palace of Karim Khan Zand in Shiraz. To the east of the Divan-khaneh a passage led to the famous Gullistan or Rose-garden. This was arranged on a checkerboard pattern with flowerbeds planted with roses and shaded with plane trees. In the centre was a summer house built by Agha Muhammad in the style called Kulah-i-Farangi, or Frenchman's hat. Fowler was very impressed with this garden, seeing in it everything that could enchant.⁹⁴

Around this garden were royal apartments and the Sanduq-khaneh or Treasury, filled with European gifts and curios, given by foreign ambassadors and other visitors. These included chandeliers, paintings

and clocks, many in poor taste and artistically arranged. The buildings were plain and flimsy structures which would have looked paltry and commonplace without a quantity of ornamental coloured glass, paint and gilding.

The south-west corner of the Ark was occupied by the house of Prince Sayf-ud-Douleh and a large courtyard called an "ambar" or storage-place, which probably also included royal workshops and the Jebbeh-khaneh which many writers have translated as Arsenal but which actually means Robehouse (cf. Isfahan). To the north of the Gulistan apartments were the private courts of the royal household and the harem. There are several of these shown on the 1858 map, always surrounding a garden divided into rectangles by paved walks - 'Imarat-Khurshid, * Khalvat-i-Shahi, Andirun-i-Shahi, Sarvistan. Nijeholt said there were three pavilions occupied in turn by the king each one complete with all necessities.⁹⁵ Both Flandin⁹⁶ and Eastwick⁹⁷ mentioned a tower attached to the harem, from which, it was supposed, the ladies could look out over the palace. Such a tower also figures in Morier's "Haji Baba of Isfahan". Two are marked on the map. (Fig.14) In this residential part of the Ark there were several baths for the use of the inhabitants, Ouseley says there were 10,

* This, meaning Sun Palace, should not be confused with the Shams-al-'Imarat, built about 1870 whose name could also be translated as Sun Palace, but more correctly "Sun of the Edifice."

which may not be an exaggeration.⁹⁸ These are not, however, marked on the map. The size of Fath Ali Shah's family was a source of wonder. Money says he had 1,000 wives, 100 children and 900 grandchildren.⁹² Morier adds that the harem was most numerous, as extensive as the king's public household because there was a female duplicate of every office in its administration.⁹⁹ There could then have been up to 4,000 people living in the Ark, although probably between 2-3,000 is a more realistic figure. Besides the king's household, many princes and high court officials had their own separate establishments, such as the Vazir and Keeper of the Seals.

North of the main east-west street of the Ark was the house of the Russian Ambassador. After the massacre of 1829,¹⁰⁰ the Russian Mission sought refuge here. Beside this was a madraseh and mosque. This street led to the third gate of the Ark, the Andirun gate, this was probably used, like the Harem gate at Isfahan, only by eunuchs and court officials, and closely guarded. The main north-south street was 25 ft. wide, paved with stone and lit by oil-lamps. West of this was the less luxurious part of the Ark. In the south were offices of the government, including the Daftar-khaneh or Archives. Three courts were stables. Fowler said the Royal Stud contained 300 horses.¹⁰¹ Also in this part were the audience halls of court officials, their residences and a takiyeh. In the north-east was the Royal Granary and coach-house and the Dar-ul-Funun founded by

Nasir-ud-Din Shah. In 1866 there were 40 students.¹⁰² Like most of the Ark buildings this school was built around a courtyard garden centred on a pool.

The avenue leading to the Doulat gate was lined with shops, and the blank spaces on the map to the north were probably occupied by the houses of courtiers and court employees.

Such was the Ark at mid-century. To many it was the only building of consequence in the city. Olivier said it left nothing to be desired for extent, the beauty of its buildings, the luxuriousness of its gardens and the abundance of its waters.¹⁰³ Dupré however could not but compare it unfavourably with the former splendour of Isfahan¹⁰⁴ and Fraser noted an air of dilapidation spreading even over the royal dwellings, where scarcely one house was in thorough repair.¹⁰⁵

Between 1858 and 1892 several changes took place affecting the lay-out and composition of the Ark, mostly brought about by Nasir-ud-Din. Information from the 1892 map is supplemented by one in Dr. Feuvrier's book "Trois Ans à la Cour de Perse"¹⁰⁶ (Fig.15). With the new walls and the demolition of the old, part of the Ark wall also seems to have been dismantled. Orsolle in 1882 said that the ditch had been filled in although the walls remained.¹⁰⁷ A year later Benjamin still described high battlemented walls, studded with

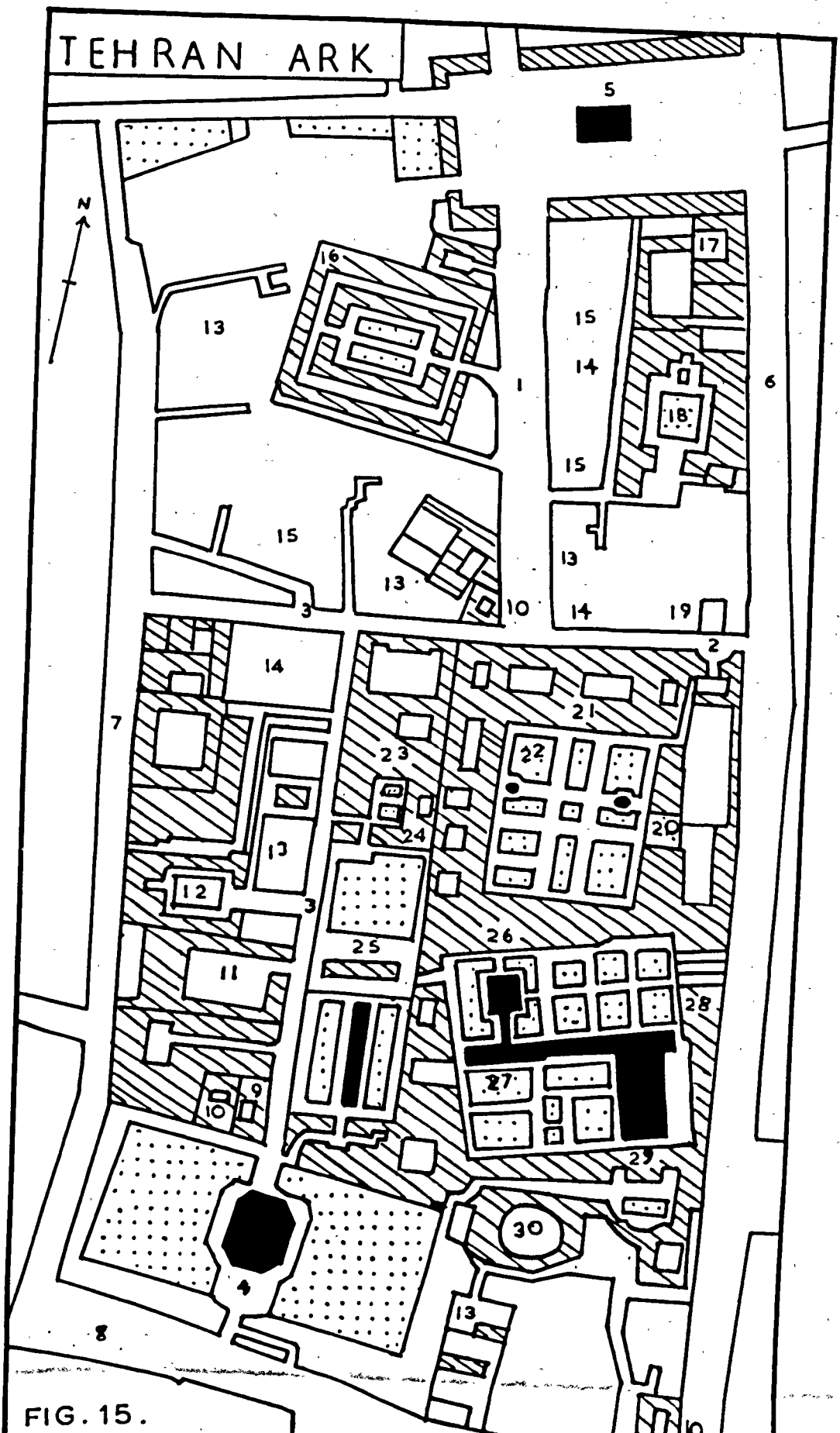
KEY TO FIG. 15TEHRAN ARK.AFTER MAP of 1892

- | | |
|-------------------------------|-------------------------------|
| 1. Diamond Street | 16. Arsenal |
| 2. Andirun Gate Street | 17. Telegraph office |
| 3. Naib-us-Saltaneh Street | 18. Dar-ul-Funun College |
| 4. Ark Square | 19. Quarters for eunuchs |
| 5. Artillery Square | 20. Orangery |
| 6. Nasiriyeh Street | 21. Andirun |
| 7. Jalilabad Street | 22. Khabgah |
| 8. Jibbehkhaneh Street | 23. House of Naib-us-Saltaneh |
| 9. Archives | 24. War Ministry |
| 10. Mosques | 25. Hall of the Marble Throne |
| 11. Stable | 26. Royal Museum |
| 12. Barracks for Royal Guards | 27. Gulistan Garden |
| 13. Houses of courtiers | 28. Shams-ul-'Imarat |
| 14. Workshops | 29. 'Imarat-i-Badgir |
| 15. Peasant houses | 30. Royal Takiyeh |

Gardens stippled

Royal Buildings ruled

Pools in black.



round towers, which could offer no resistance to modern artillery, but which would bar a popular "émeute", but no ditch.¹⁰⁸ Curzon, while still describing the Ark as surrounded by mud walls, said it was in no sense fortified and since the demolition of the old walls there was nothing in the appearance of the enclosure to identify it as a citadel in the usual sense of the word.¹⁰⁹ The ditch was replaced by avenues - Jalilabad, Nassiriyeh, Jebbeh-khaneh, and the interior streets, Khiaban-i-Almas and Na'ib-us-Sultan were also improved. The gates were replaced by ones similar to those on the new rampart "with extravagant representations in tiles of coarsest colours of the triumphs of Legendary heroes".¹¹⁰ The Diamond Gate which replaced Darvazeh-i-Doulat was the most spectacular forming part of Tupkhaneh Square. It was high, with open arches decorated with coloured tilework and gilding. Two minarets topped it and it incorporated another musicians' gallery. In comparison to this the gate of the palace proper was unprepossessing. The southern gate was less impressive and still led through a small bazaar to Maydan-i-Ark. This was now well-paved and laid out as a garden with a large octagonal pool. The cannons remained, but now the square and main avenues of the Ark were lit with gas-lamps on holidays. Being now open to the public the square had become "un des rendez-vous habituels des nombreux oisifs de la capitale". The palace itself was now the conspicuous unit rather than the Ark as a whole. It is described by Mrs. Bishop as a large irregular mass of buildings, very fine internally but presenting a mangy, unprepossessing

and forlorn aspect to the outside.¹¹¹ The audience hall and throne-room remained unchanged, Curzon described the court with its flower beds and groves of poplars, planes and pines leading to the talar and its sumptuous apartments. However, the two interior courts of the Gulistan had been converted into one vast garden with graceful kiosks, great pools and a variety of trees and flowers. Around it were Nasir-ud-Din's new palaces. The most imposing was the Shams-al-'Imarat. From this rose two square towers, tapering to the summits with a clock-tower between. This was built about 1870. The windows were filled with open brick-work and the whole ornamented with glazed tiles, as it still is today. It was for long the highest building in Tehran and a conspicuous landmark.

On the north was the Royal Museum and Orangery. The former contained an even more elaborate exhibition of bric-a-brac. Some of these rooms were entirely covered with mirror-work and are called the Diamond rooms or the Palace of Crystal. The Orangery or Naranjistan was an indoor garden with a long line of orange trees fed by a stream. On the west was a palace in Louis XVI style, unfinished when Dr. Feuvrier wrote.

The 'Imarat -i-Badgir on the south-east of the Gulistan was less romantically called the Ventilator Palace, it incorporated 4 wind-towers*

* A "Badgir" or wind-tower is a means of ventilation acting rather like a chimney in reverse. At the top of the tower is an open grille facing the prevailing wind direction, and fresh, cool air was thus drawn down into the rooms below.

and summer apartments. Behind this were the royal saddle-rooms and the courtyard used by royal diamond workers. The "ambar" was replaced by the new Royal Takiyeh. This was built after Nasir-ud-Din's return from his European trip to avoid the necessity of using tents for the Muharram Passion Plays. The inconvenience of this is exemplified by an incident in 1864 when one of the tents was destroyed in a storm.¹¹²

A street leading from the bazaar to the square in front of the takiyeh opened up the south-east corner of the Ark. Here was the new mosque named after Nasir-ud-Din, and, on the site of the former Jebbeh-khaneh, was Dr. Feuvrier's house.

The intricate system of small courts in the north of the palace was replaced by one main garden, around which were the apartments of the harem. In the centre was the Khabgah where the king slept. This was a two-storey, square, white building, ornamented with plaster mouldings cornices and pilasters. According to Dr. Feuvrier there were still 1,000 women in the harem and 40 eunuchs. The king still had several establishments which he occupied in turn according to Orsolle,¹⁰⁶ "aussi nomade dans l'Ark que l'étaient ses ancêtres Kajars dans les steppes du Turkistan". There were again apartments for princes and courtiers, some from the beginning of the century, others rebuilt.

The old Sun Palace was now occupied by Na'ib-us-Saltaneh and the offices of his War Ministry. In the west the Archives remained with a small mosque attached. Stables still covered large areas, but a new courtyard with a garden and pool was occupied by royal guards. (Fig.15)

The importance of the Dar-ul-Funum was greatly increased. It was a kind of high school, run on European lines with European teachers.¹¹³ The syllabus was extensive including languages, mathematics, physics, chemistry, draughtsmanship and medicine. In a special section a selection of well-born youths learnt military science under Prussian officers. Both Muslim and Christian students were eligible and supported by the government. The aim was to produce officers, engineers, doctors and interpreters. The school was well equipped with laboratories, a library, music-room and gymnasium. The main part of the college remained around the original court. By the end of the century there were 250 students.* Attached to the college to the north were the telegraph offices from the 1860s and the offices of the government run newspapers L'Iran and L'Ettella', whose circulations were assured by a law which obliged all government employees to purchase copies.

* This college may have been the "King's College" mentioned by travellers, but this title could also have referred to the earlier madraseh in the Ark.

The former granary now became the new arsenal and army workshop. Mme. Serena¹¹⁴ describes Khiaban Almas as lined with goldsmiths' workshops, but a saw-mill and carpenters' shops appear on the map in this area. The peasant houses were probably those of bazaar workers.

Nasir-ud-Din thus did much to improve the Ark and his palace, although many European writers decry the lack of taste with which this was done and the indiscriminate mixing of Eastern and Western styles of architecture and decoration. The most important effect however was the reduction of the area of purely royal residence and the diversification of functions this entailed. The workshops, bazaars, mosques and streets were not now solely for those attached to the court. The city had entered the Ark, but there was still a continuity, the Ark was still the seat of government and power and the site of institutions occupying what might be termed "public buildings."

From the beginning of the 20th century ministries multiplied and offices took on modern titles - the Minister of Court and Public work, the Secretariate of State. Most travellers saw and praised the Gulistan, Shams-al-'Imarat and Maydan-i-Ark. But as the Qajar dynasty declined so the Ark participated in the general decay. In 1915 Moore found the royal palace an unattractive place, the tanks were stagnant and shabby, the gardens neglected and the rooms horrible "even for one of those monuments of bad taste called royal palaces."¹¹⁵ Haigh called

the palace "an unimposing conglomeration of mud building" and the Gulistan "a disappointing sight!"¹¹⁶ The palace was now in the older part of the town and therefore unfashionable. It had been superseded by more modern palaces in the suburbs.

Like many of the features of Persian towns the palace quarters underwent complete remodelling under Reza Shah. By the mid-1920s the Ark wall was being demolished; as Hardouin remarked, "chaque année la cité impériale se ^efond davantage dans la capitale."¹¹⁷ The 1930s brought radical transformation and by 1938 the Gulistan and the buildings around it were the only monuments which remained, used for public audiences. The museum was retained with its collection of carpets and souvenirs. Some of the tilework from demolished buildings was used elsewhere. The Dar-i-Sa'adat was removed in 1929, but tilework from it was incorporated in the entrance to the Kakh-i-Marmar, and the Amjadiyeh Stadium, built in 1935.

The Gulistan palace, Shams-al-'Imarat and the Talar-i-Takht-i-Marmar can still be seen by tourists as they were in Qajar times. (Fig.16) The gardens are well-kept and have been remodelled with paved water channels and pools, fountains and trees and flowers still in rectangular plots. Much old tilework and painting is retained although a lot has been restored and some is new. The marble throne remains in the talar and the so-called Peacock Throne in the museum, with most of the

Key to Fig. 16

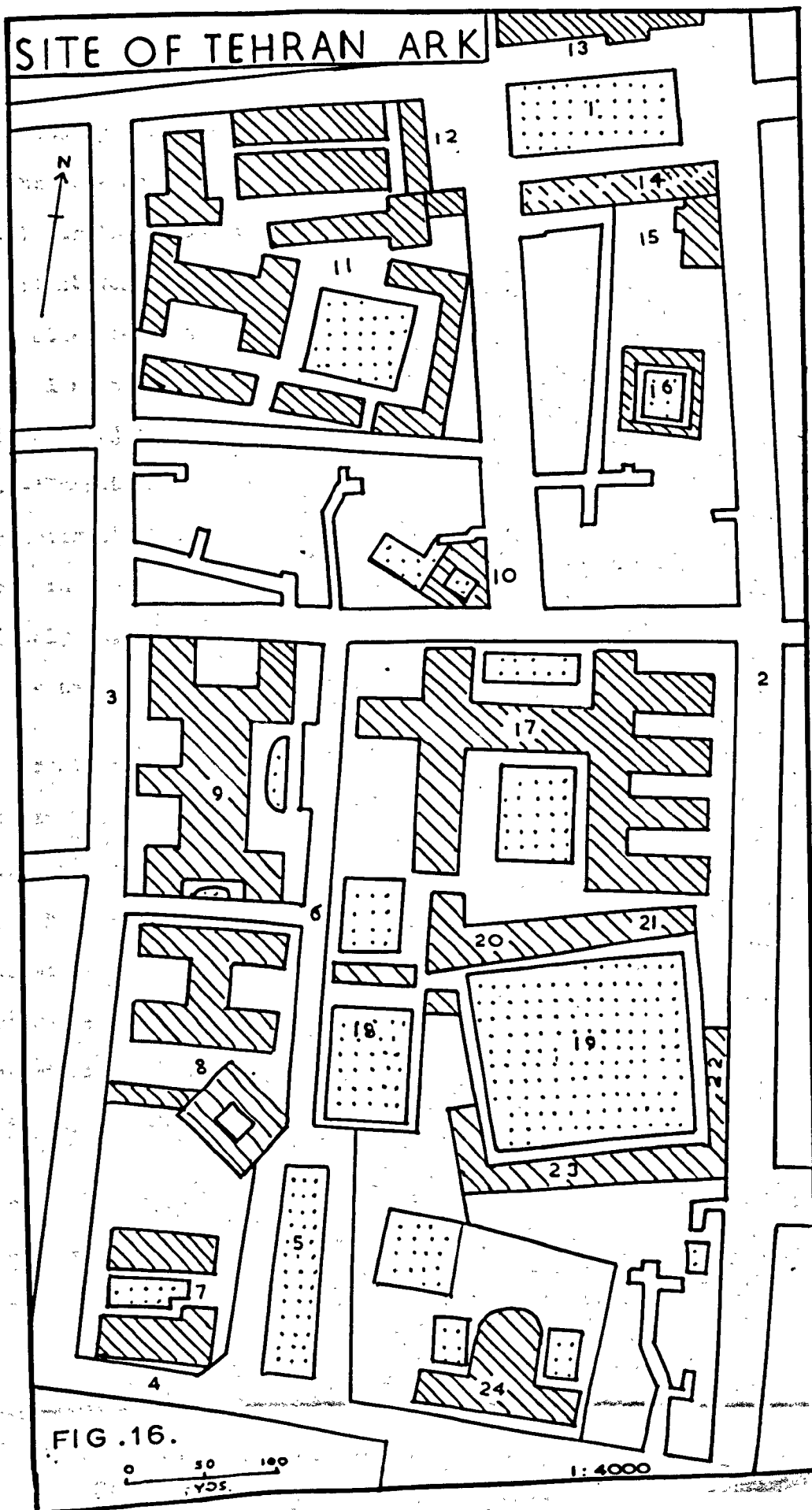
SITE OF TEHRAN ARK

- | | |
|-------------------------------------|-----------------------------------------------|
| 1. Sepah Square | 13. Tehran municipality |
| 2. Nasir-i-Khusrou Street | 14. Former Ministry of Posts
and Telegraph |
| 3. Khayyam Street | 15. New telegraph office |
| 4. Buzurgmihri Street | 16. Dar-ul-Funun College |
| 5. Ark Square | 17. Ministry of Finance |
| 6. Ark Street | 18. Hall of the Marble Throne |
| 7. Ministry of the Interior | 19. Gulistan Court |
| 8. Ministry of Press and Propaganda | 20. Museum |
| 9. Ministry of Justice | 21. New guest wing |
| 10. Ruined mosque | 22. Shams-ul-'Imarat |
| 11. Military workshops and Arsenal | 23. Ministry of Court |
| 12. Police station | 24. Bazaar branch of Bank Melli |

Gardens stippled
(not shown in detail)

Government buildings ruled.

SITE OF TEHRAN ARK



objects seen by travellers, although the more valuable pieces are now in the Bank Melli. A new wing on the site of the Orangery, was built for the visit of Queen Elizabeth II in 1961 and is used for important foreign visitors. This is in brick and blends well with the other buildings. The royal apartments incorporate the old crystal rooms with their mirror-work decoration. The 'Imarat-i-Badgir and adjacent buildings are used as court offices. The Shams-al-'Imarat is not open to visitors but still agrees with mid-19th century descriptions. The palace is one of the very few historical monuments in Tehran and the new dynasty has done well to preserve it even if only as, as Stevens puts it, "an eloquent testimony to the deplorable bad taste of the (Qajar) period."¹¹⁸

The rest of the Ark is unrecognisable, except in the street pattern, as its pre-1930 predecessor. On the site of Maydan-i-Ark is a road island with a statue and the Bank Melli Bazaar Branch. The harem has been replaced by the enormous Ministry of Finance block. (Fig. 16) Again as at Isfahan the freeing of large tracts of land has allowed spacious gardens to be attached to these buildings although not always have opportunities for road-widening been taken. These buildings are modern in style, coming after the Neo-Sasanian period.

The northern part of the Ark was always poor class housing and is now an area of small shops, often selling old clothes and metal-ware, with a street-market on the north side of the Ministry of Finance.

The army retains control of the arsenal and adjacent buildings. The Dar-ul-Funun is in its original quarters although the telegraph office has a new building.

The modern development of the Tehran Ark has therefore been similar to that of Isfahan. It also has historical buildings from the period of royal rule and modern government offices and banks although here on a grander scale. The town has invaded Tehran's Ark also with shops and dwellings and the army and schools are represented. That both are now in the town centre is coincidence as the Tehran Ark began as being in the north of the city and the Isfahan palace was on the south.

The transformation of palace-quarters to administrative centres can be seen in many Persian towns such as Kerman, Shiraz and Meshed. It is interesting to compare this phenomenon with other capital cities where enclaves of government buildings have either arisen spontaneously or by a plan, the former exemplified by Whitehall in London the latter by Praça des Três Poderes in Brasília. The whole question of sequent occupance of palaces and government buildings, or the two closely related in space, in relation to types of government, whether monarchic, constitutional monarchic, or republican, raises many interesting points.

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CHAPTER 5

THE BAZAAR

The term "bazaar" has several meanings. In urban morphology it is the agglomeration of small shops and workshops in streets that are usually covered, the densest cluster forming a distinct land-use region. It is also a commercial complex, the centre of trading, both retail and wholesale, internal and external, and the seat of much small-scale industry. Sociologically the "bazaar" is a pressure group of merchants and business men often powerful enough in their control of finances to impose their will on the government and usually representing conservatism allied with religious bigotry. All three definitions will enter into this discussion of the development of the bazaars of Tehran and Isfahan, although the first is more important to the study. The second, if analysed must entail detailed surveys and the compilation of statistics which do not exist for Middle Eastern towns. The third is not relevant here except when "bazaar" opinion has affected the shopping area itself and the town as a whole.

In both towns a central street of shops is dominant, leading from the geographical centre of the earliest-known town, marked by the Masjid-i-Jami' to the main gate of egress.

In Isfahan, the original Yahudiyeh was centred on the site of

the present Masjid-i-Jami'. The street pattern still shows this centrapetal pattern. From the old square the main bazaar led off south and south-west. Other main axes with bazaars to the north-east and north-west are discernible. When the Maydan-i-Shah was built and the town extended south, the chief bazaar joined the old centre to the new. The new bazaars around the square became the focus of trade and that leading from the south-east corner formed the link between the maydan and the Hasanabad gate, by which goods could leave the city for the south and south-east. In addition to the main system there were, as now, very many local bazaars serving local needs throughout the city and suburbs. (Fig.17) Caravanserais were arranged along the main bazaars, the oldest in the north and the new and most magnificent around the maydan. Even before becoming capital Isfahan was a great centre of trade and industry, which soon expanded into and incorporated the bazaars built by Shah Abbas I. Thus when European travellers arrived in Isfahan the bazaar system of today had already been established.

Most of their descriptions refer to the main bazaar system from the Masjid-i-Jami', though the Maydan-i-Shah to Hasanabad Gate, altogether 2 - 3 miles under cover. (Fig.17) Don Juan, in 1600, claimed there were 10,000 shops and over 600 caravanserais in Isfahan.¹ This is acceptable if workshops and caravanserais of all types are included. Chardin's 1802 caravanserais would seem an exaggeration.² None of the

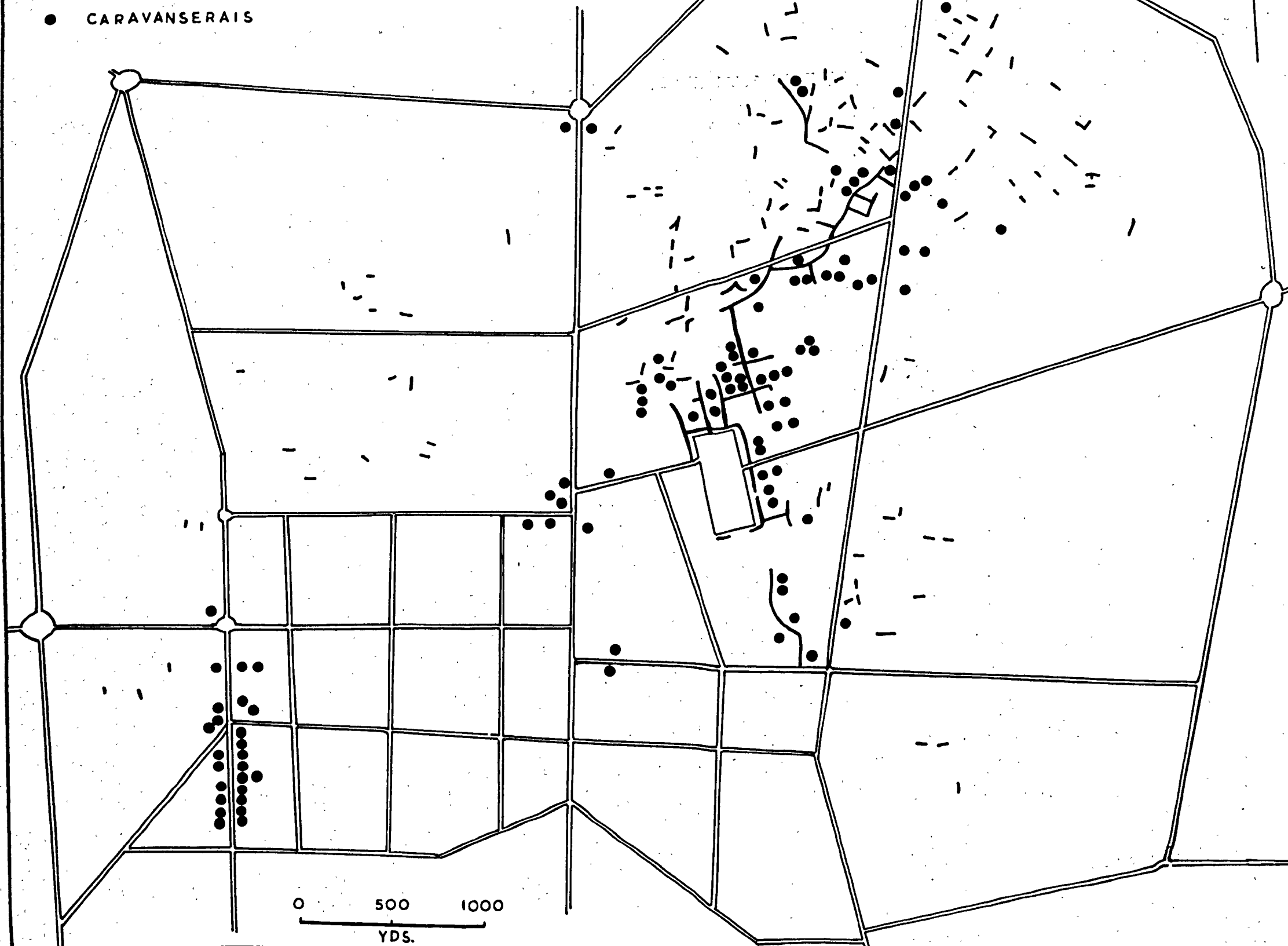
ISFAHAN Bazars and Caravanserais

FIG.17.

FROM AIR PHOTOGRAPHS

✓ COVERED BAZARS

● CARAVANSERAIS



travellers' estimates can be considered seriously, as none defined his terms or did exhaustive surveys.

Their descriptions of the bazaars from the 17th century, however, are vivid and permit comparisons with the present state of bazaars. In the main they have changed little. The covered streets were from 8 to 50 paces wide, mostly built of brick, high and vaulted, roofed by a series of domes pierced at the apex to let in light. On each side of the street was a row of shops, all the same size, in alcoves, with a wide step in front for setting-out goods and where the shopkeeper and customers could sit on carpets, displaying and examining or haggling, over a glass of tea. The shop was usually two rooms, the outer one like an open recess which could be closed by shutters at night, and here the main stock was kept. Behind, secured by a strong door, was the room where reserve stocks and the most valuable commodities were kept. This basic plan was adapted to the needs of the shop. Bakers had great ovens in the inner shop and copper-smiths could use the step in front as a workshop. All shops were closed and locked at night; no one was allowed to remain or live in the bazaar. Some were patrolled at night, a service undertaken by the owner, who also paid for the watering of the streets in summer when dust from the unpaved surface in an enclosed space could be very unpleasant. This, combined with the coolness of perpetual shade and the shielding of intense light, made the bazaars popular and

crowded, especially about midday and in the evening. Shops were open daily except on the main feasts, and during Ramadan they opened after sunset and remained closed during the daylight fasting period.

Some bazaars differed from this general description both in scale and decoration. Shah Abbas's Imperial Bazaar, built 1619-20 was the largest and most sumptuous in Isfahan. It extended from the maydan through the Qaysariyeh gateway* formed of an ayvan and demi-dome and covered with tiles and a mural depicting Shah Abbas fighting the Uzbeks. This entrance formed the fourth monument of the maydan, adorning the north wall.³ In the bazaar itself was another painted dome above the entrance to the royal caravanserai on the left and the Exchange on the right, both with lavishly decorated gateways. The Hasanabad gate bazaar was also decorated with frescoes, but most bazaars remained plain except for intricate patterns in the brickwork forming the vaulted roof.

Bazaars also differed in the types of goods sold. The congregation of shops dealing in one commodity and craftsmen in one trade was very

* The Qaysariyeh gate, according to Chardin, meant Caesarea gate, being named after a gate in that town. Langlès, however, knew of no such monument in Caesarea of the Holy Land. There are, in any case, several towns of the name. The name is more likely to have been derived from Roman usage, via Turkey and refers to the principal market of the town. Tehran also had a Qaysariyeh caravanserai.

noticeable. This is illustrated in Chardin's description of the maydan⁴ but it was long established in the older bazaars. According to Chardin, Shah Abbas decreed that merchants dealing in similar goods or from the same province should be together, but this usage must have been established long before. Apart from the detailed description of the maydan, however, it is impossible to reconstruct their distribution. Exceptions to the rule were shops producing everyday necessities like bread and meat-shops, grocers and temporary stalls for fruit and vegetables. These were scattered through the main bazaar and formed the nuclei of local bazaars. Coffee and tea-houses were also scattered, located at frequented points such as the Qaysariyeh gate. Congregation of craftsmen, metal-workers, jewellers, tailors and specialised dealers such as carpet-merchants, spice-merchants, druggists and so-on, was well-marked.

Caravanserais lay at right angles to the bazaars, reached through passages often with massive and decorated gates. They were arranged around a square courtyard with a pool, some greenery and often a well. Around the yard were rooms in arcades, single or double storey.

Struys found caravanserais with 4 or 5 storey galleries but there are no examples now.⁵ It was certainly a caravanserai which Barbaro described in 1474 as the chief of the great and noble antiquities of Isfahan.⁶ "A square cisterne with clear and sweete water, verie good to drynke" and around it was "a goodly wharfe sette w^{ith} pyllars and

vaultes wheare arr innumerable roomethes and places for merchaunts to bestowe their merchaundizes" (sic) and this was locked at night. Nearly 200 years later, Chardin describes a royal caravanserai, one of the most beautiful in Isfahan south-east of themaydan.⁷ This was a two-storey square building, each storey 20 ft. high. In the middle of each side was an ayvan decorated with mosaics, formed of a half-dome and incorporating a large room. There were 24 other rooms on each side and each storey. These were 5 ft. high, 18-20 ft. deep and 15-16 ft. wide. This caravanserai was used as lodgings as the step in front of the rooms was a sleeping-place in summer. The lower floor was servants quarters and the upper for the merchants and their wives. The rooms were two deep as in the bazaars with no windows, only doors and an open balcony in front. The walls were 2-3 ft. thick, with chimneys. Behind the living quarters were stables, and shops. The courtyard itself was well-paved, with a pool, fountain and well. This was typical in structure and form of all the great caravanserais of Isfahan, built of brick and stone, the latter being found only in the most sumptuous.

The function of the caravanserai varied; its form was adaptable to many purposes. Those in the bazaar, closed at night, could not be used for lodgings. These were sometimes groups of shops, but more often warehouses for wholesale dealers, and often a stone platform was built in the yard for storage. The rooms were then used as offices.

Wholesale caravanserais could deal with one commodity, such as those of the Saffron-dealers and Pomegranate-sellers, or mixed goods when the merchants themselves were linked, e.g. Caravanserais of the Indians or Korasanis. Others were used by crafts and industries, especially when the industry did not produce finished goods, such as dyeing; or where bulky materials were needed, as in weaving. These caravanserais might be owned by guilds. Caravanserais which housed caravans were usually outside the town centre, near the gates. This was more practical than bringing camels into the towns. Goods could be sorted and trans-shipped using donkeys.

Caravanserais can be classified under similar headings to baths.⁸ Chardin mentions 115 although only 45 by name; 19 were named after nobles who received revenue from them and three were royal. Eight were known by the trade they harboured and nine by the locality from which the occupants came. The remainder were named miscellaneously. (Appendix 2) In the suburbs of Khaju, Abbasabad, Shaykh Sabana, Kiroun and Bidabad there were 55 caravanserais, indicating the demand for lodgings.

Bazaars and caravanserais were prominent features in Safavid Isfahan, praised by travellers for their practical beauty. "Le bazaar contribue á la grandeur de cette ville" said Olearius.⁹ Provins agreed "la beauté du dedans consiste en bazaars, en magasins royaux, ou halles, caravanserai ou khan".¹⁰ The trade of Isfahan symbolised

in these buildings also extensive and flourishing, vast quantities of food were needed from the oasis and as far away as Kerman.

Isfahan was early known for its textiles and metal-work, and luxury goods were produced in great quantities in response to the demand from the court. The extent of international trade which Isfahan attracted is exemplified in the numbers of foreign merchants present.

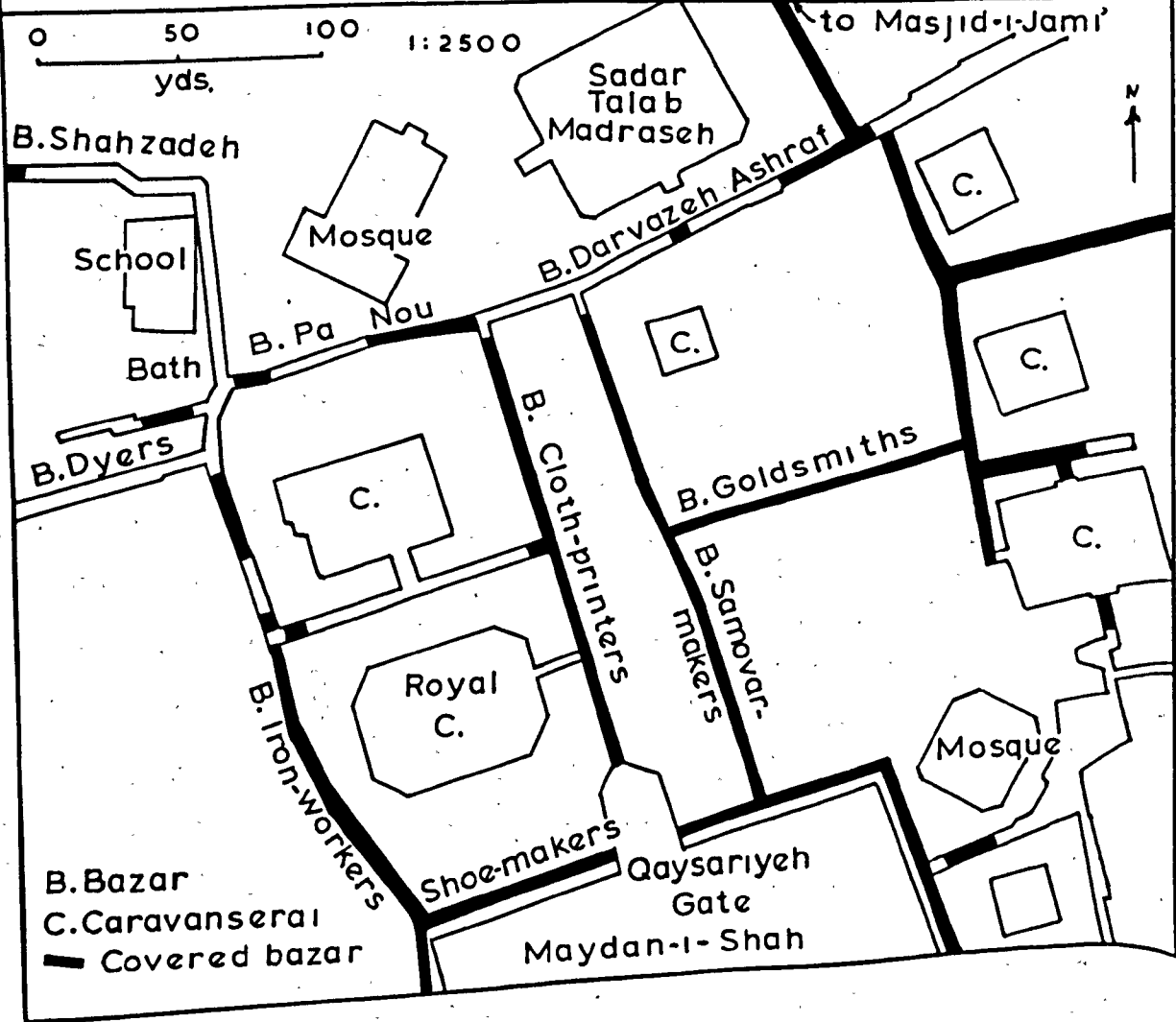
Although this description applies to the bazaars and caravanserais of Isfahan in the 17th century most of it remained applicable through the 18th and 19th centuries, as very few new bazaars were added. Morier saw no new bazaars except that of Hajji Muhammad Husayn Khan.¹¹ Local bazaars were more subject to change, as many were roofed, not with brick vaults, but with wood and cloth, or straw matting. These the travellers saw in ruins; the main bazaar survived if it did not flourish. Ouseley¹² Briand,¹³ Dubeux,¹⁴ and Flandin¹⁵ describe the decoration of the domes and the murals, exclaiming on the extent of the bazaars, the majesty of the vaults and the bustle of trade. Others, Ker Porter,¹⁶ Money,¹⁷ and Boie¹⁸ saw the bazaars empty, abandoned and ruined. There had certainly been contraction in trade and industry and therefore in the area needed to house them, but Isfahan's population remained about 100,000 which would entail considerable internal trade. Reports of large bazaars shut up and deserted, and magnificent shops housing nothing more than a melon-vendor and his stock were no doubt true, but the bazaars of Shah Abbas

remained in all eyes the finest in Persia and those still in use were crowded and active. Gordon, while recording decay and shrinkage, gives a lively account of the shops he saw, "infinitely better supplied than those of Russia."¹⁹

Curzon considered Isfahan's bazaars the finest in Asia after Karim Khan Zand's in Shiraz and said "all the life of the city throbs in their packed and clamorous alleys."²⁰ Despite its decay, Isfahan remained the second largest trade centre in Persia, after Tabriz. European goods, especially British textiles, filled the bazaars, and local products, especially opium, tobacco and carpets, were exported. Some early 20th century travellers compared the vitality of Isfahan's bazaar unfavourably with that of Tehran, but this judgement could easily be mistaken. Tehran was growing as a commercial centre for the first time, spreading outwards and building anew, whereas any increase of trade in Isfahan would mean only gradual recolonisation of abandoned bazaars; and while population remained low complete revival was impossible.

Today the bazaar still consists of miles of covered narrow lanes, lined with booths, each street having its own craft or commodity (Fig.17). Hand-printed goods and copper-ware are found in the Imperial Bazaar, jewellers still congregate in a street nearby, with hardware, heavy cloth and imported textiles beyond. (Fig.18). There has, however, been some breakdown of this system, especially in bazaars devoted to retail

QAYSARIYEH & ASSOCIATED BAZARS ISFAHAN fig.18.



trade and where tourism has intervened. Much retail trade has shifted to modern shops in the new main streets, but wholesale dealers and craft-workers remain in the bazaar for easy intercommunication. The Imperial bazaar remains the most impressive; those behind the maydan to the east are somewhat neglected. It is still possible to walk from the Masjid-i-Jami' to the Maydan-i-Shah under cover except where a new road has smashed its way through bazaar and houses. The present extent of covered bazaar is much the same as in the 16th and 17th centuries. Scattered bazaars indicate the local shopping areas of the older quarters. No conclusions on the pattern or retail trade can be deduced from this distribution, as bazaars today are now supplemented, and in newer areas replaced, by modern shops. Both bazaars and new shopping streets appear to be strong and flourishing. Through specialization, with the bazaar taking over wholesale trade and craft industry, there is still room for both.

Many 17th century caravanserais exist in Isfahan still. Some are used as shops, many are warehouses, with crates and boxes stacked in heaps in the courtyard, while the rooms are used as offices. Others are workshops of craft industries. The great Shah Sultan Husayn caravanserai adjoining the Chahar Bagh madrasah is being incorporated into the unfinished Shah Abbas Hotel. Three sides are original, with rooms on two storeys while the fourth is the new

hotel block. This is a way of preserving ancient monuments usefully and one which will attract the attention of tourists. A completely new type of caravanserai has replaced those which catered for camel caravans. As lorries replaced caravans so there sprang up, along main roads and at intersections, garages with an open courtyard for parking and around it low buildings for work-shops and offices. These are found along the upper Chahar Bagh and the south of Avenue Shahpur. (Fig.17) In these modern caravanserais goods for long-distance lorries can be loaded, unloaded and sorted, being dispatched to the warehouses in bazaars by mule, porter, or converted motor-scooters, better able to negotiate the narrow lanes. From others long-distance buses leave - a very important service, as Isfahan lacks a railway. The congregation of repair workshops on Avenue Shahpur is a very interesting feature continuing the bazaar tradition.

Until the end of the 18th century Tehran was only a small town, where routes from the south joined the important one along the southern edge of the Elburz. It also derived strategic importance from its situation. The bazaar, first built by Shah Tahmasp in 1553 was a prominent feature. Hence Herbert's remark that of all the houses the Duke's and the bazaar were the fairest, and the "caravan's lodge here for elegancy far exceeds the mecht." (mosque)²¹ The

market, he said, was divided into two, some part open, the other arched. It is not recorded if the Zands built bazaars as well as a palace here, but the Qajars, once in power, soon began building or rebuilding bazaars. Olivier said: "ses bazards present l'aspect d'une ville neuve ou entièrement renouvelée."²² He adds that Agha Muhammad built very beautiful caravanserais. In appearance the bazaar resembled that of Isfahan, although not as high and wide as the Imperial Bazaar, and no writers describe decorations. According to Money, they were mud-built and unpaved, surmounted by low roofs and after every four or five shops was a dome with an aperture for light.²³ Trades assembled together and the bazaars were closed and guarded at night. Many considered the bazaars extensive and well-filled. Others, including Fowler²⁴ and Flandin²⁵ were less favourably impressed, considering the bazaars miserable and tumble-down, very inferior to Tabriz or Isfahan. They were ugly and dirty, crowded and disagreeable as they were also used as thoroughfares. The streets were narrow and densely-choked.

The 1858 map marks bazaars and caravanserais. (Fig. 19) The main bazaar and probably the oldest part led from the Masjid-i-Jami' to the Shah Abdul Azim gate. Sabz-i-Maydan and the bazaars to the south correspond to the maydan and Imperial Bazaar of Isfahan, obviously having been planned and laid out with the Ark, by early Qajars. An important bazaar led north to the Shemiran Gate. All

KEY TO FIG.19TEHRAN BAZAAR. AFTER MAP OF 1858

- A. Ark
- B. Sabz-i-Maydan
- C. Shah Mosque
- D. Congregational Mosque
- E. Garden of the British Legation
- F. Shah 'Abdul 'Azim Gate
- G. Muhammadiyeh Gate.

Religious buildings
ruled

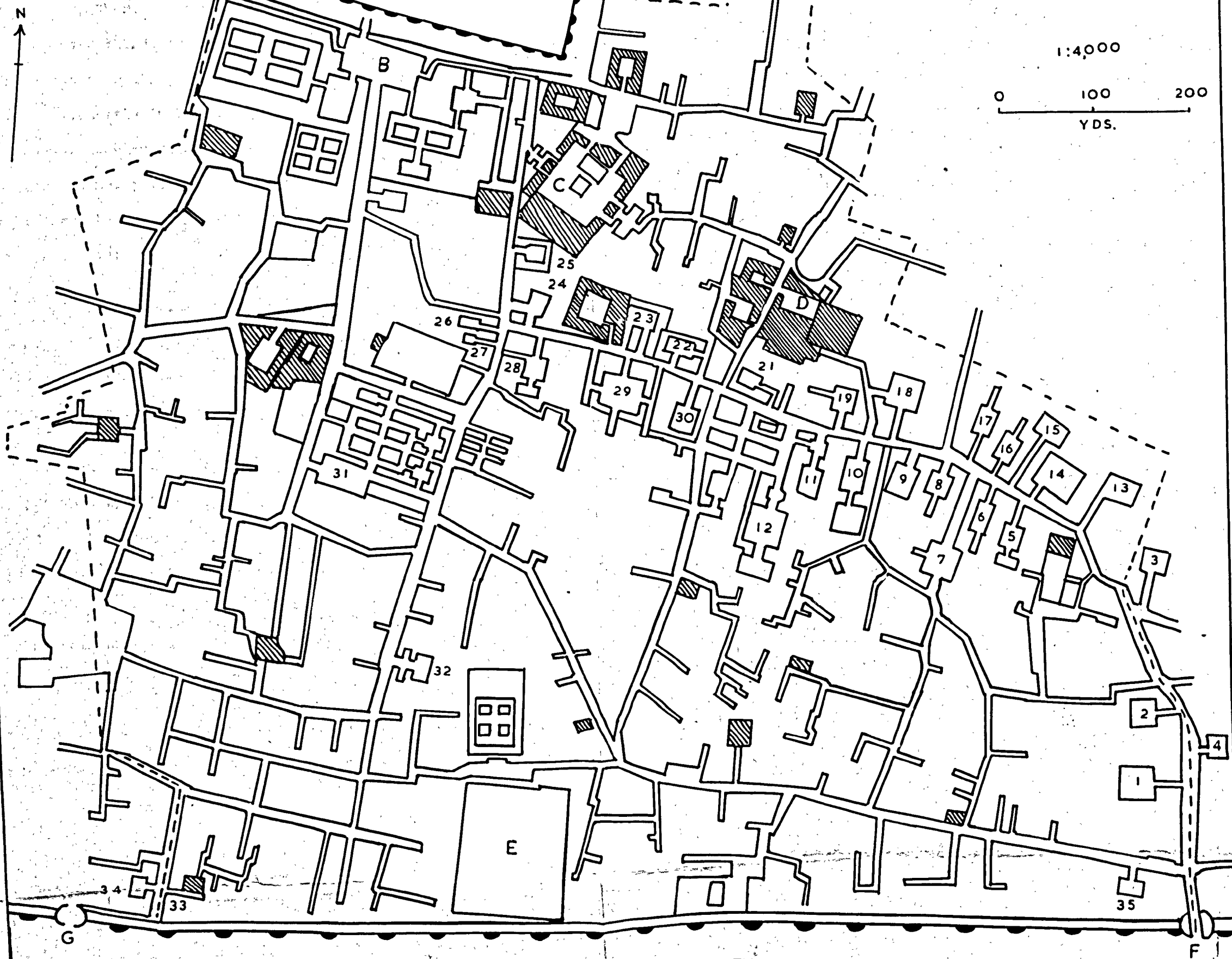
Boundary of Bazaar
Quarter shown
by a broken line.

Caravanserais

- | | |
|----------------------------|-----------------------------|
| 1. C. 'Alam Shikan | 18. C. Nou |
| 2. C. Golshan | 19. C. Shaykh Ja'far |
| 3. C. Hajji Hadi | 20. Unmarked |
| 4. C. Golshan Shiikan | 21. C. Naqqarehkhaneh |
| 5. C. Hajji Kamal | 22. C. Khudai |
| 6. C. Hajji Kamal | 23. C. Hajji Sayf-ud-Douleh |
| 7. C. Dalan Daraz | 24. C. Hajji Seyyid Makhtar |
| 8. C. Sulayman Khan | 25. Timcheh Zargarha |
| 9. C. Hajji Nadir Ali | 26. C. Ahmad-i-Kur |
| 10. C. Hajji 'Abdul Vahhab | 27. Timcheh Hajji 'Ali |
| 11. C. Qaysariyeh | 28. C. Hajji Mulla 'Ali |
| 12. C. Shah | 29. C. Hajji Hasan |
| 13. C. Gardan Kaj | 30. C. Hajji Zaman |
| 14. C. Mirza Isma'il | 31. C. Amir |
| 15. C. Navvab | 32. C. Mirza Abbas |
| 16. Unnamed | 33. C. Kalantar |
| 17. C. Hajji Mukhtar | 34. C. Mirza Maruz Vazir |
| | 35. Unnamed |

FIG.19.

TEHRAN BAZAR
1858



the gates except the Qazvin gate had bazaars in the main streets approaching them. Caravanserais follow the bazaars. Of 60 on the map, two thirds are attached to the main bazaar. Most of the others are near the gates. (Appendix 2) Morier claims there were 150 caravanserais in Tehran in 1808.²⁶ This sounds excessive unless there were many outside the walls. Binning mentions caravanserais outside the New gate and adds that they were numerous, as the city was a great thoroughfare.²⁷ Morel's estimate of 300 in 1867 also seems excessive.²⁸

Most caravanserais are named after their founders. Here these are merchants rather than courtiers which the absence of honorific titles and prevalence of "Hajji" in their names testifies. A double caravanserai named "Qaysariyeh" corresponds to that of Isfahan.

Nasir-ud-Din's modernisation included renovation of the bazaar. Repairs were undertaken and new bazaars built such as that of Taki Khan 1850-1. Gobineau considered the Hajib-ud-Douleh caravanserai, built 1854, one of the most beautiful monuments in Persia, which could be cited with honour among the most elegant of Isfahan.²⁹ The location of this caravanserai, mentioned also by Orsolle³⁰ is uncertain, as none of that name appears on the maps.

The impetus for this building was the increased trade once Tehran became established as capital, with the growth of population and the

influx of European goods. Eastwick noticed English chintzes,³¹ and Ballantine Manchester goods, French sugar, and Russian oil in the bazaar,³² while many writers were disappointed to find stalls selling Persian goods in the minority. However the local shoemakers, hatters, saddlers, gunsmiths and coppersmiths had their own quarters with distinctive names. Le Mesurier considered this grouping a result of trade monopolies by families.³³ There were also special quarters for Christian and Zoroastrian merchants.

The impression made on many travellers was one of confusion aggravated by the absence of light. The bazaars were still the principal thoroughfares, the seat of most economic activity and, during the day, the centre of population. Orsolle estimated a daytime population of 20-25,000³⁰ and de Windt of 30,000.³⁴ The former compared it to a city with its own streets, squares, and cross-roads, hostelries and mosques. It was an immense labyrinth of covered streets varying in height and width and in the quality of the building.

Curzon wrote "in width of passage, size of shops and general structural convenience they (Tehran bazaars) are in advance of almost any oriental bazaar I have elsewhere seen, though inferior to those of Isfahan, Shiraz and Tabriz, but for the stranger and curiosity-hunter, they are the most disappointing in the east."³⁵ They lacked the picturesque oriental appearance of Cairo and Constantinople,

KEY TO FIG. 20 TEHRAN BAZAAR, AFTER MAP OF 1892

- | | | |
|----|--------------------------------|---------------------------------------------------|
| A. | Ark | |
| B. | Sabz-i-Maydan | Religious buildings ruled |
| C. | Shah Mosque | |
| D. | Congregational Mosque | Boundary of Bazaar Quarter shown by a broken line |
| F. | Site of Shah 'Abdul 'Azim Gate | |
| G. | Site of Muhammadiyeh Gate | |

Caravanserais

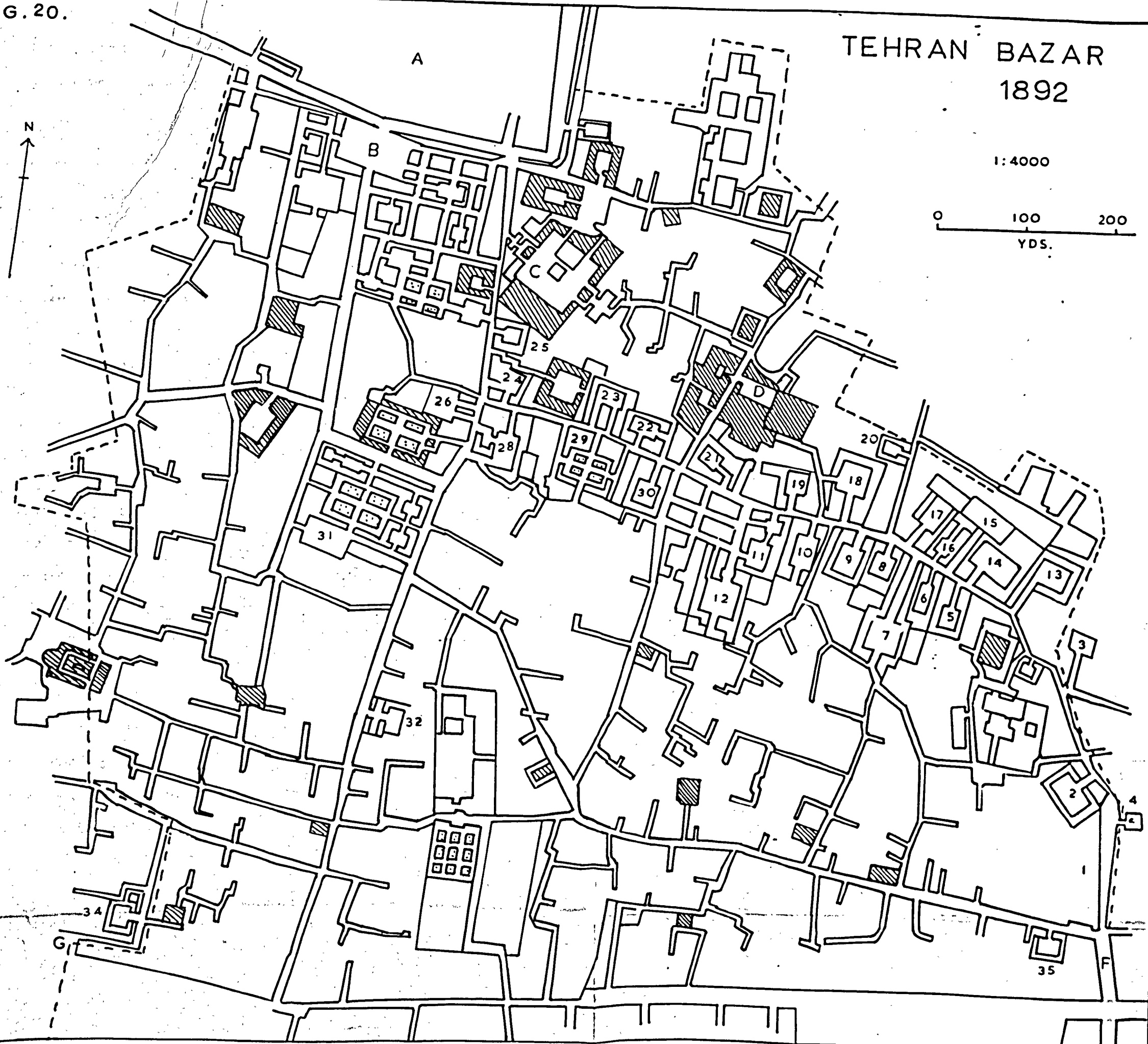
- | | | | |
|-----|-------------------|-----|------------------------------------|
| 1. | C. 'Alam Shikan | 19. | C. Aqa Shaykh Ja'far |
| 2. | C. Golshan | 20. | Unnamed |
| 3. | C. Hajji Hadi | 21. | C. Naqarehkhaneh |
| 4. | C. Golshan Shikan | 22. | C. Hajji Seyyid Mahmud |
| 5. | C. Hajji Kamal | 23. | C. of the Zoroastrians |
| 6. | C. Hajji Kamal | 24. | C. Hajji Seyyid Mukhtar |
| 7. | C. Dalan Daraz | 25. | Timcheh Zargarha |
| 8. | C. Sulayman Khan | 26. | C. Ahmad-i-Kur |
| 9. | C. Nadir Ali | 27. | Unmarked |
| 10. | C. Abdul Vahhab | 28. | C. 'Ala-ud-Douleh |
| 11. | C. Qaysariyeh | 29. | C. Hajji Hasan |
| 12. | C. Shah | 30. | C. Hajji Zaman |
| 13. | C. Gardan Kaj | 31. | Unnamed |
| 14. | C. Isma'il | 32. | C. Mirza Abbas |
| 15. | C. Navvab | 33. | Unmarked |
| 16. | C. Yazdiha | 34. | Unnamed |
| 17. | C. Dust 'Ali Khan | 35. | Timcheh of the Armenians |
| 18. | C. Nou | 36. | C. Chihil Tan |
| | | 37. | C. of the Orchard of Amin-ul-Mulk. |
| | | 38. | C. Khaneh Amin-ul-Mulk |
| | | 39. | C. Vazir Nizam |
| | | 40. | C. Sadiq-ul-Mulk |

FIG. 20.

TEHRAN BAZAR
1892

1:4000

0 100 200
YDS.



mainly because of their concentration on European goods and the drabness of the people themselves.

As early as 1883 Benjamin had noticed that business was not confined to the covered bazaars.³⁶ Not all the streets lined with shops on the 1858 map were necessarily covered, certainly not all had brick vaults. (Fig.7) The 1892 map shows streets in the north which were uncovered but very important for commerce. The difference between the extent of Land under commercial land-use on the two maps cannot be called an extension, as there was certainly development outside the walls in 1858. However, although there were caravanserais outside, there were probably few shops. The shopping streets of the "European quarter" were certainly new. (Fig. 20)

Caravanserais outside the old town are closely related to the gates, especially the former New and Shah Abdul Azim gates. Many were new but the Old Qaysariyeh perhaps existed in 1858 and also a ruined caravanserai to the west. (Fig.21)

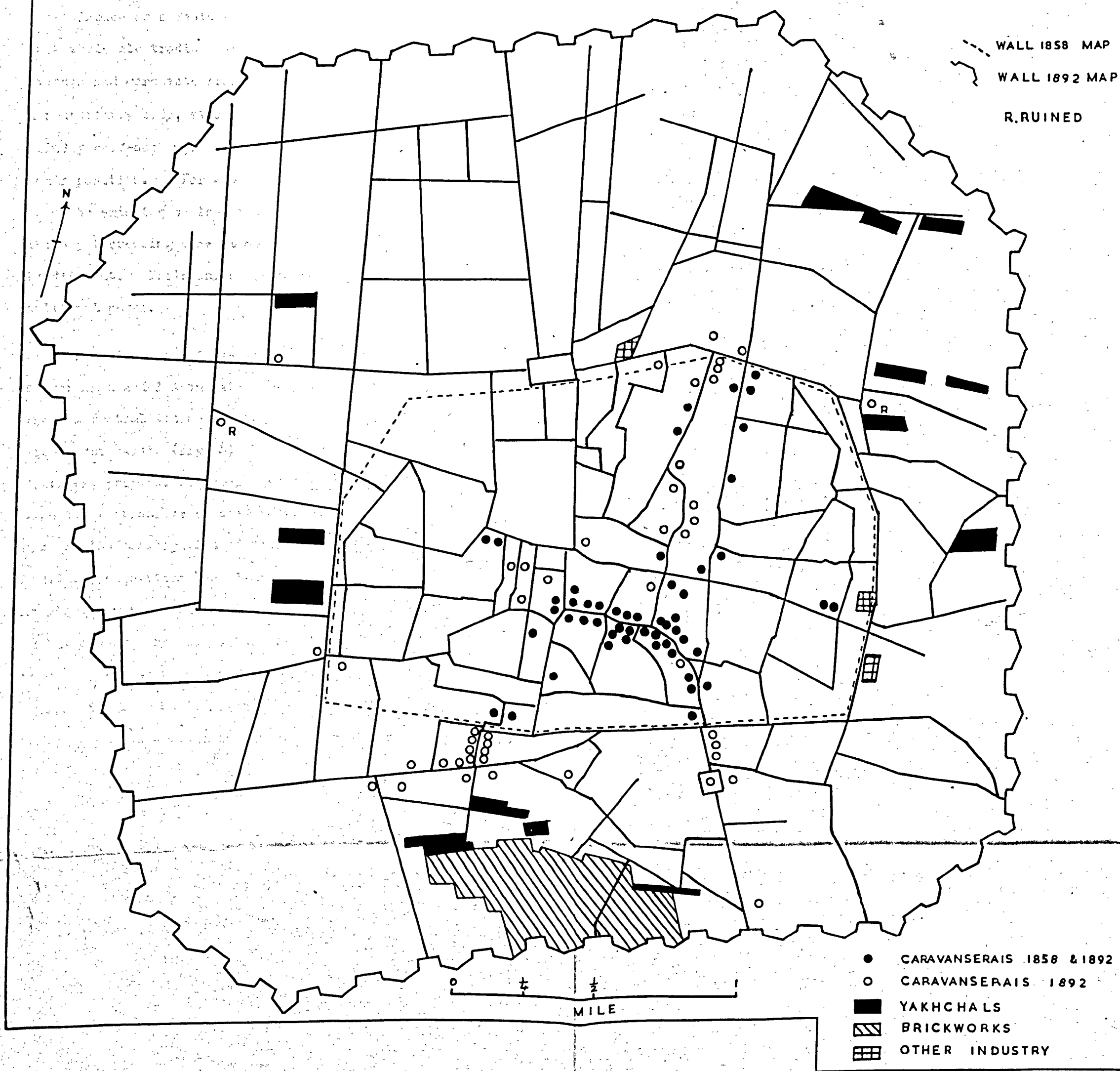
Despite increasing competition from European-style shops in Lalehzar and Boulevard des Ambassadeurs, the bazaar continued to flourish as the centre of commerce into the 20th century, gradually taking on nation-wide importance although until the 1920s it was surpassed by Tabriz. As the town became westernised the bazaar acquired value in the eyes of visitors as a truly eastern feature which had survived. Finding little else of interest in Tehran, their

imagination ran riot with "murky retreats, labyrinthine lanes and cavernous enclosures." However, the Tehran bazaar never was and never will be a tourist attraction. It is a practical institution for the purpose of buying and selling, the commercial heart of the capital and country. During Reza Shah's modernisation, the bazaar did not emerge unscathed. (Fig. 8) Large stretches were pulled down in road-widening and caravanserais were converted into garages. Harris thought the bazaar was probably intended to disappear with the walls and gates.³⁷ Whatever the intention, this did not happen. Even in the 1930s new building was still being undertaken in relation to the bazaar. Banks set up branches there, foreign firms had their offices and much modernisation took place in situ. Little brick vaulting now remains. Higher buildings line the bazaar - shops with glass windows, offices with air-conditioning. The streets are roofed with steel girders and frosted glass. Caravanserais have been replaced by enclosed courtyards of two, three or even more storeys of shops and offices with internal balconies for access. The older type of bazaar with small alcove shops survives both on the fringe of the bazaar and as local bazaars in the poorer areas of Tehran. Old caravanserais are still used for storage, each specialising in one commodity. (Fig.22)

However, with the growth of Tehran as a political and administrative centre, and increasing state control of trade, the bazaar has lost its

CARAVANSERAIS AND INDUSTRIAL PREMISES. TEHRAN

FIG. 21.



WALL 1858 MAP

WALL 1892 MAP

R. RUINED

- CARAVANSERAIS 1858 & 1892
- CARAVANSERAIS 1892
- YAKHCHALS
- ▨ BRICKWORKS
- ▤ OTHER INDUSTRY

pre-eminence as a feature of townscape and as an economic power-house. Much wholesale trading has also shifted to lower Lalehzar and Sa'adi Avenues and merchants remaining in the bazaar have become known as a reactionary body, strongly influenced by religious leaders and blindly self-seeking. They oppose any reforms which will affect their position. For example they opposed any bus services other than the existing centripetal services, fearing to lose trade, but thereby increasing congestion and rendering traffic circulation inefficient. Their influence stems from strong financial and political power.

The main bazaar today is still that joining Sabz-i-Maydan to the former Shah Abdul Azim gate. (Fig. 22) It is the largest area in central Tehran not touched by new avenues. Those projected were never built. (Fig. 8) Maps of bazaar land-use and social features, prepared by the Tehran University Sociology Department, show the continuance of certain trends noted in the 19th century, such as the congregation of trades, illustrated by carpet-dealers. Similarly population has always avoided the bazaar itself which forms at night a population vacuum in the city centre. The covered area of the bazaar corresponds very closely to that of 1858 and 1892. It is one of the most stable features of townscape in both Tehran and Isfahan but whereas in Isfahan the fabric has remained the same, in Tehran this has changed in situ. Today Tehran's bazaar is obviously

the richer and busier, crowded with shoppers, business men, clerks, and porters bent double under crates and boxes with the occasional mule-cart or donkey, or motor-scooter. Motor transport is virtually impossible and this is a great disadvantage which will weigh heavily against the bazaar. The Isfahan bazaars are less crowded and generally more spacious, but despite their prosperity they have not Tehran's air of bustling modernity. However, the future of Isfahan's bazaar is more secure than that of Tehran, being now an asset to tourism and an ancient monument of value which will be maintained even if its economic *raison d'être* is superseded.

In addition to shops, Persian bazaars also include workshops of craft industries. Before the 20th century almost all industry in Persian towns was bazaar or caravanserai-based and there was a strong locational and managerial link between manufacturing industry and commerce.

The basic unit of bazaar and caravanserai is a deep arched recess with a room behind. This forms the shops, office, store and living quarter. It is also the premises available for craft-industry. For many it is suitable and adequate; gold and silver-smiths, jewellers, shoemakers, tailors and hatters need little space in which to operate and only two or three workers to form a viable economic

unit that can carry on all the processes from raw-material to finished article, as well as marketing. Raw materials are not bulky and the goods produced depend so much on quality and individual specialisms that grouping in the bazaar itself is convenient. Industries needing rather more space include metal-working, pot-making, sweetmeat-preparation, where the raw materials are bulkier. These often use the step in front of the shop as extra working-space and may occupy larger shops with more extensive back premises where bulky articles such as copper vessels and earthenware pots must be stored. Ovens such as those used by bakers are necessary for potters and in some cases for sweetmeat preparation. This type also produces a finished article. When really bulky raw materials and equipment is needed, where the process is only one towards the completion of the product and where retailing in the same premises is not a major consideration, then the caravanserai is a more suitable location. This is illustrated in the case of the textile industry. Bales of wool and cotton can be stored in courtyards. Dyeing requires a regular water-supply, which a qanat in a caravanserai would supply, large dye-vats and also space to dry the yarn. This is usually done on large wooden trellises. Looms are bulky machines but can be accommodated in enlarged caravanserai rooms. Industrial establishments in the bazaar therefore varied very little in form, with the minimum adaptation to special needs.

The organisation of industry on a family or guild basis is not

KEY TO FIG. 22TEHRAN BAZAAR, PRESENT

- B. Sabz-i-Maydan
C. Shah Mosque
D. Congregational Mosque
F. Site of Shah 'Abdul 'Azim Gate
G. Site of Muhammadiyeh Gate

Covered streets ruled
Dots represent shops
selling carpets.

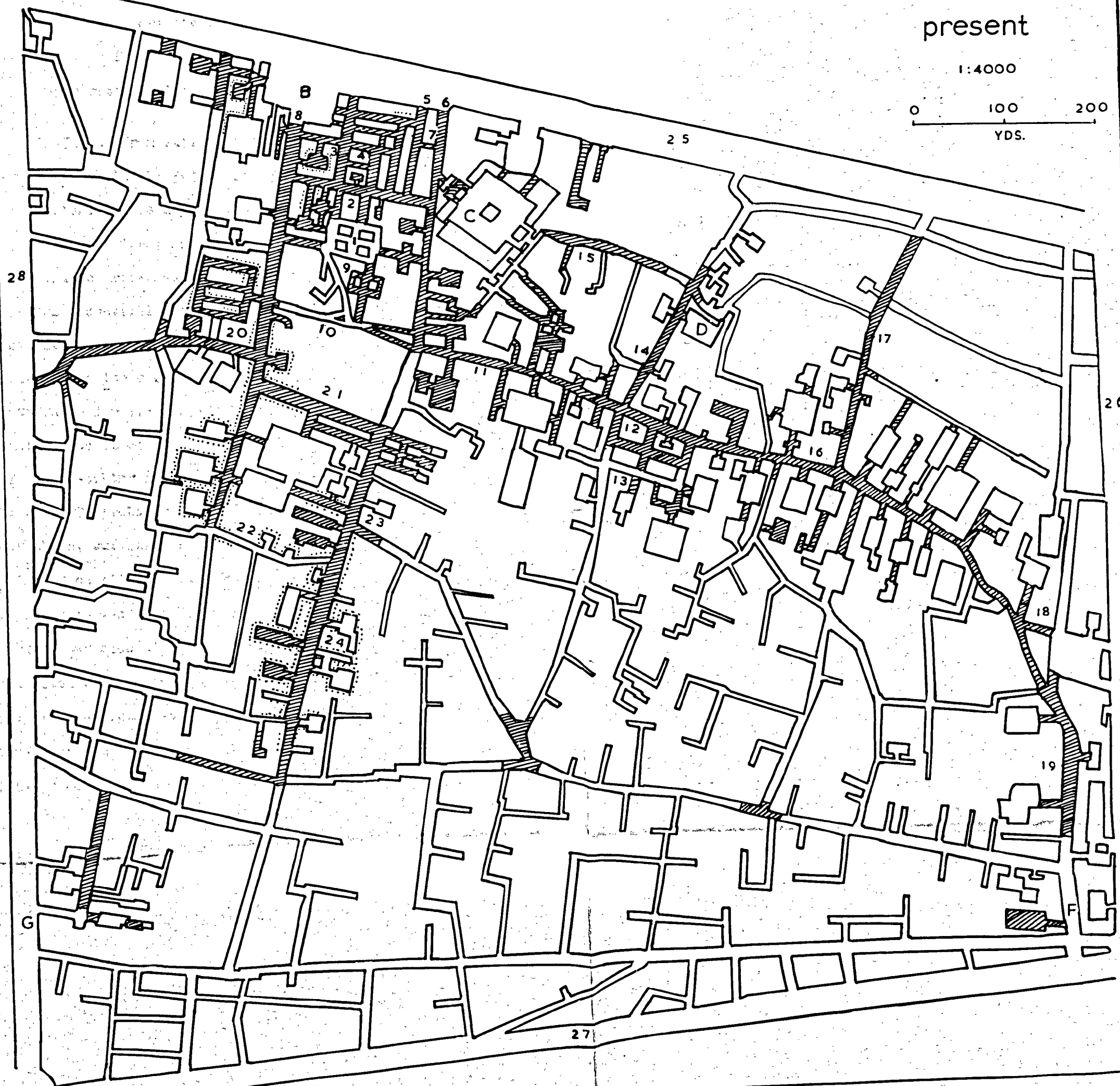
- | | |
|-------------------------------------------------------|--------------------------------------|
| 1. Saray-i-Hajib-ud-Douleh (Hardware) | 17 B. Ahangarha (iron workers) |
| 2. Dalan Hajib-ud-Douleh (Spices) | 18. Sayyid Isma'il |
| 3. B. Qaysariyeh (Carpets) | 19. B. Darvazeh Bazaar |
| 4. Libas furushan (clothing
Dukhteh furushan | 20. Kucheh Pachenar |
| 5. Chamadan Sazha (trunk-makers
Sarrajha (leather) | 21. B. Khayyatha (tailors) |
| 6. B. Buzurg B. Bazzazha (drapers) | 22. B. Kababi-ha |
| 7. B. Zargarha (goldsmiths) | 23. B. Abbasabad
(carpet dealers) |
| 8. B. Kaffashha (shoemakers) | 24. B. Hajji Qasim |
| 9. Chahar Suq. B. Kilo (cloth by
weight) | 25. Buzurgmihri Street |
| 10. B. Imamzadeh Zayd (carpets and
drapers) | 26. Sirus Street, |
| 11. B. Hajji Hasan | 27. Moulavi Street |
| 12. Chahar Suq Buzurg | 28. Khayyam Street |
| 13. B. Messgarha (coppersmiths) | |
| 14. B. Halabi Sazhe (tinsmiths) | |
| 15. B. Bayri-ul-Haramayri
(between two mosques) | |
| 16. B. Kucheh Ghariban | |

FIG.22.

TEHRAN BAZAR
present

1:4000

0 100 200
YDS.



discussed here, nor the financing or taxation of industrial premises except in so far as this affects the form of the premises occupied and their distribution.

Isfahan, from early times was noted for its commerce and industry. In the 3rd century H. Yahudiyeh was exporting silk and cotton. The Zayandehrud was always prized for washing and bleaching textiles, raw materials being supplied from the oasis and nomadic tribes such as the Bakhtiari. Chardin describes several industrial establishments in detail but not industrial activity as a whole.³⁸ The King had 32 karkhaneh or workshops, probably on the caravanserai plan. Each had an average of 150 artisans; for example, 72 painters were employed and 180 tailors, making a total of about 4,800 men. Even this was not the total of those working solely for the king. Chardin records that "formerly", probably in the reign of Shah Abbas I, there were more workshops, but certain departments, such as those of the dyers and painters on silk had been closed down. The work of these and other departments was given to town workers for a cash payment. The royal workers had special conditions of work and payment. Sometimes they travelled with the court. Royal tent-makers, gold and silver-smiths, armourers and clock-makers (some of them European), are mentioned. Tavernier and Chardin were jewellers specially commissioned by the Safavid court. A special officer was in charge of all manufacturing

done for the king in town and country. This included the permanent royal artisans, contract work by town workshops and special commissions such as carpet-making. The body of artisans working directly for the king and court could have approached 10,000. The importance of this to Isfahan's industry is clear, and besides the royal household, aristocratic families also patronised industry, especially the building and decorative trades and the making of luxury goods. For basic necessities the population of near a million would generate a steady demand. The king's labour force was only a fraction of those employed in industry, which would then constitute a very appreciable portion of the employed population.

Despite the disruption caused by the Afghan siege and 18th century disturbances, with the consequent catastrophic fall in population, the bazaar industry of Isfahan survived, although on a reduced scale, in the 19th century. The removal of the court greatly diminished the demand for luxury goods and considerably reduced the industrial labour force. Local markets were reduced by something like 80% and sources of raw materials were lessened. Dupré saw many kinds of cloth being made, iron-goods, weapons, paper, crystal heads for pipes and refined sugar.³⁹ To this Morier added gunpowder, sword-blades, glass and earthenware, specifying brocade and cotton in textiles.⁴⁰ Kinneir commented on the gold brocade of Isfahan which had "attained unrivalled excellence"⁴¹ All these products had been important in

Safavid times. In the early 19th century, industry experienced a revival under Hajji Muhammad Husayn Khan who promoted old manufactures in order to populate deserted bazaars and caravanserais. The reputation for high quality which Isfahan enjoyed no doubt helped the revival and encouraged adherence to the traditional products, especially textiles, to which the city's resources were suited, and of which a great variety was produced - brocades, satins, chintzes, silks, velvets, taffeta and hand-printed cloths. However, production had swung to the cheaper range of goods. Brocade was only produced in small quantities and strong cottons for coats and trousers were very important. By mid-century hand-printing on Manchester cloth was found here.

These tendencies were emphasised by Curzon.⁴² He remarked that much local industry was devoted to the reproduction of articles and styles that once won world-wide renown. Chiselled brass-ware, painted and lacquered objects, gold and silver trinkets, all copied old patterns. Pottery and tiles recalled Safavid modes, and tilework from Isfahan was still in vogue all over Persia, for architectural decoration. Qalamkari or hand-printed cottons used elegant native designs from carved wooden blocks, many of them very old. Not only were traditional products still important, but industry was still in the traditional bazaar and caravanserai. The beginning of trade with Europe allowed the export of curios and especially carpets. Even in the 1920s industry

was still tied to the bazaar, small-scale, with small working-units employing only man and animal power. These factors limited output and in many respects industry had progressed little since the 17th century; in fact, man power and production had declined.

Bazaar industry in Tehran however has never been very important nor well-known for any particular articles. Before the Qajar period it was most likely of the non-basic type, serving the town only with articles of daily need. The workshops were similar in type and organisation to those of Isfahan, although on a much smaller scale, and the royal workshops were totally absent. Early 19th century travellers saw only limited and uninteresting industrial activity. Felted carpets were produced and small metal articles of little importance such as shoe heels. Iron ore was mined from the mountains to the east, on the Firuzkuh road, but only in small quantities. There was a little cotton-spinning and some printing, the latter no doubt encouraged by the court and Nasir-ud-Din's interest in education. Other craft industries encouraged by westernisation were gun-making and coach-building. There were some royal workshops in the Ark, set up by the Qajars, but nothing on the scale of Safavid Isfahan.

Bazaar industry in Tehran has never been strong, and now it is very insignificant. Repair work retains some importance but factory-

made textiles, clothes, footwear, hardware and household goods have largely ousted the hand made articles.

Despite the growth of the modern textile industry since 1920, there are still hundreds of dyers, spinners, weavers' and printers' workshops still in use in the bazaar of Isfahan, using ancient methods and equipment. 25,000 hand-loomes are estimated to exist in Isfahan and district. Their survival after 30 years of factory production indicates that a market for their products still exists even though they have been hit by factory competition. There is reason to believe some will always remain, although it must be looked upon more as a craft to be preserved for its artistic value than as a viable economic enterprise. Tourism aids their survival and they, in their turn, attract Tourists. The Arts and Crafts College at Isfahan is doing much to keep these crafts alive. The same can be said for decorative metal work, lacquerwork and painted articles, which have been adapted to modern conditions by attempts at mass production at craft level. This has led to an inevitable fall of standards, but has been necessary for survival. These craft industries must be protected and helped where artistic talents are worth encouraging.

Like that of the bazaar itself, the future of bazaar industries seems to lie in their preservation in situ for non-economic reasons. There are modern industrial establishments in the bazaar such as the

"gaz"^{*} factory but these are few. Some changes must come about to improve working conditions in the bazaars where workshops are often dark, unventilated and congested. This could be done without prejudicing either the quality or the attraction of the goods produced. If so, the bazaar industries of Isfahan could aid greatly in the expansion of the tourist trade. (Appendix 3).

* "Gaz" is a very popular and traditional Isfahani sweet-meat made from "manna", sugar and egg-whites with pistachios or walnuts.

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CHAPTER 6

GARDENS AND PALACES

The Persian love of gardens is perhaps derivative from the generally barren desert and mountain landscape of their land. Certainly there is no better retreat from the fierce heat and aridity of the desert than a shady grove and cool water. This is exemplified in the word "Firdous" which can mean either garden or paradise. "Paradise" is itself a Persian word meaning an enclosure or park.¹ The Garden of Eden was Paradise and all through the mythology and poetical imagery of the Middle East the theme recurs. The earliest gardens were regularly laid out and their beauty lay in the accuracy of spacing and straightness of rows. This is particularly due to their dependence on irrigation. For the luxuriant growth of a garden a very well-regulated water supply is needed. This presupposed social organisation and a large capital investment, but despite social and physical difficulties the Persian, rich or poor, town-dweller or countryman, has always had his garden.

An urban settlement also needs an assured water supply for growth and so takes upon itself, in the particular environment of Persia, the aspect of an oasis. Land around the town must be irrigated and cultivated for food supply. Even ornamental gardens often produced fruit and vegetables.

To a Persian, however, a garden means more than a cultivated plot. It can also mean a residence set in a garden, ranging from an open kiosk to an elaborate palace. As it is the rich only who can afford such a luxury, it is very difficult to distinguish gardens from palaces. Palace is here taken to mean any considerable mansion. There are royal palaces occupied by the king himself and others by princes, nobles and rich men. Royal palaces are generally more fully described by travellers and usually known by name.

The first view of a town in Persia is usually a dark patch of cultivation, something which cheers the heart after a long desert crossing. Herbert, approaching Isfahan in 1627 would have judged it "a forest". Hardly any house was without large gardens full of cypress trees, and in a much quoted passage he asserts that "the gardens here for grandeur and fragour are such as no other city in Asia outvies".² In fact his enthusiasm was more for the gardens than for any other feature of Isfahan. Other early travellers agree, nearly all comparing the city at first sight to a forest, and all commenting that there was rarely a house without something of a garden.³ Olearius remarked that the nobles' palaces added grandeur to the city, but especially the gardens, of which many houses had two or three.⁴ There were pools, trees and several kinds of flowers. Only Tavernier adds a disapproving word saying that the gardens were

"ill look'd after",⁵ which was perhaps true in comparison to meticulously kept European gardens. The Persians preferred a mixture of trees, shrubs and flowers and although the plots were regular and the streams and walks set out grid-wise, the garden itself was something of a wilderness. Many were also orchards such as the Hizar Jarib. The most popular trees were chenar and poplar, elm and willow, with the rose as the chief and best-loved shrub.

Many of the monuments of Isfahan were obscured at first sight by trees, to the disappointment of some travellers. Trees in squares and along avenues added to the general effect. In Julfa even minor streets were tree-lined.

The gardens suffered in the fall of Isfahan through disruption of water supply, decay of irrigation channels and general depopulation. The loss of trees from the Madraseh-i-Madar-i-Shah and Chahar Bagh is deplored by many travellers. What cover remained, however, helped to hide the decay of Isfahan as it had earlier concealed its beauty. In 1807, Dupré remarked sadly that nothing was more melancholy than the sight (Isfahan) presented when the trees were without their leaves.⁶

Travellers had always noticed that without its gardens and orchards Isfahan would be considerably reduced in size, but in the ruined city exaggeration was even more likely until dispelled by closer examination. Disillusionment also came at closer quarters as the

gardens were all enclosed in high mud walls lining the dusty lanes between, and very rarely did a low gate allow a glimpse of the paradise within.

Throughout the 19th century large agricultural gardens came into being on abandoned lands, especially along the river where irrigation was easy.

Today many of the above remarks still apply. Isfahan remains enveloped in a vast expanse of splendid gardens and orchards, and even from the summit of the Atishgah nothing can be seen of the town itself. From the airport minarets and domes still break the skyline but the green foliage of trees is the dominant feature of townscape, if it may thus be termed. The gardens and trees around and within Isfahan are however only part of the Isfahan oasis which continues along the Zayandehrud, especially to the west.

The problem of food supply is largely solved with reference to these gardens. Even with its maximum population Isfahan was supported mostly from local sources. The oasis produced cereals and the gardens fruit and vegetables in great quantities, especially melons, which can be a staple summer diet. With the present re-growth of population and the rising standards of living, market-gardening is expanding.

In Tehran also, gardens have played a large part in townscape,

although, as Tehran is not on a river, water supplies were smaller and the gardens likewise smaller and less luxuriant. During Rey's ascendancy it was a place of resort, known for its waters and gardens.⁷ To Pietro della Valle it was a city of beautiful lofty plane-trees, lining the streets and watered by rivulets.⁸ The gardens were extremely large and produced an abundance of fruit of various descriptions and excellent quality. Until its becoming capital, however, the gardens of Tehran were largely agricultural in function, exporting the surplus of their production.

The late 18th century wall included many gardens. Olivier declared that not half the enclosed space was built-up but there were large empty spaces and spacious gardens planted with all kinds of fruit trees.⁹ Even by 1810, however, population pressure was such that many of these gardens had disappeared, as Ouseley said, houses were not more profitable than trees and flowers.¹⁰ Money saw ruined gardens probably soon to be built on, within the walls in 1824.¹¹ By mid-century there were few gardens within the walls except in the Ark. (Fig. 4) Development of gardens was now taking place in the suburbs. Gobineau saw "Une multitude de grands jardins de toutes parts".¹² Inside Tehran the planes of della Valle had long disappeared as congestion increased.

The new walls eased this pressure and once again there were gardens within Tehran (Fig. 6) Some, such as the Nigaristan,

predated the new walls, but others came after, like the British Legation park. The new enceinte was never filled even with gardens, and many travellers describe, in disillusionment, the depressing succession of rampart, waste ground, walled gardens and monotonous streets before the centre of the town was reached. However, the gardens did little to relieve the monotonous townscape of the old city. Arnold says "were it not for the plane trees, one might overlook Tehran as a sleepy crocodile on the banks of the Nile, for without its gardens its appearance would be indeed miserable."¹³ Another advantage of garden expansion, according to Basset, was a favourable effect upon climate, the average summer temperatures being reduced by several degrees.¹⁴

To the north of the old rampart emerged the "European quarter" where streets were wide, watered and tree-lined and there were many mansions of foreign legations and rich Persians. Most of the gardens remained in the traditional style which le Mesurier considered too precise in their long avenues of plane trees and singularly devoid of bird or insect life.¹⁵ Others were laid out in more European fashion, often with the aid of French gardeners. Gordon said it was proposed to create a people's park in this area but there is no record of this ever happening.¹⁶ In 1913 de Warzee¹⁷ said there were no public gardens in Tehran. However, notables would open their gardens to the public at certain periods.

Although gardens abounded, they never obscured the sky-line as in Isfahan but rather contributed to it, providing a contrast to the endless succession of roof terraces in drab mud brick.

Writers often found solace in describing the beauties of gardens to counteract their less favourable impressions of the houses themselves and all deplored that they should be concealed behind ugly mud walls with access only through "miserable little tumbling-down gates" and "narrow, low passages".

With the tremendous growth of population in the 20th century, many of the large gardens near the centre of Tehran have gone, Lalehzar among the first. However it is surprising how many still remain hidden behind shops and workshops. There is now a different garden type associated with each type of house. This classification applies also to Isfahan. The courtyard type of building incorporates a small garden centred around a pool. The modern type of house of several storeys or apartments has its garden in the southern half, still with high garden walls. Here the pool is often larger, for swimming. Larger houses and establishments such as schools and banks are set among gardens which are usually full of trees and laid out in walks. These exist throughout the town, with many even in the centre, such as around the government offices of the Ark.

There are two types of public garden, both very recent. The

first is that attached to a roundabout or square, of which many were included in Reza Shah's regularisation schemes. (Fig. 8) There is often a statue as centre-piece and the inevitable pool, but many have elaborate systems of illuminated fountains with flowers and grass, such as Fouzieh and Firdousi squares, and they are a popular place of resort in the evenings and on holidays. The Chahar Bagh and Maydan-i-Shah fill this place in Isfahan. There is also the large public park of which the main example is the Park-e-Shahr of Tehran. More of this type of clearance for amenity purposes has often been suggested. (Map A).

Thus up to half the area of a Persian town can be gardens. Even non-residential buildings contain greenery (cf. caravanserais). This is of great amenity value and profoundly affects townscape. An obvious effect is to enlarge the extent of the town.

There is little detailed description of royal gardens in Isfahan before the age of Shah Abbas I. No doubt the Timurid and Seljuq palaces had gardens, but these have no expression in the present townscape. Similarly the four gardens which predated the Chahar Bagh had disappeared before 1600.

The earliest Safavid garden outside the palace¹⁸ was the Hizar Jarib at the southern end of the Chahar Bagh and obviously part of a

plan, being the focus of the great avenue (Fig. 3) It was thus laid out not long before 1600. Herbert describes it as a "fruit forest" with three gates and high walls.¹⁹ It was three miles in compass, measuring 1,000 paces north - south and 700 east - west. The name means "a thousand acres" but this is as deceptive as the estimates of travellers were unreliable.* The garden was watered by a contour channel taken off the Zayandehrud and led around the base of the Kuh Sufeh from which leaden pipes distributed it. The garden was arranged in terraces, 12 according to Chardin, but Thevenot²⁰ and Tavernier²¹ say 16, each 6 - 7 ft. high and held by stone walls. Down the centre was a stone canal 3 ft. wide but shallow with fountains every 10 ft. said to have been upto 40 ft. high. Above and below each terrace there were pools varying in shape and size with more fountains, and the water fell or cascaded from the higher to the lower. Beside these pools were pavilions at regular intervals. The main walks of the garden were parallel to this central stream, but others cut at right angles, forming the rectangular pattern, with subsidiary channels every fourth terrace. In 1665 Thevenot saw young fruit trees here in great numbers as well as rose trees and lines of great planes.

* This is because the measure varied from district to district, as it was not purely a surface measure, but rather an estimate of the weight of seed that the land could grow. A. S. K. Lambton in "Landlord and Peasant in Persia," London 1953, p.405-8, goes into the subject in detail. By law, since 1926, a jarib should equal a hectare.

Chardin, *Voyages*, ed. Langlès. Paris 1811 Vol. 8 p.33-34, says that the garden was one mile long and almost as wide, and Kaempfer, quoted by Langlès, op cit. over 1,300 paces square.

The whole garden was surrounded by a 20 ft. high wall with a pigeon-tower at each corner, mistaken for summerhouses by some writers. Their existence leads to the belief that melons and vegetables of many kinds were grown here. The Hizar Jarib was obviously not created solely for pleasure. It was perhaps a source of food supplies for the court. It seems to have also been open to the public. Its loss to the Afghans in 1722 must have been a great blow to the besieged city.*

Shah Abbas's main summer resorts, however, were on the Caspian coast and therefore this is the only large garden ascribed to him. Shah Sultan Husayn, however, in 1700 laid out the garden of Farahabad as a summer retreat, but it took several years to complete and water supply was a great problem. Lockhart believes that Shah Abbas's canal for the Hizar Jarib must have been used.²² Water was taken from the Zayandehrud at Misra, $17\frac{1}{2}$ miles south, but the contour canal was actually 30 miles long, incorporating a siphon over a spur. In the competition for water the older garden no doubt suffered. Beaudoin's plan of Farahabad shows the typical checkerboard regularity in paths avenues, pools and pavilions, but on a lavish scale.²³ However this palace can scarcely have been completed before the Afghan attack and very few early writers mention it.

* The detailed lay-out of Safavid gardens in Isfahan is illustrated and discussed by Donald N. Wilber in "Persian Gardens and Garden Pavilions". Tokyo 1962, Chap.3, p.79-120.

On a smaller scale, and largely for residential purposes, the palace and park of Sa'adatabad was built by Shah Abbas II. The gardens were partly enclosed in courtyards but extensive gardens stretched to the south.

Although their particular beauty in the context of a desert country could not be denied, not all early writers praise the gardens. According to Tavernier the "Hezardgerib" (sic) would have been accounted nothing in Europe, the gardens were not "so curiously set out, or so well-kept as ours" but nevertheless it was "the fairest in all Persia".²¹ The total absence of grass seemed a great defect to the European, and also the lack of variety in flowers - both an effect of climate.

The Afghans in their attack occupied the Hizar Jarib and Farahabad, used their crops, but neglected the water supply and decay naturally followed. By 1796 Olivier saw only a few canals, pools, waterfalls and fountains, more or less mistreated, in the Hizar Jarib and by that time Farahabad had been long destroyed and most of the materials carried away.²⁴ There were a few remains of canals, but not a drop of water, not a single tree or bush. The latter had not had time to establish itself before the attack, and its water supply had been, at best, precarious. The ruins of both gardens are marked in Coste's map, but by Curzon's time there was no trace of either.²⁵

The Sa'adatabad gardens had also been abandoned for years. Some trace of the ground plans of the gardens can, however, be seen from Kuh Sufeh. The elongated square of the Hizar Jarib stands out well, and ruins of the pigeon towers remain. A few broken walls are all that remain of Farahabad, the site of which is now occupied by the army. Some of the Sa'adatabad gardens have been incorporated into those which surround the textile factories, but most are built over.

A new residence was created soon after 1900 by Zill-us-Sultan to the west of Isfahan. This was known as Bagh-i-Nou and contained large gardens. By the 1930s this was fragmented and built over, but the suburb retains the name.

A special feature of Isfahan, which was at once public garden and avenue was the Chahar Bagh. This was royal insofar as it was built by Shah Abbas as part of his town plan and insofar as it led to the Hizar Jarib, but it was and is also a place of public resort. The Chahar Bagh was laid out between 1596-98²⁶ on the site of four gardens or vineyards from which it takes its name. As the name implies, it was conceived more as a garden than a thoroughfare, of which the traffic of that time had no need, but it was still in the shape of an avenue, having a marked beginning and end. Estimates of

its length are various, but the generally agreed figures are about 3,000 yards for its length, it being of approximately equal length either side of the river, and 100 yards wide. (Fig.23) To Herbert it was as broad as Holborn and even by his time chenars had been planted all along and the avenue was "here and there bestrewed with mahals or summer houses".¹⁹ From the very detailed description by Chardin,²⁷ and others by des Landes,²⁸ Sanson,²⁹ Bell³⁰ etc., a complete picture of the Chahar Bagh in its greatest glory can be formed. This subject was one of the most popular for travellers of the period.

The Chahar Bagh began with a pavilion 30 - 40 ft. square, two storeys high and connected to the palace through a kind of corridor (Fig.12) The windows and balconies were wooden trellises and the inside lavishly painted. This pavilion was situated near the Imperial Gate of the palace and used as a belvedere by court ladies. The avenue then descended to the river in terraces, each about 200 paces long and the lowest 3 ft. high. In the centre ran the main stream in a stone canal, which widened into pools. There were eight of these before the bridge, octagonal, square and round, the largest being 128 paces around. The stream descended in waterfalls, but there is no mention of fountains here except by Thevenot, who said they were rare. The head of water may not have been sufficient as the slope to the river is slight. On either side of the central canal was a raised paved walk wide enough

for two horses abreast, lined by double rows of chenars for which the avenue was famed. These were high and spreading giving rise to the name "Taq-i-sabz" or Green Archway, applied to the avenue. The Jesuit of 1730 said "les branches forment une espèce de grand berceau, où les passans ne souffrent rien des ardeurs du soleil"³¹ Other wider walks, lower than the central one, flanked the parterres. The garden walls on either side were not, as usually, solid and forbidding, but "percées à jour" and "pallisaded with gilded iron" so that the gardens behind could be seen. There were several gardens on each side with fanciful names. (Fig. 23) To the south were at least two cross channels probably on the sites of the madis here. Parallel to them, side streets led to the western suburbs and more gardens. Just before the bridge a "quai" led off right and left along the banks of the Zayanderud; also, according to Chardin, beautiful avenues with the palaces of lords set in beautiful gardens on their northern sides.

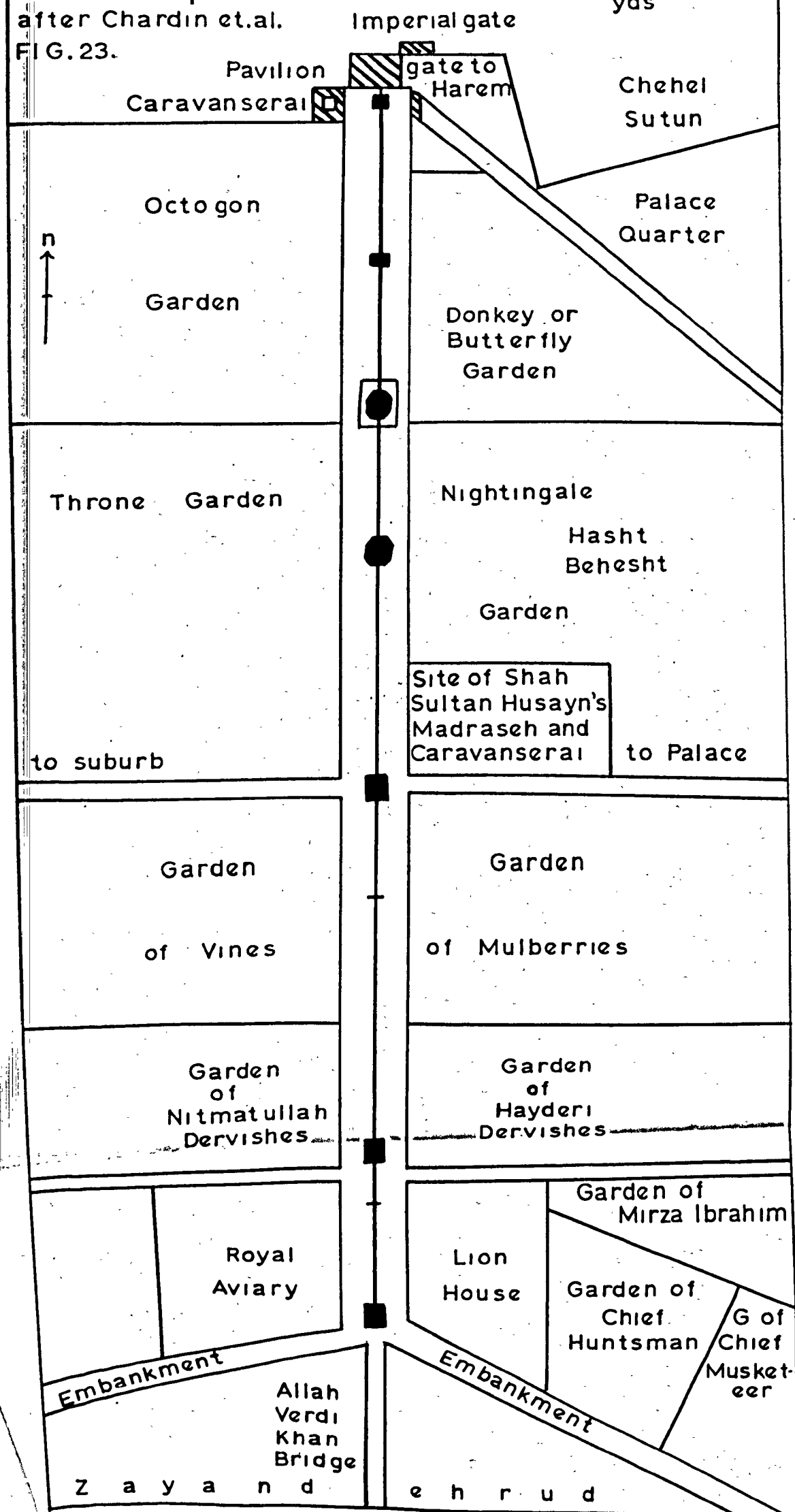
Many writers considered the Chahar Bagh to end at the Alla Verdi Khan bridge but in fact it continued an almost equal distance to the south, along similar lines, with channels, planes, gardens and palaces. Careri speaks of this southern avenue which "n'offrent aux yeux qu'un suite de beaux jardins et d'agréables maisons".³² The avenue rose towards the Kuh Sufeh and ended in a great octagonal basin and pavilion in front of the Hizar Jarib.

Chahar Bagh Avenue Safavid period

after Chardin et.al.

FIG. 23.

0 100 200 300
yds



Throughout its length the gardens of the Chahar Bagh contained palaces, summerhouses and kiosks all more or less lavishly decorated. Chardin says there were 14 houses to the south of the river alone. Morel's map shows 24. According to le Bruyn, Shah Abbas ordered his councillors to build these at their own expense.³³ Others record that the pavilions south of the river were named after the lords who built them. Some were, however, royal houses such as those built for dervish orders.

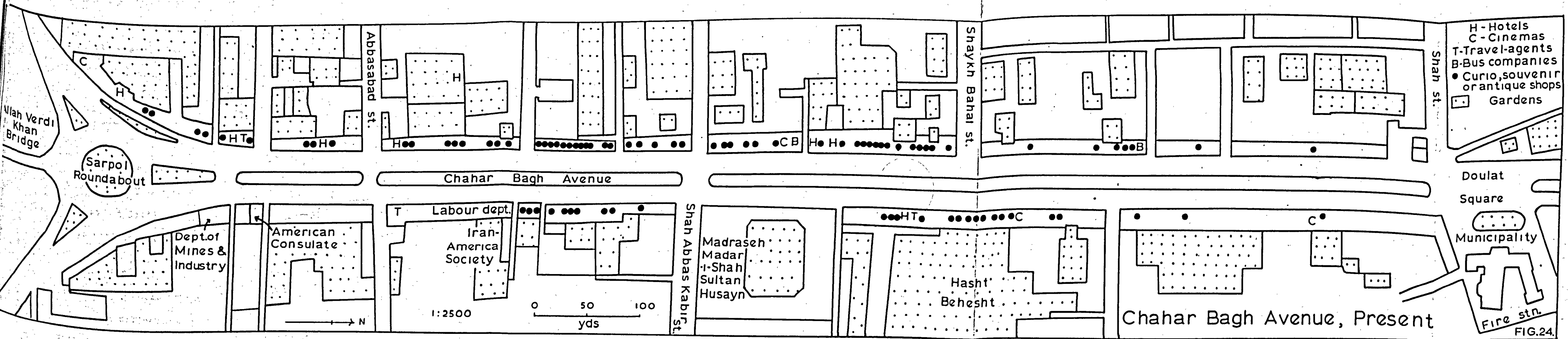
The Chahar Bagh was maintained and further embellished by the later Safavids, when the Shah Sultan Husayn Madrased and the Hasht Behesht were added. After the Afghan attack its story is the common one of decay. Nevertheless, the northern part remained beautiful enough for Olivier to compare it favourably with the gardens and avenues of Europe.³⁴ He enthused over the pavilion at the northern end, but stated that the part south of the bridge was completely destroyed. Those of Ouseley's expedition were less impressed. Morier saw only one garden not in ruins³⁵ and Ouseley himself deplores the desolation of the many stately mansions, the unpaved walks, the waterless cisterns and conduits, and few trees which remained to give an even more melancholy appearance.³⁶ About this time Hajji Muhammad Husayn Khan built his new Chahar Bagh near the Khaju bridge, copying but never equalling the original, although it diverted attention from it, and aggravated its decay and neglect.

Many mid-nineteenth century writers still enthused over the Chahar Bagh gardens and palaces. The gardens could have maintained themselves providing some water had been available and the more solidly-built palaces decayed slowly; colourful decorations in many were still intact. The southern avenue, having been the site of active battle and occupation by enemy forces, suffered heavily, but the northern half was abandoned slowly with the decrease in population and shift of government. Nevertheless, the Chahar Bagh was no longer the superb Safavid avenue and some travellers thought more of its past splendours than its present state.

By mid-century the ruin of the Chahar Bagh was irreparable. Gobineau saw gardens almost completely deprived of foliage and broken pavements, the whole nothing but a shadow of the past.³⁷ Zill-us-Sultan has been accused of allowing the ancient planes to be cut down for firewood and for building his Tehran palace, but this seems to have been going on all through the century. Weeks saw the tanks as morasses, choked with rotting vegetation and slime,³⁸ yet Browne could still speak of fountains.³⁹ There is obviously some exaggeration and embroidery in these accounts, but Curzon's record was usually realistic and unsentimental. "Of all the sights of Isfahan, (the Chahar Bagh) is the most pathetic in the utter and pitiless decay of its beauty ... Now the channels are empty; their stone borders crumbled and shattered, the terraces are broken down, the parterres are unsightly bare patches,

the trees all lopped and pollarded ... the side pavilions are abandoned, and tumbling to pieces and the gardens are wildernesses."⁴⁰ Nor did the 20th century bring any respite. Wanton vandalism combined with gradual decay to complete the destruction of the avenue. It was not until the 1930s that the Chahar Bagh rose again in its modernised form as a highway for modern traffic and a thoroughfare which has become the axis of modern Isfahan. The old system of channels and pools were completely swept away and replaced by a central paved walk for pedestrians (Fig.24). New trees were planted to replace the last of the ancient chenars. On either side a two-laned road was levelled and by 1938 asphaltting was under way. Water still runs along the Chahar Bagh, but only in earth jubes, crossed by stone bridges, which are lined with trees, but tend to become cluttered with leaves and rubbish. Wide pavements flank the motor roads and the garden walks have given way to shop fronts. The avenue was extended to north and south and Darvazeh-i-Doulat removed for the creation of the Municipality square. Gardens were laid out around a gilded equestrian statue of Reza Shah to form an impressive approach to the Allah Verdi Khan Bridge, the Sarpol roundabout. Without the Chahar Bagh there would no doubt have been difficulty in coping with modern traffic. There is little to distinguish this 400 year old avenue from the new roads created 30 years ago.

However, the most active part of the Chahar Bagh remains between



the Municipality square and Sarpol. This is still used as a promenade, even if the crowds are less colourful. Some of the earliest modern tourist amenities are here - the Hotel Firdous, now Jahan, cinemas, shopping arcades, travel agents, antique and curio shops all dating from the last 30 years (Fig. 24). It has been described as the Bond Street of Isfahan, but it is also the Champs Elysées and the Broadway. Of the ancient Chahar Bagh only the Hasht Behesht and Madraseh remain. Behind the shop facades the gardens of substantial houses occupy the sites of Safavid gardens, such as that of the Labour Department, formerly the residence of a Bakhtiari Chief. The Chahar Bagh is no longer a garden, but it is still one of the most attractive features of Isfahan.

Reference has been made to pre-Qajar gardens within the Ark of Tehran.⁴¹ The Bagh-i-Shah to the west of Tehran was probably Safavid but little definite information is available. Similarly it is not known if pre-Qajar palaces or gardens existed in Shemiran.

The first Qajar garden in Tehran after those of the Ark was the Qasr-i-Qajar built between 1780 and 1805. This surrounded a palace built on a hillock about 2 miles north east of the Ark. (Fig. 25) The terraces of the garden merged with those of the palace itself, its pools and channels filled from an aqueduct connected to a qanat.

This garden was noted for its roses and fruit trees, but it never excited much admiration in the travellers, and when the palace fell from favour the garden was also neglected. By the end of the century the pools were dry and the terraces broken, and the grounds were used only as a camping ground for the Cossacks. The site is now occupied by the buildings of a military college.

The Nigaristan or Dilgoshai* of Fath Ali Shah was a garden in its own right. This was an oblong enclosure just to the north-east of the city, completed about 1810 and subsequently enclosed within the second walls. (Fig.5) The 1892 map shows its lay-out on the usual rectangular pattern with parallel channels and walks, the buildings set at the junctions. Keppel gives an account of the formal rows of poplars, cypresses and fruit trees, with a variety of shrubs, some flowers, and "no scarcity of weeds".⁴² He implies that part of the garden was let to a courtier who used it to grow crops such as clover. It is difficult to understand this remark unless the writer was referring to some land attached to the garden, but not incorporated in it. By mid-century this palace was also less popular but the gardens continued to be well-known, and Nijeholt says it was used by the public especially on Fridays.⁴³ Once the new walls were built and the gardens became part of the fashionable northern suburb they were used again by royalty. When Mme. Dieulafoy saw it in the 1890s part was curtained off as apartments for Royal

* The real name of this garden was Dilgoshai or Heart's Delight, but it was nicknamed Nigaristan or Picture Gallery, from the life-sized portraits of Fath Ali Shah and his court with which the pavilions were decorated.

Tehran and district c.1900

Royal palaces

AFTER STAHL

- ROADS
- AVENUES (TREE-LINED)
- - - CARAVAN ROUTES
- ▨ ROYAL PALACES & GARDENS
- LEGATION SUMMER QUARTERS
- X IMAMZADEHS & SHRINES
- VILLAGES

0 1 2 3
MILES

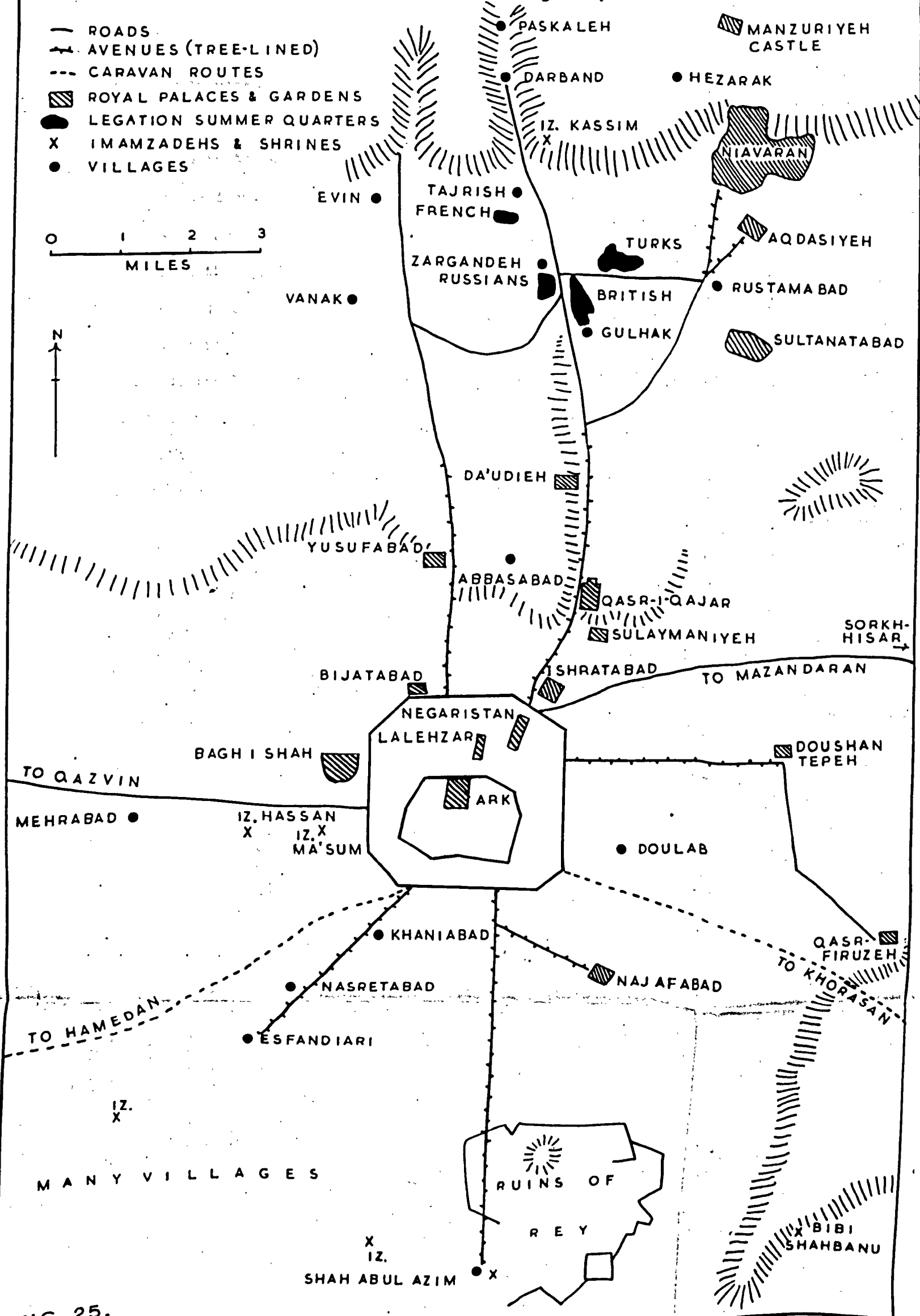


FIG. 25.

wives.⁴⁴ The Nigaristan was probably then the first step in the spring migration northwards. Wilson also says that the king halted here on his return to the capital while all was being prepared for his reception in the Ark.⁴⁵ According to Wishard the Nigaristan garden was the first to be taken over by modern institutions, in 1908 there was an agricultural school there.⁴⁶ Bradley-Birt a year later concurs that part of the garden had been built over, but does not give the use of the new buildings.⁴⁷ After 1900 there is no account of royal residence in the Nigaristan. In the Pahlevi era the arts faculty of the university took over the site and more of the gardens disappeared. Today the enclosure is still a visible feature although little of the garden remains and all the original buildings have been demolished. (Map A)

The Lalehzar garden is not mentioned by travellers before 1840 when Flandin included it in his list of royal residences;⁴⁸ perhaps because it was primarily a garden and not a palace, near to the Ark and used only for day excursions. The only building was a summer house not intended as a residence. It too was used by the public except during royal visits. Lalehzar garden also came within Nasir-ud-Din's walls, but being even nearer the "European Quarter" the land was of great value for building and by 1900 the garden had been divided into lots, sold and built over. Sykes deplores the loss of what would have constituted a good lung for the capital. Now only the name of the once-beautiful Tulip Garden remains. Khiaban

Lalehzar was in the 1920s and 30s the main shopping street of Tehran and remains a crowded busy throughfare.

Under Nasir-ud-Din the number of palaces in Tehran grew every year. Besides reshaping the Ark, he built outside the walls. As his passion was for hunting, many of the palaces were primarily shooting boxes, but some had large gardens attached. His favourite palace in Shemiran was at Niavaran, famous for its waters and "beaux ombrages". This palace is still used by the royal family and by delegates to important conferences. Also dating from this time are Sultanatabad, also favoured by Nasir-ud-Din, Da'udieh, 'Ishratabad, Aqdasiyeh, Najafabad and Sulaymaniyeh, all named after adjacent villages. (Fig. 25) Bihjatabad and Yusufabad were gardens only, within walking distance of the new walls. Some have been built over in 20th century development, others have been put to other uses, for example 'Ishratabad and Sultanatabad are barracks. (Map A)

Nasir-ud-Din's favourite shooting lodge was at Doushan Tepeh.* Below the palace, to the south, was a large walled garden with stables and a pigeon-tower. This garden was open to the public in the Shah's absence and it contained the royal menagerie. Along the shady walks were rows of cages; Curzon found the animals fine specimens but badly housed, and their numbers small.⁵⁰ It was however a popular

* The name means "Hare Hill", which is a rocky hill about 150 feet high, outcropping from the level plain two miles east of Tehran.

place of resort with a coffee house and mosque attached. The gateway to this garden still exists although the land has reverted to desert. Nasir-ud-Din also built shooting boxes at Qasr-i-Firuzeh and Surkh-Hisar to the east of Tehran and on the banks of the Jajirud. Qasr-i-Firuzeh is now used as a meeting house for the Zoroastrian community and the pavilion is in total ruin, although the garden with a large tank is maintained.

In the early 20th century Muza'ffar-ud-Din Shah built his palace of Farahabad not far from Doushan Tepeh. The gardens were laid out on a European pattern, with winding walks and balustraded terraces rather than the traditional rectangular form. These have also been kept up by the present dynasty.

The Pahlevi dynasty has followed the practice of abandoning all or most of its predecessors' establishments and creating new residences. Of the Qajar palaces, only Niavaran, Farahabad and the Gulistan are used today. However the tradition of a palace quarter in the town and summer resorts outside is retained.

The new palace quarter is situated at the junction of Khiaban Kakh and Pasteur. There are four palaces all built in the 1930s set in large gardens and almost hidden among trees. With the closely-spaced trees lining the avenues these gardens make the area one of the shadiest and most pleasant in Tehran. The Pahlevi summer palace is

Sa'adabad; a barren hillside in the 1930s was transformed into a shady park with swimming-pools, tennis-courts and more modern garden features. Unlike his Qajar predecessors, however, the Shah does not open this park to the public. (Map A).

A notable feature of contrast between the royal gardens of Tehran and Isfahan is that in Tehran they have never been large-scale food producers like the Hizar Jarib. This partly reflects more advanced transport and commercial organisation in the 19th century and also a smaller court and population. Also the need for seasonal movement within the immediate environs of the capital was not felt so much in Isfahan as in Tehran. Far more striking are the similarities of behaviour between the different monarchs as they all sought for pleasant retreats from the cares of government, in the shape of their gardens.

The garden can exist without buildings in it but then it is an orchard or a vegetable plot and not a residential unit, and it is certainly very rare to find a palace without a garden in Persia. Having considered the role of gardens in the development of a capital city, the dwellings must be set within them and considered both alone and as part of the gardens.

Chardin said "La beauté d'Isfahan consiste particulièrement dans un grand nombre de palais magnifiques, de maisons gaies et riantes".⁵¹ Although the majority of people were poor and only a small minority occupied palaces, the space they covered and their effect on townscape was out of all proportion to the numbers inhabiting them. It was these mansions which enlarged and beautified the town. Chardin's description places palaces in all parts of the city without zonation on the basis of social class. There were nobles living throughout the town gathering around them their entourage of family, servants and tribal followers, perhaps in a distinct quarter with a centre having all necessary institutions such as mosque, bazaar and bath.* Through the years this grouping may have become blurred but still the classes remained mixed. Palaces also changed hands through changes of office at court, Chardin has many examples of this.⁵² When a courtier was disgraced, discredited, banished or executed, his property was often forfeit to the king. Chardin says the Shah had 37 palaces in different parts of the city taken by confiscation.⁵³ They were used by ambassadors and others under the protection of the king, such as the Augustinian monks, who were settled in a palace near the Masjid-i-Jami' according to Chardin in order to annoy the strict mullahs of the quarter.⁵⁴ These palaces

* This is reminiscent of the encampments of the Mongols for their tribal concourses where each tribe or family group pitched tents together around their leaders, or the camps of the Ancient Hebrews during their migrations.

were, however, not well maintained. More striking were those of high court officials or religious leaders. Chardin does not describe these in any detail. They were perhaps elaborations of the common courtyard type of building.

Outside the walls, however, were garden suburbs inhabited almost entirely by "persons of quality". Here palaces were set among gardens, although quarters for retainers were incorporated in the plan. Olearius gives some description of the houses. They consisted, he says, of "sirsemin, chane, kufchk, tzauffe, kesser". the first two mean cellar (zirzamin) and house (khaneh) but it is uncertain what the others referred to.* Almost all were square, built of sun-dried brick, with windows as large as doors and were beautiful within but ugly from the outside.⁵⁵

Building material was almost universally sun-dried brick. Even for his great mosques Shah Abbas used very little stone, and that only marble for facings. Mud brick can be durable even in heavy rainfall if built up to a great thickness by a series of annual applications, but it is never attractive and little attempt was made to beautify the exterior walls of the houses or gardens. Thevenot said the beauty of the houses lay in the divans.⁵⁶ By this he meant open rooms

* It is possible that "kufchk" is from kafshkan - anteroom; "tzauffe" perhaps comes from "sofa", therefore platform, verandah; and "kessar" may be qasr - palace.

looking on to the gardens usually across a pool. Porches, called ayvans, protected the interior from direct sunlight. The Chehel Sutun with its open talar, pool and rooms behind is a good example of this type.⁵⁷

The Hizar Jarib contained many pavilions, two flanked each pool on every terrace. That on the sixth terrace lay athwart the main walk, the water perhaps passing through it, as it does through the pavilion of Bagh-i-Fin at Kashan. This building had three storeys and could accommodate 200 people sitting, according to Chardin.⁵⁸ There were similar pavilions at the entrance and southern end of the garden. There is no account of the sovereign's residence at Hizar Jarib, these pavilions were rather for the use of the public or for court festivities. The buildings of Farahabad were similarly laid out, with similar functions.

Sa'adatabad was the main residence of the later Safavids. The buildings consisted of a mixture of the courtyard and garden types. Overlooking the river, near the Pul-i-Chubi was a windowless range of buildings, part of the harem which was a closed courtyard. The Ayineh khaneh or Mirror-house was a talar used for audiences, so named because the twenty wooden columns were gilded and set with pieces of mirror. Behind the talar were three rooms decorated with paintings. Another part of this palace was known as the Haft Dast, a series of pavilions or ranges of apartments. Ouseley's

embassy occupied part of this, a pavilion called the Namak-dan or salt-cellar, presumably from its shape.⁵⁹ The ensemble of this palace incorporated additions by several monarchs. The governor Hajji Muhammad Husayn Khan added a part called Fatihabad for Fath Ali Shah.

Sa'adatabad was built after Chardin wrote his penetrating description; the first accounts of it are from the early 19th century. There seems to have been little striking or even luxurious. Price complained that the rooms he occupied were dirty. No doubt the older parts of this palace were neglected after the new Fatihabad was completed, as the king only infrequently visited Isfahan, and his retinue were lodged in tents in the palace gardens. Whereas before the Haft Dast had been spoken of as extensive, Flandin referred to it as a "little palace".⁶⁰ Much of Sa'adatabad must have been allowed to fall to ruins. By 1866 the Ayineh-Khaneh was stripped of its mirror-work, although some attempt at replacement had been made. The Haft Dast could still be spoken of as a "château" which despite its grilled exterior and severe facade onto the river was royal within. Browne found the Haft Dast deserted and the Namak-dan pulled down to afford building materials for a house a minister wished to build.⁶¹ The Ayineh-khaneh was pictured in late 19th century photographs as a decaying ruin, stripped of all adornment with hardly a tree or blade of grass near it. It seems that all

through the 19th century the Sa'adatabad palaces were maintained sporadically against the visit of the monarch. When the Shah was expected, an effort would be made to accommodate him suitably, but otherwise the whole palace was neglected. The impression made on travellers depended on at which stage in this cycle they saw it. However, as royal interest in Isfahan waned, decay overtook the whole establishment. The last ruins were removed in the 1930s for the building of textile factories which now occupy the site. However the walls overlooking the Zayandehrud still closely resemble those of the harem from old illustrations. (Map B).

A completely different type of Royal palace were the pleasure-houses built on Kuh Sufeh. Le Bruyn mentions one built by Shah Sulayman, called Takht-i-Sulayman, which was being repaired during his visit.⁶² Olivier gives a similar account saying that this was originally the house of a dervish named Haydar.⁶³ Its ruins and several other smaller kiosks can still be seen on the mountain, as well as pathways reaching them, now broken and dangerous. From these retreats the king could look out over the city and oasis and hold summer festivities in comparative coolness after the heat of the plain.

The Hasht Behesht* is an example of a garden palace of a different

* This name has variously been taken to mean Eight Gardens, Eight Paradises, Eight Favourites, but "Hasht" meaning eight could again have no numerical significance, like Chehel Sutun - 40 Pillars. However, "Hasht" may also mean gate or porch, this "Gate of Paradises" would seem a logical translation.

style from the talar. (Fig.23) This was built by Shah Sulayman about 1670 in Chardin's Nightingale garden. The original decoration of this palace was polished marble with painted walls and inset mirror-work. Its plan is octagonal with three open ayvans supported by pillars and a central chamber under a high dome, containing a marble pool and fountains. There are two storeys with a multitude of small rooms on each around the central hall, a labyrinth, as Chardin says, but his account of a hundred "petits endroits les plus délicieux du monde" sounds exaggerated. Many writers enthuse over the delights of the palace and its gardens, but Chardin adds the more material note that 50,000 écus were spent on the building alone.⁶⁴ The palace had fallen somewhat into decay by the time Kinner's mission were lodged here in 1810. Kinneir⁶⁵ and Alexander⁶⁶ admired the garden, but said little of the interior decoration.

Fath Ali Shah later had the palace restored and new decorations added - portraits of himself and his court. The present decoration must have been applied towards the end of the century as Curzon did not see it. The whole of the palace was covered with a layer of white plaster on which various designs were etched. No restoration has yet been attempted. The palace passed out of the hand of the Qajars and is now privately owned. It is maintained but not improved and visits are not encouraged. It was inhabited until the 1930s when instructions were given for the protection of monuments. The garden

has been reduced by building and the Chahar Bagh gate is never open now. The Hasht Behesht is one of the lesser known Safavid monuments. It has never been subjected to total decay and is a good example of the garden palace pavilion.

The only example of a modern palace in Isfahan is the Bagh-e-Nou of Zill-us-Sultan, built about 1900. This was a great white building similar to Farahabad in Tehran. According to Bricteux it was constructed from materials from ancient buildings.⁶⁷ It incorporated an observation tower and was surrounded by a large park, Its site is now built over.

In Tehran many of the features of mansions and palaces are repeated. The Duke's or Khan's house of early days developed into the Ark where the palaces were mainly of the courtyard type.⁶⁸ When Tehran became capital, the growth of the city by the addition of mansions and gardens really began. At the beginning of the 19th century there were gardens and palaces within the walls. Jaubert testifies to the outward monotony of the rich houses,⁶⁹ but Gardane speaks of the "maisons des grands, riantes, appartemens élevés ouverts au levant et au couchant par des fenêtres qui donnent sur des parterres"⁷⁰ There was thus the duality of blank mud walls facing outwards and airy rooms within, with ayvans overlooking gardens.

In the early 19th century people wishing to gain the sovereign's eye or ear flocked here and all endeavoured to set themselves up in the greatest magnificence possible. Ouseley comments that rents and the price of land had risen so as to nearly equal those of a European metropolis.⁷¹ Very soon only the courtyard type of palace existed in Tehran. There are very few large gardens outside the Ark on the 1858 map (Fig.4) This map shows the distribution of notables' houses throughout the town, as Chardin did for Isfahan, with comparable titles and offices.

Money⁷² and Shoberl⁷³ describe these 19th century courtyard palaces. They contained two or three enclosed courts. The first was reached through a gateway and a long passage from the street. Each court contained a reservoir of water with canals and alleys of trees in the larger establishments. One courtyard was the divan-khaneh or reception hall for visitors, open to the garden and ornamented with tile-work, glass mosaic or painting. These guest rooms were clean and neat for Persia, says Money, but adds that they were clumsily built and worse ornamented to European eyes. Another courtyard was the anderun, or ladies' apartments, the worst part of the house, "it being the universal principal to bestow ornamentation and expense on that which is for show and to neglect that which is not for the eye of the visitor." Other courtyards included servants quarters and household offices. It was difficult to assess the extent of the

buildings because of this proliferation of courtyards and the seclusion of the *anderun*.

Palaces were soon built outside the wall especially to the north where air and water were better. These included *Takht-i-Qajar* and the *Nigaristan*, both very different in style and lay-out.

Qasr-i-Qajar, by virtue of its site and style was more of a fortress than a pleasure-palace. It was a "noble pile of building", "a showy edifice" and "grandiose". The palace was built as several terraces which gave the impression of a multi-storey building of great height. The terraces flanked the barren rock like an amphitheatre and joined those of the garden. The principal apartments, built of brick were on the fifth terrace, and the summit was crowned with a delightful pavilion. The whole was whitewashed over, although not always kept completely clean and decorated with paintings. The whole enclosure with the gardens was surrounded by a high mud wall, flanked with many towers, and four gates "covered with pavilions."^{74,75}

Although built originally for Agha Mohammed Khan Qajar, Fath Ali Shah used *Qasr-i-Qajar* as a summer residence for those of his harem who did not accompany him on his summer excursions, perhaps seven or eight hundred women. These were housed in what Sercy called "petites cellules ... assez semblables du reste à ces chambres des moines qu'on voit dans les cloîtres italiens".⁷⁶ As the palace was

used less it was neglected and the paintings spoiled by "oiseaux indiscrets qui sont venus placer dans le harem royal leur nids vaniteux". Fowler thought the place looked like a prison and everything about it bespoke neglect and rapid decay.⁷⁷ By Nasir-ud-Din's time the castle was no longer used by the royal household, but as a summer camping-ground for the Cossack regiment, and in the winter the British Legation used the reservoir as a skating-rink. However, even at the end of the century the palace retained an imposing appearance from afar, says Curzon, "rising from a base of foliage in a number of white tiers, one above the other, culminating in a sort of castle at the top"⁷⁸ These on examination proved to be only earthen terraces faced with brick and once adorned with lakes and fountains, all in ruins. The view from the castle was extolled by travellers.

The building still stood as a landmark until the 1930s. It was for a time used as a prison by Reza Shah but the original buildings are now all demolished.

The Nigaristan palace was built by Fath Ali Shah and conformed to his character as the fortress-like Qasr did to the militant Agha Muhammad. There were three summer houses which were hardly more than open "Kulah-i-farangi" pavilions. All, especially the upper one were decorated with life-size portraits of Fath Ali Shah and his court. Tancoigne considered the apartments neither spacious nor very extraordinary.⁷⁹ Keppel said that although they were newly erected the

houses had the usual Persian marks of dirt and decay.⁴² Others however saw great beauty in this palace, especially Ker Porter who called it "an earthly imitation of the houri's abodes."⁸⁰ Sercy considered nothing was as beautiful and as gracious as this delicious dwelling.⁸¹ Although the palace itself was small, it was "si coquet, si frais, si seduisant que l'on y voudrait passer sa vie." A notable feature which caught the fancy of travellers was a subterranean bathroom all built of marble, with a circular pool and a slide. The palace was used in the latter 19th century as a staging-point on the autumn and spring progress of the court. The new walling had made it part of the city and it was passed over in favour of the Shemiran palaces. It later housed an agricultural college and now various departments of the university and evening institutes. (Map A.)

The number of palaces outside the walls of Tehran continued to grow as the city became established as capital. The annual migration to Shemiran had been a feature of the earliest days of Tehran, but now the rich were building permanent structures for summer residence in their gardens instead of taking tents with them. There was little change in the style of either buildings or gardens, however, until the reign of Nasir-ud-Din, when European influences were established.

The walling of the 1860s made the former garden suburb to the north a European quarter and fashionable part of the town. Houses were built in the gardens for Persian lords and Europeans of note. The

1892 map gives examples of these (Fig.5). Apart from the ambassadors' residences most of the leading courtiers had palaces here including the Prime Minister, Amin-us-Sultan, Mushir-ud-Douleh and also the royal princes Zill-us-Sultan and Naib-us-Sultaneh. Some of these have been described by travellers. The Grand Vazir's palace was of marble decorated lavishly by colonnades and verandahs, and designed by a Frenchman.⁸² The new style adopted incorporated the use of coloured plaster and stucco-work with mouldings and statues. Heavy facades were derived from Tzarist Russia and details of interior and exterior decoration from Victorian England and France, but still much that was Persia was kept. The result was a "melancholy mixture of delightfully Persian and abominably European". Fraser continued "the better dwellings are of cooked brick, not infrequently stuccoed over to resemble a sculpture gallery and painted white, pale green, red pink, or blue so blue as to keep a whole street shuddering."⁸³ These palaces were further compared to the imposing but crumbling St. Louis or San Francisco exposition edifices at the end of their term of service.⁸⁴ Many of these facades can still be seen in Tehran where repairs have been done, as on the whole the plaster-work was fragile and soon deteriorated. The better examples still managed to retain the open freshness of the Persian kiosk with balconies and terraces and the garden, although somewhat changed by the craze for things European, never became subordinate to the building within it. The interiors however presented the same mixture in poor taste. "The

chief glory of a nobleman's house is a great room with chandeliers, gorgeous clocks, gilt ornaments, flamboyant vases and anything that adds to the confusion of glaring colours."⁸³

The royal palaces of the late 19th and early 20th centuries led in this trend. Niavaran or Sahebqaraniyeh, built soon after Nasir-ud-Din's accession, was considered modern and was very popular with the king. The buildings were low but of Russian style, following the courtyard plan but with modern decoration.

The 'Ishratabad palace consisted of a tower of several floors something like the Shams-ul-'Imarat⁸⁵ furnished in European style but in poor taste. The exterior was tiled. Scattered around this in a semi-circle interspersed with gardens were 30 two-roomed "maisonettes" or kiosks for the king's wives. Mme. Serena likened these to stables⁸⁶ and Feuvrier to tombs.⁸⁷ The site is now occupied by barracks. (Map A)

The hunting-box of Doushan Tepeh continued the tradition of Qasr-e-Qajar, built like a fortress on an isolated rocky hill in the plain to the east of Tehran. The main building was a spacious octagonal pavilion with a large central room and four flanking it. Above this was an arcaded terrace. Nijeholt saw it when it had been newly furnished with chandeliers and carpets and remarked "je n'ai rien vu, en Perse, de plus frais et de plus coquet."⁸⁸ Mme. Serena likened the central apartment to a ship's cabin.⁸⁹ The women's

quarters were arranged at a lower level, around a courtyard, with baths and servants' quarters attached. After this palace was abandoned it fell so rapidly to ruin that little now remains.

The palaces attached to the other gardens mentioned above were of a similar though varied style.

The last Qajar palace in Tehran was that built by Muzaffar-ud-Din in the 1900s at Farahabad. This building has been variously likened to a pale-blue wedding cake⁹⁰ and a Mississippi steamboat⁹¹. Several terraces lead up to the three-storey, bow-fronted building. This palace has been maintained by the Pahlevi dynasty and used occasionally by the Shah or his family.

The multiplication of royal palaces on which many travellers remarked cannot be explained solely by large households and extravagance. Nor does the nomadic instincts of the dynasty or the desire for cool summer havens totally explain this phenomenon, although all these factors are important. There was also the point made by Depping that the royal palaces were not well repaired, that the king was overcharged and the money misappropriated. In this respect they were in a worse state than private houses. The result was that the palaces were continually under repair. In the summer repairs were done to the winter palaces and vice versa. In 1853 when cholera broke out in Tehran the king rushed to Niavaran to find that there was only one room where he could go without needing an umbrella.⁹²

The 20th century palaces have tended to be more substantial although retaining the traditional love of the grandiose. The Kakh-Pasteur palace quarter contains four palaces all built in the 1930s. The south-eastern one is the Kakh-e-Marmar, built by Reza Shah as his town office and place of reception. It is a square building faced with pale green Yazd marble and surmounted by a dome copied from that of the Shaykh Lutfullah mosque in Isfahan. Inside are murals of the Trans-Iranian railway and the ruins of Persepolis; but one room covered with mirror-work from floor up to and including the ceiling, another entirely covered in inlay mosaic, including the furniture, and many elaborate chandeliers and objets d'art carry on the 19th century tradition. Around this palace are iron railings instead of walls, a departure from tradition much encouraged by the present Shah. In the opposite, north-west corner is the Private Palace, built for the present Shah while Crown Prince and now retained as his main Tehran residence. This and the two remaining palaces are in modern style. They are also used by members of the royal family and separate buildings in the gardens, usually around the periphery, house servants, guards and other officials. The main summer palace of Sa'adabad is also in modern style.

Palaces, both royal and aristocratic have contributed much to the growth of both Tehran and Isfahan. The development of garden suburbs has pointed to the further development of the town itself, to the south

and west in Isfahan and to the north in Tehran. They have been the outward sign of the vitality and prosperity of the dynasty which made the town its capital and of the wealth this new function brought. The central palace has in both cases played a very important part in equipping the city for modern government.⁹³ Ruling families have always been active in introducing new styles of living, decoration and architecture which have been quickly seized upon and copied, and this has affected the appearance of the town. All this is a part of the effect capital-hood has on the development and morphology of a town.

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CHAPTER 7

PART 1

ISLAMIC RELIGIOUS BUILDINGS

Most religions entail some kind of communal invocation, supplication and glorification of deities by their adherents. In all but the most primitive societies this has led to the creation of structures with purely religious functions, where either the deity or its spirit resides, or which are venerated as places set aside for religious acts. Where the religion recognises men and women who have been specially favoured by the deity or especially steadfast in the faith, buildings connected with these too may be venerated, especially tombs and burial places. Because of the central role which religion plays in civilisation, past and present, religious buildings are usually the most splendid and solid, enriched with appropriate decoration, protected and maintained. Thus they have often survived through centuries, and even millenia. Their importance as material symbols of spiritual life has often led to religious buildings incorporating conspicuous architectural features such as spires, domes, towers and arches. Islamic buildings have the above characteristics. Many of their features can only be explained in religious terms such as the orientation of all mosques towards the "qibleh" at Mecca, which in Persian mosques is south-west. They are also adapted to the Persian environment in terms of climatic influences and building

materials. The result is a distinct Perso-Islamic style of religious building.

Religious buildings in Persian towns fall into several categories, mosques, madrasehs, takiyehs, imamzadehs, shrines, tombs and dervish monasteries.

Mosques are places for prayer, either in congregation as on Fridays or privately. It is very rare to see men praying in the streets, or at their workplaces as in Arab countries. A typical Persian mosque is of the four-ayvan plan¹ arranged around a courtyard with a pool for ablutions. The sanctuary to the south-west is usually covered, with the "mihrab" as the focus of all prayer, and beside it the pulpit, or "minbar". Several examples of this type are described in detail below.

The madraseh, or college is not only a religious building, but until the twentieth century, was in most cases the only educational establishment in Persian towns. Here boys were taught to recite the Kōran and older youths were trained as mullahs, but theology was the only subject taught. The college was laid out on a courtyard plan with a central garden and rooms for students in the arcades surrounding it. It was not orientated unless it incorporated a mosque.*

* The four ayvan form of the madraseh in fact predates that of the mosque in Persia. The madraseh system was started by Nizam-ul-Mulk about 1080 and the earliest four-ayvan mosques appear a good deal later, e.g. Varamin 1322

The takiyeh is an open space surrounded by alcoves or "qorfeh" where Passion Plays are performed during Moharram, at which time the enclosure is usually roofed by tents.* The nineteenth century maps of Tehran mark takiyehs whether permanent or temporary, and they greatly outnumber the mosques. (Fig.26)

An imamzadeh is the tomb of a descendent of one of the imams.** These are found in large numbers throughout Iran. The essential feature of an imamzadeh is the tomb-chamber itself but elaborations may be added. The number and importance of these shrines endows a town as a pilgrimage-centre. The tomb of Shah Abdul Azim at Rey is an example of this.

Shrines, similar to imamzadehs, venerate other saintly men and women or events connected with them, such as the tombs of Babas in Isfahan.

Dervish monasteries and hermitages have been important more in the past than today. Dervishes were often patronised by rich men and royalty and hospices built for them much on the lines of European monastic houses.

* Muharram is the month of mourning for the deaths of Hasan and Husayn, the Prophet's grandsons. During this time plays, depicting the story of Husayn's death at the Battle of Kerbala, 680 A.D., are popular with Shiite Muslims.

** The Imams were the leaders of the Shiite sect, descended through Ali and Fatima from the Prophet. The title is still used for important religious leaders.

RELIGIOUS BUILDINGS. TEHRAN

FIG. 26.



	1858	1858 & 1892	1892
MOSQUES	△	▲	M
MADRASEHS	□	■	
TEKIEHS	○	●	T
IMAMZADEHS	◇	◆	I

Having been an important regional centre even before becoming capital, Isfahan has examples of religious architecture from all periods of the Islamic history of Persia. The Masjid-i-Jami' was founded in the early days of the Abbasid caliphate and was very likely the great mosque of Yahudiyeh. It was rebuilt and aggrandised in the second half of the ninth century when the minaret 70 ells high, seen by Muqadassi was added. Of the mosque of Jay there remains no trace.²

The earliest existing parts of the Masjid-i-Jami' are the great and small dome chambers of Nizam-ul-Mulk, a famous Seljuq vazir, built 1085-88. These exemplify the Seljuq style of plain but solid brickwork, with raised brick decoration and Kufic script. Religious buildings from the Seljuq period 1037-1197, are all in the oldest part of Isfahan. (Fig.27) Prominent among these are three minarets, which have survived the buildings to which they were attached, presumably mosques. The oldest is the Chehel Dokhtaran minaret of 1107, on the edge of the town and much dilapidated. The tallest is the Sareban or Camel-drivers minaret, 44 metres high, built 1156 and already standing alone at the time of Chardin.³ The Seljuq minaret of the Ali Mosque is much earlier than the mosque to which it is attached.

The period of the Mongol invasion was not conducive to elaborate building programmes, but by the early fourteenth century under Oljeitu, the Shiite Ilkhan, much beautiful work was done like the stucco-decorated mihrab of the Masjidi-Jami'. The ayvans and the madraseh, now ruined, date from this period. Otherwise the surviving monuments of the Mongol period are minarets and shrines, mostly in the old town. They incorporate early tilework and some delicate plaster-work. Some are restored, like Baba Qasim's tomb, others allowed to decay, like Bakht Agha tomb. Very few are still used and they are rarely visited by tourists.

The early Safavid period produced the Harun Vilayat shrine and the Masjid-i-Ali. The distribution of these early monuments clearly defined the extent of the preSafavid town, centred around the Masjid-i-Jami' and the old square.

With the reign of Shah Abbas I the great period of mosque-building in Isfahan began. New mosques were built as part of the planned extensions to the south, especially the Masjid-i-Shah and the Masjid-i-Shaykh Lutfullah in the Maydan, built 1612-28 and 1603-18 respectively. Existing mosques were rebuilt and decorated with Safavid tilework, as in the Masjid-i-Jami' and Masjid-i-Hakim. Certain courtiers also built mosques at their own expense, often attached to their palaces. Masjid-i-Sofrechi was built by Shah Abbas's Maitre-d'hotel and

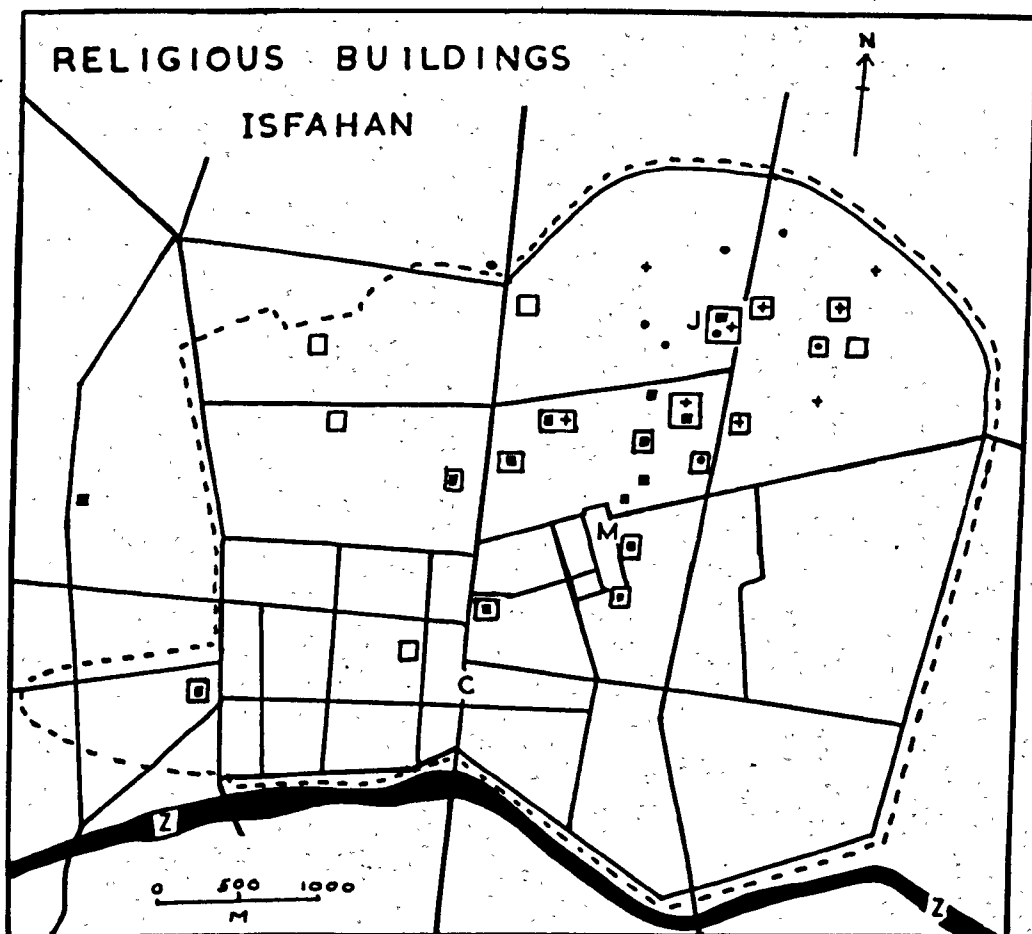


FIG. 27.

- | | | | |
|-----|---------------------------|---|---------------|
| + | SELJUQ 11-12 CENT. | M | MAIDAN |
| • | MONGOL AND TIMURID 14-15. | C | CHEHAR BAGH |
| ■ | SAFAVID 16-17. | J | MASJID-I-JAMI |
| □ | MOREL AND COSTE'S MAP | Z | ZAYANDEHRUD |
| --- | WALLS C. 1840 | | |

Masjid-i-Jarchi by the chief herald. Chardin mentions several mosques which have survived until the present, such as Maqsud Beg and Sarutaqi, and in the suburbs Masjid-i-Lunbun, 1669. Not all, however, have survived, names have been changed, and restoration has replaced the old fabric.

In this period Isfahan was the foremost centre of Islamic education, after Najaf, and was famous for its madrasehs and the number of mullahs it produced. The most famous are the Madraseh Jaddeh, the Mullah Abdullah College and the early eighteenth century Madraseh Madar-i-Shah Sultan Husayn.

From the Safavid period mosques have survived, and from earlier times, shrines and minarets. This is partly because mosques are constantly used and therefore more likely to undergo change and alteration, whereas a shrine, once built, is of commemorative value only and therefore maintenance is not encouraged. Also the importance of Isfahan as a capital would encourage mosque-building for prestige purposes, whereas the presence of saints and descendants of imams in a town is largely fortuitous.

The history of the foundation of religious buildings was almost over before the European travellers of the seventeenth century reached Isfahan. The mosques were however the most "observable" buildings.

They only, with their domes and minarets challenged the chenars for the supremacy of the skyline. The mosques of the Maydan attracted most attention although opinions were mixed. Pouillet considered the Masjid-i-Shah the most beautiful in the town, "quoi qu'infiniement au dessous de celles qu'on voit a Constantinople."⁴ Others add more appreciative remarks about marble gates and paving, tiles of blue porcelain, friezes of azure and gold and minarets enriched with sprig-work. To Struys it was a large and sumptuous temple, the most costly building and most glorious fabric of all the "emmarath" (palace).⁵ All mention the great gateway facing the square, topped by minarets and the central court with four ayvans, set at an angle. The great dome and minarets of the sanctuary were and are the most impressive landmark of the city.

Chardin says that the mosque was built on a melon garden belonging to an old woman.⁶ This part of the town was then open before Shah Abbas's building schemes. Shah Abbas had wanted to use the marbles from the Masjid-i-Jami' in the new Masjid-i-Shah, but was dissuaded by the mullahs. This underlines the struggles between religious and temporal power, even though both wished to further religious building. Chardin and Sanson⁷ also noticed the little canopies of wood above the ayvans from which the call to prayer was made. The minarets were not used in case the muezzin looked into neighbouring harems, even the royal seraglio in this case. These

canopies still exist as rather ugly and incongruous features.

The Masjid-i-Shaykh Lutfullah was often considered the ladies' mosque because of its enclosed form without a courtyard. To Chardin it was "sombre et peu fréquentée" and Thevenot saw little of interest except the high gate of colourful glazed tiles.⁸

Chardin alone goes into any detail of other religious buildings. He considered the Old Congregational Mosque, (Masjid-i-Jami') the largest and most majestic in Persia, and described its tiles "peints de mores qes vifs et luisans", its 8 ft. high skirting of porphyry and marble, the great dome chambers and winter halls. The seven gates which were traditionally the work of seven kings, symbolised the palimpsest of architectural forms which the mosque had become. His survey accounted 162 mosques and 48 colleges, but it is uncertain what the former category included (Appendix. 4) The next estimate of the numbers of religious buildings is that of Ouseley in 1810, when with the help of Persian sources, he gives a total of 60 mosques, only 40 of which were kept in repair, and 84 colleges, not all flourishing.⁹ This last sounds excessive considering the decay of Isfahan. However, as estimates, and without definition, these figures have little value.

Early nineteenth century travellers again found mosques the salient features in the townscape, but their glory had passed and, while they remained impressive and beautiful, the decay which had taken

hold on them could not be overlooked. Tiles were peeling from the Chahar Bagh Madraseh and Masjid-i-Shah although the Masjid-i-Shaykh Lutfullah remained apparently well preserved. Ouseley and Price,¹⁰ noted and appreciated the abundance of brick minarets showing fewer signs of wear than newer buildings. The dervish convent near the Haft Dast palace, incorporating the mausoleum of Mir Abul Khassum still remained from Safavid times with ten dervishes. Olivier¹¹ found 30 professors at the Chahar Bagh madraseh and Ker Porter¹² states that there were 100 students in the Madraseh Jaddeh. Travellers busied themselves with searching out the monuments of Chardin's time and usually found them in a state of ruin.

On Morel's map, c.1840 three main mosques and 16 others are marked, presumably the most prominent. These in most cases correspond to existing mosques. (Fig.27) Their distribution shows continued emphasis on the old north-eastern quarters, which were still well-populated even after the drop in population in the eighteenth century. Other estimates from the middle of the century suggest a figure of 12 large mosques and a similar number of madrasehs.¹³ The 11 large Safavid mosques formed the bulk of these lists. By this time some attempt was being made at restoration. Gobineau in 1855 saw scaffolding on the Masjid-i-Shah for restoration by order of the king.¹⁴ However, despite the scaffolding, no work was being done and Gobineau guessed that the money was being misappropriated and would continue thus even when the

mosque no longer existed. It is surprising however that Gobineau should describe the Chahar Bagh madraseh as entire and not lacking a brick, with a thriving market attached, whereas Binning and Ussher in the same decade saw the place deserted and the tiles broken and stripped off.¹⁵ Writers later in the century do agree that the madraseh was by then untenanted. Many travellers derived more interest from the curiosity of the Shaking Minarets of Jumban. By an architectural oddity these minarets can be made to shake in sympathy when one is rocked. Otherwise the shrine is undistinguished.

Increasing decay may explain increasing reluctance towards the end of the century to allow foreigners in the mosques. Mrs. Bishop¹⁶ despaired of the Chahar Bagh madraseh which had lost over half its tiles and to Arnold it was the most lamentably striking picture of ruin in Persia.¹⁷ Bricteux sums up the state of the religious buildings of Isfahan in his description of the Masjid-i-Shah, "cette merveille d'architecture est le plus beau des monuments de la Perse, et meme de l'Orient musulman, (elle) s'effrite, les faïences détachées laissant apercevoir le gris terne du plâtras sans qu'on prend le moindre precaution."¹⁸

By the 1920s mosques were closed to foreigners more from a sense of shame than any religious fervour. However, with the Pahlevi dynasty restoration began in earnest. In some cases this entailed almost

complete rebuilding. This was the first major work of religious building undertaken for 200 years. However, the religious motive here was not the foremost. The renovation was put in the hands of a French archeologist Godard, of the newly-created Department of Antiquities. It was for national prestige and a glorification of the past that the work was undertaken. This proved long and laborious. Old arts of tilemaking had to be revived and piecemeal reconstruction of tilework patterns undertaken. Even in 1933 Tweedy thought nothing could repair the Masjid-i-Shah, that efforts to piece together the Masjid-i-Jami' seemed pathetic, as it was beyond repair.¹⁹ By 1940, however, the blue domes again flashed upon the gaze of incoming travellers, marvellously shaped and exquisitely tinted. Foreigners were allowed free access to the main mosques at certain times of the day and the Masjid-i-Shah, Masjid-i-Shaykh Lutfullah and Masjid-i-Jami' became the poles of attraction for a growing and valuable tourist trade which has greatly aided Isfahan's recovery. (Map B).

The Master Plan²⁰ claims that there are 2,000 shrines, prayer houses and mosques in Isfahan of which about 300 are "remarkable art monuments". This is incredible. Another estimate gives 169 mosques, very close to Chardin's figure which served a similar population and 28 ancient schools, very few of which are used today. Modern religious buildings in Isfahan are mostly undistinguished.* The Seljuq

* An exception is the mosque of General Zahedi, still unfinished in May 1964, which incorporates some fine mosaic tilework made on the spot, as well as modern plumbing, a school, clinic and a bathhouse (projected), serving the social and well as religious needs of a newly-built-up area of north-west Isfahan, otherwise lacking in these services.

minarets and the restored Safavid mosques remain the salient features of the Isfahan skyline as they have even been in prosperity or decay.

Religious buildings in Tehran are of the same type as in Isfahan, but there the comparison ends. In Tehran the period of building began only after that of Isfahan was over. The largest proportion of religious buildings in Tehran are of the Qajar period from 1780 onwards. The number of mosques in a town varies with population, and in this respect Tehran has always been at a disadvantage. Even though Isfahan's population dropped by 80% in the eighteenth century, it was left with religious equipment for $\frac{3}{4}$ million. Tehran began its term as capital with a mere 30,000 and grew comparatively slowly until the twentieth century.

Tehran has always been known as singularly destitute of religious monuments. Clavijo²¹ did not see a single building here worthy of notice and Herbert said that "the caravan's lodge (caravanserai) here for elegance far exceeds the mehit (mosque)"²² The skyline was not enriched as at Isfahan. "Neither mosque nor palace break the equal line of the city"²³ Tehran lacked the patronage of a rich dynasty interested in art and religion.

However, the town is not completely devoid of ancient monuments

Three imamzadehs survived from pre-Qajar times. At Imamzadeh Seyyid Ismail in Chal-i-Maydan was found a stone with the name of the builder and the date 886 (1562). This was rebuilt and two tiled minarets added by the Qajars. Imamzadeh Yahya in Oud Lajan was for long a well-known site. It consisted of an 8-sided tower with a 12-sided cone above, but the dating is uncertain. The grave itself was dated 628 (1270). However, its condition by the 1930s was ruinous and the building was demolished to be replaced by a mosque, museum and library. The third, Imamzadeh Zayd is also of ancient origin, but its present fabric is almost wholly Qajar. Fath Ali Shah rebuilt the main structure and Nasir-ud-Din added an ayvan. It is now part of a school.

Other imamzadehs formerly outside the town have been included in its growth such as Imamzadehs Hasan and Abdullah to the west and Qasim in Tajrish.*

Fath Ali Shah began to build the Masjid-i-Shah soon after 1800, Morier saw it unfinished, but it was not finally completed until 1840.²⁴ It was decorated with tilework in the yellows which were then popular.

Ouseley estimated there were 30 - 40 mosques and madrasehs in

* The shrine of Shah Abdul Azim at Shahr-e-Rey to the south of Tehran is an important place for pilgrimage. It is named after Abul Qasim Abdul Azim who, fleeing from the Caliph Mutawakil, lived in Rey until c.861 A.D. and was buried here. Previously however, it had housed the tomb of Hamza, son of the seventh imam, Musa-el-Qazim, and was a sacred place even before Islam.

Tehran, which figure seems high for the period.²⁵ Morier, Dubeux²⁶ and Flandin²⁷ give a more conservative 7, with 3 or 4 madrasehs. All, except the Masjid-i-Shah, were insignificant.

The 1858 map gives valuable detail of religious buildings. There were then 11 mosques, 18 madrasehs, 42 takiyehs and 3 imamzadehs being the three described above. (Appendix 4) (Fig.26) Mosques are distributed among the quarters except for the concentration in the Bazaar. For a population of about 80,000 this is meagre. Madrasehs are again well-distributed except for Chal-i-Maydan and the Bazaar concentration. The larger may also have served as mosques. Mosques and madrasehs show a tendency towards centrality, none are found near the margin of the town. Their distribution could be indicative of the extent of built-up Tehran in the early 19th century. Takiyehs, being easy and cheap to set up, could more easily follow population. They were also more frequented by women and so are found in the residential areas towards the periphery. Typical sites for takiyehs are street junctions where tents were put up over a square, and the courtyards of caravanserais.

Nijeholt's numbers of mosques and madrasehs for 1866 are the same as on the 1858 map.²⁸ However, he adds Shah Abdul Azim to his total of mosques and the distribution among the quarters is different showing that either he cannot have used the map, or he ignored the mahalleh

boundaries marked on it. His distribution of mardasehs is closer to the map. (Appendix 4)

Several of the buildings mentioned by name by the travellers are not recorded on the map - Madraseh Khan, Masjid-i-Madar-i-Shah, Masjid-i-Mayar. These may be alternative names or inaccuracies. Between 1858 and 1892 travellers continued to be disappointed. Some were frank; Browne declared that the mosques here were of less interest than those of almost any other Muhammadan city of equal size.²⁹ Arnold saw no place where ornamentation was not more or less disfigured with ruin.³⁰ Lefevre-Pontalis, however, attempted to make the best of poor material, setting the blue cupolas against the great white mass of Demavand.³¹

The 1892 map again pays attention to the four categories of religious buildings. Resurveying appears to have taken place from the additions to and omissions from the earlier map. All types increased in numbers especially mosques, eight having newly appeared. There were few in the new quarters, except the Masjid-i-Sepah Salar. This mosque, with a madraseh attached, was begun by Mirza Husayn Khan, once commander-in-chief under Nasir-ud-Din, and completed with his endowments by his brother Yahya Khan, Mushir-ud-Douleh whose palace was nearby. (Fig.5) The mosque was unfinished in 1891 when Curzon visited it and described the four minarets, the only ones of any

size in Tehran, the immense dome and vaulted winter prayer-hall, all given a brave appearance by a lavish decoration of gaudy enamelled tiles.³² He deplored their inferiority to earlier ceramic work and considered that neither in design, execution, nor glaze could they be accounted works of art. The Sepah Salar mosque remains the most elaborate and beautiful religious building in Tehran.

The area formerly within the walls still contained practically all the religious buildings. (Fig.26) Those new since 1858 were mainly peripheral such as the mosques of the Queen-mother, Hajji Abul Fath and Shahhab-ul-Mulk, and three takiyehs to the south. The greatest increase in mosques was in the east, with three new ones in Oud Lajan, and five in Chal-i-Maydan, two having disappeared since 1858. These new mosques are all named after rich men and Qajar nobles, which reflects the increasing wealth of the town also in pious endowments. Madrasehs, on the other hand, remained constant in numbers. The beginnings of secular education may explain this. Takiyehs increased by six following the rise in population, although slowly. One of these new takiyehs was in the Ark, built by Nasir-ud-Din after his European tours and inspired, it is said, by the Albert Hall. This was a circular brick building, lined with boxes inside around a central platform. The entrance was tiled, decorated with niches and towers, "gew-gaw, pretentious, vulgar, ephemeral" as Asnold³³ described it, the facade "as the small transspt of the Crystal

Palace, florid, coarse plaster decoration with beadings of bits of coarse looking-glass." After the construction on the walls were found unable to support the dome and so the structure remained permanently unfinished. A roof covering of canvas stretched across steel ribs was put on during performances. This odd roof remained a conspicuous landmark in Tehran until the 1930s when the whole building was demolished, its site now being occupied by the bazaar branch of the Bank Melli. (Fig.16)

New shrines include tombs of religious leaders. Nonetheless, the overall pattern remains, of centrapetal mosques and takiyehs more widely spread.

On into the 20th century the religious monuments of Tehran could make little impression on travellers. Only the Masjid-i-Shah and Masjid-i-Sepahsalar were worthy of mention. All, however, remained in use and in a fair state of preservation, unlike the Isfahan mosques. The mosques of Tehran have, however, never been freely open to non-Muslim visitors; even today such visits are regarded with suspicion. Many new mosques have been built corresponding to increases in population. They are insignificant buildings, mostly without domes or minarets, recognisable by a tiled gateway and courtyard. Their distribution throughout the town is uneven, the largest number, 132, being still in the old town. Their paucity in the new centre

and fashionable Takhte-Jamshid area is very noticeable. Madrasehs have very little influence now where they survive. Few have been added since the building of the Masjid-i-Sephsalar, where, however, the madraseh is flourishing. Tehran is not and was never noted for religious education. Numbers of takiyehs have increased enormously since 1892 but most are now temporary structures, difficult to map as Muharram is not an advisable month for surveys. Throughout the town tents decorated with black mourning flags spring up on open spaces and squares. Not all sections of the community attend the meetings, but even in the most westernised areas they exist. Numbers of takiyehs vary from year to year. In 1963 they were conspicuous in the townscape of all parts of Tehran, but following the disturbances there were much fewer in 1964.

Mosques are still being built in Tehran but many have been for years in an unfinished state through lack of finance. The Shah's land reform programme attacking "vaqf" or mosque land given in endowments will even further decrease their income and may have a marked effect on religious building throughout the country. Religious feeling is still strong in Iran; even Reza Shah stopped short of the complete secularisation which Ataturk undertook, and religious buildings still play a part in townscape, more in the case of Isfahan, less in Tehran, and are valuable factors in the typification of Muslim towns in general and Persian towns in particular.

PART 2SQUARES

The square and the citadel are considered the focal points of a Persian town.³⁴ But of these the square is the more basic and fundamental, as it is found also in pro^{e?}-urban settlements. Only under urban authority, however, can a square become more than an open space and attain functions other than that of a market-place. Squares are thus planned features and reflect very closely the aims, motives and tastes of the time when they were created and of the planning authorities involved.

Capital cities, with their wealth and the extent of authority exercised in them, often contain squares. The squares of Tehran and Isfahan vary in form and function with time and different dynasties.

Of the pre-Safavid square of Isfahan little trace now remains and little description can be found. It was the centre of the old town, and around it lay the Timurid palace and the most important mosques. It stretched from the Masjid-i-Jami' to the Masjid-i-Ali, both of which contain Seljuq or earlier work. On Olearius's plan an open space is marked in the north-east of Isfahan near the Augustinian's convent.³⁵ Chardin speaks of a great square in this quarter with palaces of the Husaynite family around it.³⁶ There were four palaces, one at each corner, and all in good repair except the northern one which was then (1665) deserted and in ruins. Tavernier says that two

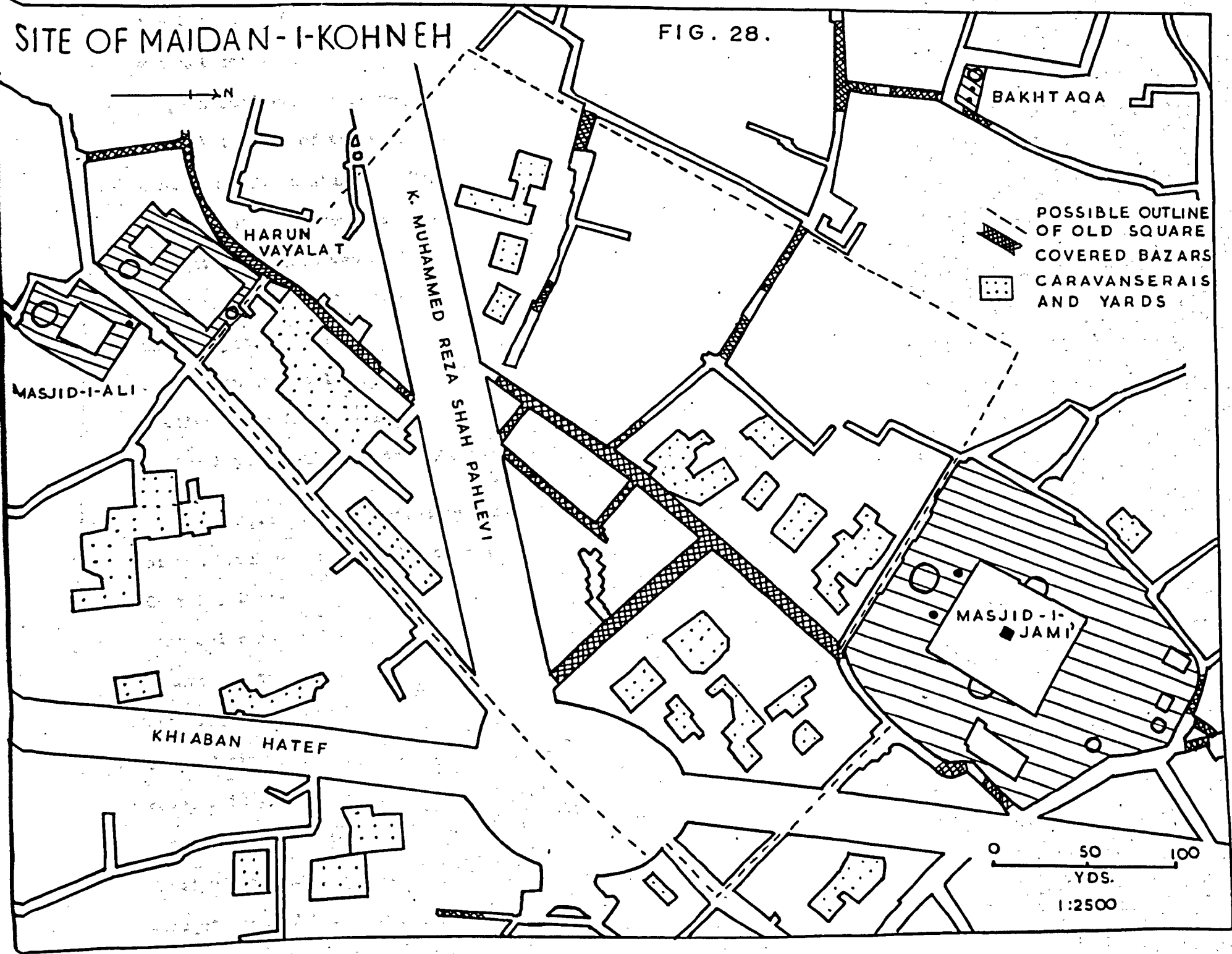
sides of the old maydan were complete with shops or stalls selling herbs, fruit and victuals, but the other two sides had almost fallen to decay.³⁷ He considered that this decay was due to the drawing off of trade to the new maydan, but that formerly the old square was as fine as the new. The reason for this deliberate shift was the refusal of a prince of a former dynasty to grant Shah Abbas the old square and the house nearby, says Tavernier. Thus the old square decayed. In 1694 Careri saw it ruined.³⁸ Few other writers mention the old square which was presumably gradually built over, although the area is still known as Maydan-i-Kohne, or Old Square.

An attempt to reconstruct the lines of this square shows that the alignment was most probably north-east - south-west. With this alignment palaces could have existed on each side with the old mosques to north and south (Fig.28). The old streets have a similar trend and very likely followed the edges of the former square. It has thus become an area of covered bazaars and caravanserais, distinguished by the comparative absence of residence within it.

The successor to the Old Square was the Maydan-i-Shah of Shah Abbas, an open space near the site of the Timurid palace and garden called Naqsh-i-Jahan, Picture of the World, regularised early in the 17th century. Iskandar Munshi said that Shah Abbas spent a large sum on embellishing the maydan in 1020-1 (1611-12).³⁹ The Ali Qapu and

SITE OF MAIDAN-I-KOHNEH

FIG. 28.



the Shaykh Lutfullah Mosque already existed then although the Shah Mosque was not completed until after.⁴⁰ Estimates of the size of the maydan vary enormously, but it seems to have always been of its present dimensions. However the use of the square and the buildings around it has varied since the 17th century. Herbert considered the maydan "as spacious, as pleasant, and aromatic a market as any in the universe."⁴¹ Olearius thought the square was so large and wide that no other in all of Europe could approach it.⁴² It was in Sanson's opinion the prettiest spot in the east.⁴³ and for many more one of the largest and most beautiful squares in the world. From the detailed accounts of Chardin⁴⁴ Tavernier⁴⁵ Foullet⁴⁶ des Landes⁴⁷ Thevenot⁴⁸ Careri⁴⁹ and others a reconstruction of the Maydan-i-Shah in the 17th century can be made.

The square was delimited by a series of two-storey arcades built of mud brick and decorated with tile-work and plaster. According to Chardin, there were 335 of these with over twelve openings, all the same and regular, each 16 ft. wide. Below were shops, one facing the square and the other inwards onto the covered bazaars. The upper storey comprised four small rooms, two towards the square and two behind. Those facing the square had a little balcony with a brick balustrade, covered in plaster and painted red and green. Behind was the high, domed roof of the bazaar and roof terraces. These were quarters for foreign merchants, according to Pouillet. Neither he nor Tavernier thought much of the arcades, considering them decaying even in mid-century.

This perhaps confirms that they were lived-in. On each arcade were niches, 120 according to Chardin, where small lamps could be placed to illuminate the square, altogether 50,000. This was often done in Shah Abbas's time for festivals or receptions, but rarely after his death. At 20 paces from the houses ran a canal, lined with brick and plaster of the type Chardin called "Ahacsia" meaning black lime, and which was harder than stone. This canal was 6 ft. wide with raised edges of black stone wide enough for four men to walk abreast. Behind were lines of plane trees, higher than the houses which they shaded without hiding. When the stream was flowing, the dust kept down by sprinkling and the market in progress, it was "la plus belle place du monde, et où la promenade est la plus agréable". This is an ideal picture. Pouillet found that the channel was only well-faced on the palace side; elsewhere it was of earth. Careri declared that few of the trees from Shah Abbas's time remained, as no replanting was undertaken. The maydan was watered in summer but its great unpaved expanse became a dustbowl or morass with the changing seasons, and to many Europeans the emptiness of the square was unpleasantly overwhelming.

Rarely, however, was the square empty. Besides people passing to and from the main buildings there were many others buying and selling; the maydan was, as des Landes put it, "une foire continuelle". Traders would set themselves up on a carpet or matting with their wares before

them, and a rough awning of linen to shade them. Chardin gives a scheme of shops said to have been arranged by Shah Abbas. (Fig.29) This, however, would vary with the season and time of day. The large livestock market only functioned in the morning, the peasants came on Friday to sell their fruit and vegetables, and in the evening the entertainers took over much of the square with story-tellers, charlatans, jugglers, prostitutes etc. The revenue from this market went to the religious foundations of the city. It amounted to 50 écus a day, according to Chardin.

At other times the maydan was cleared of peddlers and became a magnificent polo-ground. At each end were two great columns of marble, 8 ft. high, 15 ft. apart polo posts. Posts less high still exist, but are not necessarily original. Other sporting events in the square, often watched by the Shah from the Ali Qapu, included horse-racing, animal displays and shooting from horseback at a target often a silver goblet on a mast which was a permanent feature in the centre.

The permanent shops in the porticos were also grouped by products or processes. There is fairly close agreement on their distribution. Craftsmen often worked outside in the shade of the trees and the coffee-houses also overflowed here as they do now. Some of the trades are located with reference to the main buildings. Luxury crafts such as

KEY TO FIG. 29 MAYDAN-I-SHAH. SAFAVID PERIOD

- | | |
|---------------------------------|---------------------------|
| A. Masjid-i-Shah | H. Mechanical clock |
| B. Masjid-i-Shaykh Lutfullah | I. Mast |
| C. Ali Qapu | J. Display of cannon |
| D. Qaysariyeh Gate | K. Pools |
| E. Imperial Bazaar | L. Channel with planes |
| F. Harem Gate | M. Royal caravanseral |
| G. Kitchen Gate | N. Exchange. |

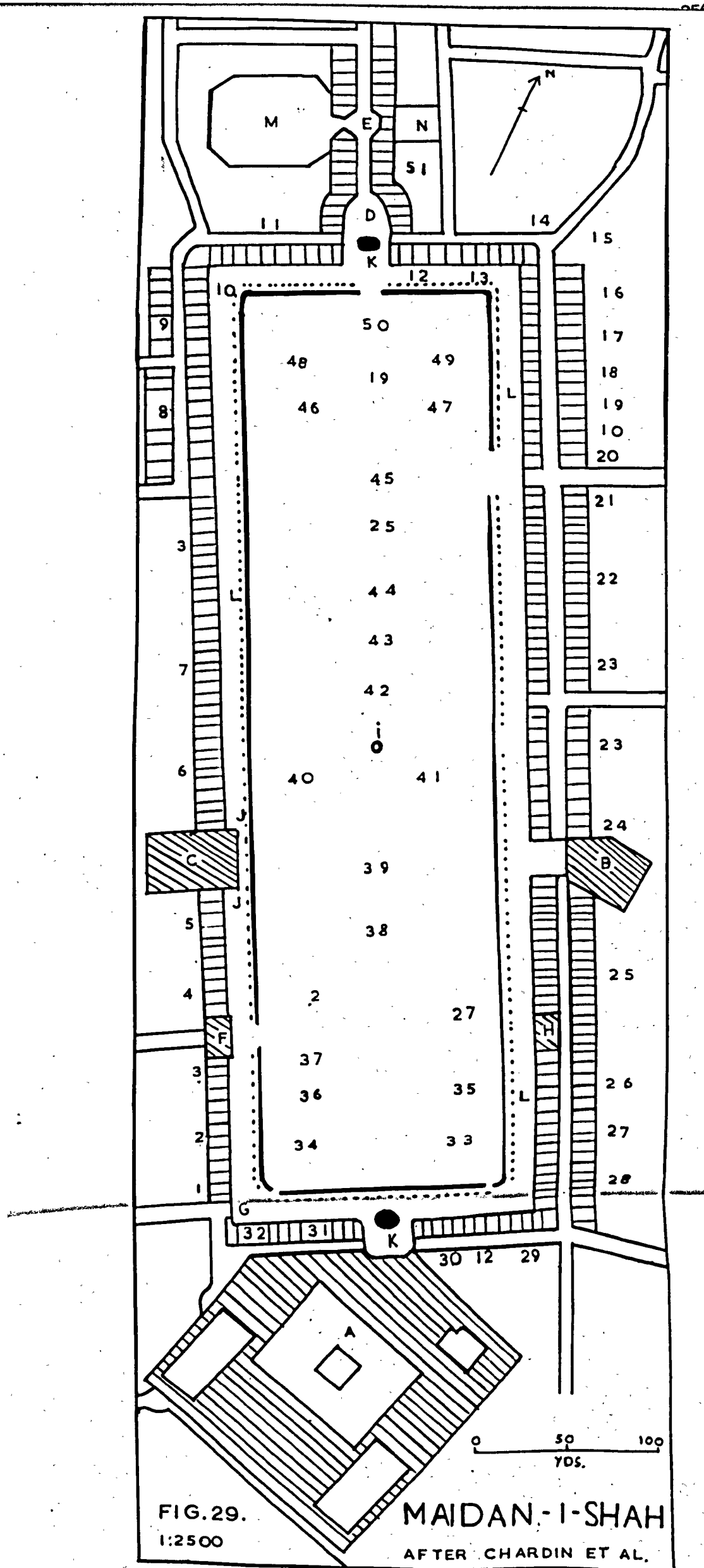
Distribution of shops

- | | |
|-----------------------------------------------|-------------------------------------------|
| 1. Haberdashers | 17. Booksellers |
| 2. Ironmongers | 18. Hot food vendors |
| 3. Polishers | 19. Second hand dealers |
| 4. Lapidaries | 20. Grocers |
| 5. Goldsmiths | 21. Lacemakers |
| 6. Writers (mullas) | 22. Makers of gold and
silver buttons |
| 7. Shoe-makers (high heeled shoes) | 23. Shoe-makers (flat shoes) |
| 8. Heavy cloth merchants (London
cloth) | 24. Cotton-carders |
| 9. Archery equipment suppliers | 25. Cotton-beater |
| 10. Druggists | 26. Turners |
| 11. Dealers in sheepskins | 27. Rope-makers |
| 12. Coffee-houses | 28. Rice-sellers. |
| 13. Pipe-makers | 29. Saddlers |
| 14. Printers on cloth | 30. Readers |
| 15. Gold and Silver smiths | 31. Sellers of penknives,
pens, paper. |
| 16. Founders | 32. Sellers of trunks and
chests. |

(Continued)

Distribution of Peddlers

33. Livestock market (mornings)
34. Carpenters and joiners, house fittings (afternoons)
35. Dried fruit sellers
36. Poultry market
37. Spun cotton sellers.
38. Halter and harness sellers
39. Felt and fur hat sellers
40. Fur-sellers
41. Sellers of new harness
42. Sellers of fine and coarse leather
43. Sellers of old clothes
44. Sellers of heavy cloth
45. Sellers of copper goods
46. Money-changers
47. Doctors
48. Food-sellers
49. Meat-sellers
50. Fruit and vegetable sellers.
51. Sellers of rich cloth.



goldsmiths and lapidaries working for the king occupied the west. Around the Ali Qapu writers gathered from the presence of the courts there, and readers near the mosque helped illiterate worshippers.

Commerce and entertainment were not, however, the only functions of the square. The religious element was represented by the two mosques. The Masjid-i-Shah had before it a pool edged with porphyry, 70 paces round, for ritual ablutions. Both mosques were set back from the square in decorated recesses. Another large pool was set before the Imperial Bazaar Gateway. Above this was a musicians' gallery, the Naqqareh-khaneh. "Un Furieux bruit" said Chardin, "Jargon" said Sanson, "60 of 'em playing together with neither time nor measure".

In the south-west was the clock-tower or Pavillon de l'Horloge, built by Shah Abbas II. The clock had moving marionettes and a carillon. Chardin disparagingly called it "un vrai jeu d'enfant" although the Persians considered it a masterpiece. Some of the bells were allegedly brought from a Portuguese convent at Hormuz. This clock was perhaps moveable as by 1703 le Bruyn saw one over the bazaar gate which was still the only striking-clock in Persia.⁵⁰

Leading from the palace were the Ali Qapu and Harem Gate.⁵¹ In front of the former was a balustrade of painted wood extending 110 paces to each side, enclosing pieces of cannon. * Only Chardin records that

* Chardin says there were 110, from Hormuz, captured from the Portuguese, Pouillet says 22 and des Landes 30-40. They also figure on sketches of the Maydan.

in front of the Harem Gate there were the bases of two columns from Persepolis.*

The Maydan-i-Shah of the Safavids was thus at once market-plate, sportsfield and arena, public park and national monument. It was laid out with imagination and extravagance, and, combining the two great functions of government and commerce, has remained the heart of Isfahan.

Chardin mentions other squares in Isfahan - Maydan - Nou, Maydan-Mir, Takgah, but none were formally laid out and none can be traced with any certainty today.

The Maydan-i-Shah in the 19th century invited a sorry comparison to 200 years before. There was no longer a busy scene, the trees and canals had practically disappeared and many of the houses were uninhabited, bricked-up and decaying. The market was a miserable group of tents in one corner. The bells had been melted down for cannon. Many travellers were disillusioned at the decay and loneliness of the square where only a rare passer-by had replaced the bustling crowds. Some rooms were being used as barracks and the evening still brought the peddlers, conjurors, acrobats, story-tellers and dervishes reduced in numbers.

Throughout the century decay continued. Travellers could extol

* Flandin and Coste, *Perse Ancienne*, p.21-22, say that two capitals were found at the palace gate on the Maydan. These were of white marble with carved heads, probably Sasanian, similar to those of Bi-sutun and perhaps the remains of a palace built in Isfahan by Khozrou Parviz. Whatever their date and origin these could be the stones seen by Chardin.

the past glories of the maydan but not disguise its fall from grandeur; it was intact but little more.⁵² Thus it remained until the Pahlevi period when modern needs brought about a fundamental change. The arcades were broken to allow motor roads through, the maydan was laid out with gardens, pools, fountains and flowerbeds, and the whole thoroughly restored. Now the channels are repaired and new trees planted. In the last five years shops have been occupied again, but many are only stores and the upper storeys are empty. (Fig.30) Curio shops cluster near the monuments, coppersmiths in the north-west and mixed shops near the bazaar where an extension has been built in front of the Qaysariyeh gate.

The cannons and clock-tower have long disappeared. More recently the musicians' gallery was also removed. Modern writers deplore the changes in the maydan and the loss of its spaciousness, but the gardens are not only of amenity value but also have the effect of lessening the overwhelming scale of the square and bringing out the monuments to full advantage where they were belittled and lost before. This is another example, like the Chahar Bagh, of Safavid planning being put to useful modern purposes.

Modern squares have been created in the new road system, such as Municipality square and Sarpol, where gardens and walks are also valuable. Julfa Square also deserves mention.⁵³ There is nothing however to compare with the Maydan-i-Shah.

KEY TO FIG. 30 MAYDAN-I-SHAH, Present.

See Safavid Period map (Fig.29) for letter key.

Gardens stippled

Arcades used as shops and
workshops ruled

Curio-shops cross-hatched

Copper shops vertical ruling

Coffee and tea-shops solid shading.

1. Wheelwrights
2. Wire-sellers
3. Metal-workers
4. Wholesale stationers
5. Bank
6. Carpet Bank
7. Wholesale market office
8. Customs department and police headquarters
9. Boy Scout Headquarters
10. Leather dealers
11. Dealers in printed cloth.

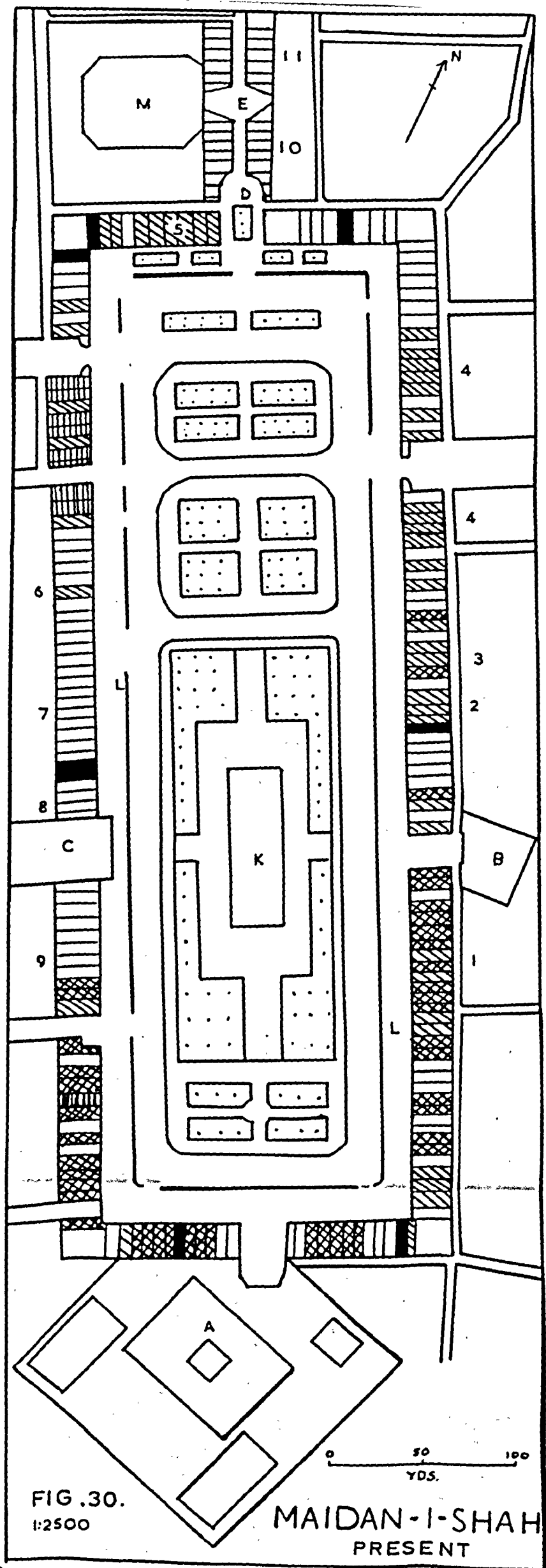


FIG. 30.
1:2500

MAIDAN-I-SHAH
PRESENT

In Tehran, also, city life has always centred on some deliberately created square, usually laid out under royal authority. The oldest square is the Sabz-i-Maydan, at the northern entrance to the bazaar. This was situated at the centre of the old town, attached to the bazaar which was the *raison d'être* of Tehran before it became capital. No information exists as to when this square was first regularised, but it was probably at least partly rebuilt by Agha Muhammad who built many bazaars in Tehran. Morier mentions the square although not by name⁵⁴ and most of the other writers ignore it, turning their attention to the Ark square.⁵⁵

The name Maydan-i-Sabz, Green Square was derived from its use by fruit and vegetable sellers. These traders have always preferred open spaces rather than permanent shops in view of the seasonal and perishable nature of their stocks. It was also the place where criminals were publicly executed, showing it to be the centre of the town's attention. The earliest descriptions of the square come from midcentury after it had been embellished by Nasir-ud-Din. It was surrounded by elegant galleries, like the Maydan-i-Shah, well-paved and with a great square tank in the centre. On the north the gate of the Ark with its towers and coloured tiles added a touch of splendour. This description by Gohineau⁵⁶ agrees with the 1858 map which shows shops

all around and three monumental gates leading to the bazaar (Fig.19) Brugsch said that the shops were full of articles from Paris and Vienna and anything to be found in a European store was on sale here. Some of them were owned and run by Europeans, but mostly by Armenians.

This square and the Maydan-i-Ark were until the second walling the only regular squares in Tehran and represented the functions of commerce and government. There were also open spaces just within the gates for the unloading of caravans and storage of bulky merchandise such as straw and wood.

With the 1860 walling the centre of gravity of Tehran moved north, an event symbolised by a new square, the Tupkhaneh, or Cannon-house - Artillery Square as it is best translated. This was built about 1870, between Lalehzar garden and the palace, partly on the site of the old Darvazeh Doulat and ramparts. Following the tradition of the Maydan-i-Shah, Tupkhaneh was surrounded by two-storeyed terraces or arcaded rooms, in brick with plaster ornamentation. But here military interests replaced the commercial. The lower storey was a series of rooms for guns on carriages, and the upper, apartments for artillerymen, with a narrow balcony. (Fig.15)

The arcades were broken by six gates, all decorated with glazed tiles in which the lion and sun design figured prominently. The most beautiful and imposing was the Doulat Gate leading to Diamond street and the palace.

Each gate led to a main street of the new town making the square a traffic node and the junction between the old town and the new. Later it became the main tramway and cab terminus. The gates were guarded and closed at night. The square was partly cobbled, and occupied by a great reservoir, the only water-supply and washing-place for the barracks. Arranged around this were cannons, rather antiquated, on "rotten-looking" ammunition wagons, and pyramids of cannon-balls painted in pastel colours. The square was designed for military purposes although always open to the public. There is no record of a market here.

Changes in the Tupkhaneh appeared later. Brugsch said the south-east corner was used by the Royal Guards and the Telegraph office after 1860, significantly near the Dar-ul-Funun.⁵⁶ Buildings associated with the new Arsenal occupied the west with the post office and customs house to the north-west. By 1886 there was some electric lighting in the square although intermittent. In 1889 the Imperial Bank of Persia took over a rented building on the east, lavishly decorated with tilework and an ornamental plaster facade in the Persian style. The buildings on the Tupkhaneh all had official or semi-official functions closely connected to the monarchy, and especially the army.

Although to Persian eyes the square symbolised modernity, the

travellers viewed it differently. Although Curzon called the gates original and imposing structures, and handsome at a distance, he realised that closer scrutiny showed the Persian view, that they were triumphs of modern architectural skill, to be an illusion.⁵⁷ To Weeks the square typified modern Persian architectural art, "an astonishing medley of cheap and showy faience, of tinted and stuccoed facades of German descent, meretricious, pretentious and grotesque, recalling an oriental background at the Opéra Comique".⁵⁸ Although the centre of the town, Tupkhaneh was rarely used as a gathering ground of any kind, military displays and manoeuvres were performed in the nearby Maydan-i-Mashkh, specially built for this purpose. (Fig.5)

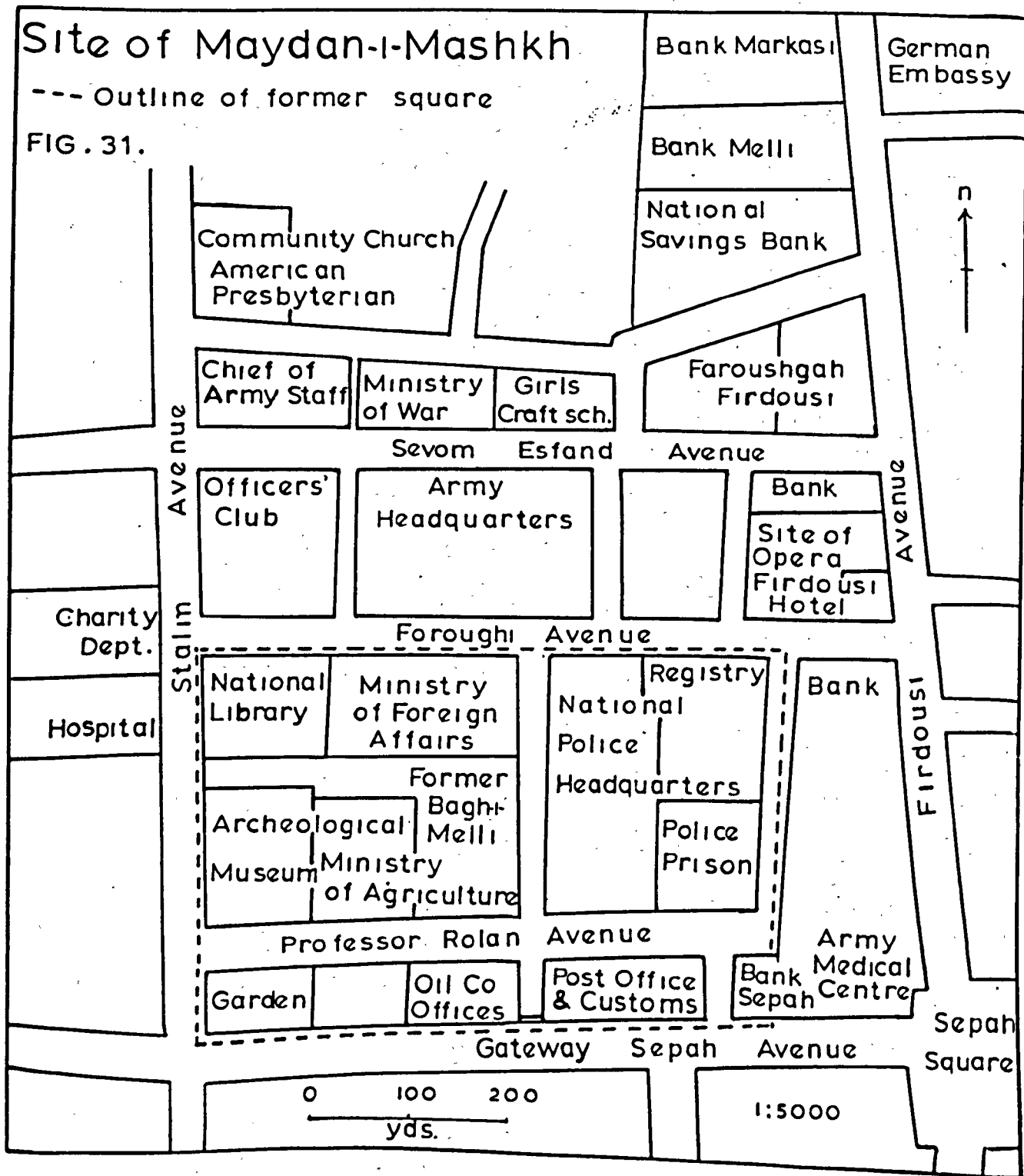
This square was much larger than Tupkhaneh, although created about the same time. It was a vast empty expanse, large enough to be used later as a flying-field, surrounded by barracks, stables and military stores. Here troops were drilled daily, especially the Cossack brigade and polo was played. The Shah often watched these displays from a series of balconies and a pavilion. The enclosure was walled with gates in the usual style leading to Kh.Mashkh and Amin-us-Saltaneh. The gateway on Kh.Sepah is partly original and illustrates the type of decoration used, tiles depicting soldiers, guns and cannon-balls. (Fig.31)

At the present day all four squares can be traced in the townscape

Site of Maydan-i-Mashkh

--- Outline of former square

FIG. 31.



of Tehran. Surprisingly it is the oldest which is least changed. Sabz-i-Maydan at the bazaar entrance is still known by that name and still has a thriving market. The arcades have been replaced by three-storey buildings of the 1930s, the shops have glass windows and the high gates of the bazaar have been replaced by one plain portal. A variety of goods are sold and clothing and hardware stalls compete with vehicles for space. Commerce is its only function. (Fig.22)

Tupkhaneh has been renamed Maydan-i-Sepah, although both names are recognised. The garden has been remodelled and extended, with the inevitable statue of Reza Shah amid pools and fountains. The trees shown on photos from the 1930s, have been removed. The northern side is still in two-storey arcades but these are the premises of the Tehran municipality which have been altered several times since the 1920s when they were built. Part of the Imperial Bank Building remains with an impressive tiled gateway, but the rest of the east side is now built up in multi-storey shops and offices, under 15 years old. Reza Shah built the very impressive P.T.T. building on the south. This was later found unsafe and demolished, its site today being deserted except for a street-market. Replacing it is the new telegraph building in the south-east corner and a rather drab block in the west, which also houses a police station. All the gates disappeared in the 1930s, giving place to wide traffic arteries which converge on the square. These are still the most important streets in Tehran. Any claims to the picturesque

which this square might have had are now completely dispelled by the unevenness of building, its varying age and style, and the chaos of motor traffic within it. (Fig.16)

Drill Square, successively Champ de Mars, polo-pitch, race-course air-field and football ground, provided a very valuable piece of open ground during the building boom of the 1930s. Reza Shah demolished nearly all of the old buildings and created a quarter of government buildings, including some of the best examples of Neo-Achaemenid and Neo-Sasanian architecture. These include the police headquarters, post office, War Ministry and army headquarters all significantly concerned with security as opposed to economic and social affairs, illustrating the priority in Reza Shah's mind. In the west are cultural establishments such as the museum and library but the most sumptuous building is the Officers Club. (Fig.31) Like the Ark, this square has been the means of creating an administrative quarter in the very centre of Tehran, with space for gardens along the buildings. The former Bagh-i-Melli, however, has been enclosed.

As in Isfahan, modern squares have come into being with the new road system. These vary from the elaborate gardens and fountains of Fouzieh, Ferdousi and 24th of Isfand Squares, to the less pretentious roundabouts of Kh.Shoush in the south. Most have statues, usually of Reza Shah, but also of national characters such as Firdousi, and,

more recently, allegorical figures to represent the national rising of 28th Mordad. It is unfortunate that the best and largest of these should be in the north of the town when it is the poorer southern population that has the greater need of open spaces.

The generalisation that a square forms the centre of a Persian town is true for Tehran and Isfahan. Squares have played a great part in the development of both towns. They have been created under and as symbols of royal patronage, as they are public works for the townspeople's as well as the king's convenience. Where they have survived, they have served to focus attention and regulate the modern system of streets and traffic. Where they have been built over, the land has been mostly used to good purposes in the creation of modern public buildings of practical and aesthetic value.

PART 3

PUBLIC BATHS

The public baths, essential features of Persian towns, are partly an element of Islamic culture, which encourages cleanliness. The climate also necessitates this with the dry, hot and dusty summers and the muddiness of the streets during winter rains. Public baths or "hammams" in Persia are, however, more than simply communal washing places. They also have the character of Roman baths as places of social contact, the exchange of views and pleasant conversation. Also

other operations besides washing take place, including massage, shaving, hair-cutting and dyeing and medical treatment. Public baths are used by all sections of the population, not only the lower classes who have no other washing facilities. However, many private palaces had their own baths, including the royal establishments.

The baths were frequented once a week or once a month. A special day was set aside for women, unless there were baths nearby catering solely for them. Numbers of baths vary in direct proportion to population. Travellers have estimated numbers of baths for Tehran and Isfahan, but at best these are only estimates and only indicate the general order of figures. For Isfahan in mid 16th century Don Jan gives a total of 300 baths,⁵⁹ but Chardin, when it was at its peak of prosperity and population, estimated only 273, which seems small for a population of between 750,000 and 1,000,000.⁶⁰ Chardin also gives some examples of the types of bath to be found (Appendix 5). There were those built by rich courtiers for revenue and prestige, which often formed part of groups of public buildings - the usual form of investment, for example Mirza Rezi's complex of bazaar, caravanserai, mosque, bath and coffee-house in Mouchi-al-Mamalek street, and the baths of the Chief Mullah, the Chief Architect and others. In this category also were the royal baths, some acquired by confiscation.⁶¹ One with a special entrance from the palace near the Kitchen Gate, built by Shah Abbas I was used by the royal guards,

eunuchs and ushers but on certain days it was open to the public. Other baths were used by guild groups such as those of the Saffron-dealers and Stone-cutters. Racial minorities had their baths. Jews and Armenians were accustomed to frequenting baths but would not have been tolerated among Muslims. Finally some baths had fanciful names - White, Paradise and Thursday baths.

The first and last classes are the largest in every survey. Chardin names 37 baths in Isfahan, 26 are royal or owned by nobles and 8 miscellaneous. Their distribution is difficult to reconstruct, as the list is not complete and locations not given precisely.

With the fall in population the number of baths in Isfahan decreased, being in 1810 between 80 and 120, on Ouseley's estimate.⁶² with native estimates of 80 and 100. At the same time, however, Tehran had about 50, a ratio of approximately 1:1000 of population as opposed to Isfahan's 1:2000, illustrating the impoverishment of Isfahan against the growing strength of Tehran. By mid-century estimates for Tehran were 100-150. Morel's 300 in 1867 would seem exaggerated.⁶³ The 1858 map does not show baths but on that of 1892 sixteen are marked, presumably the most important (Fig.5) All fall into the two main categories noted for Isfahan. Then are named after benefactors and six miscellaneous. Their distribution is fairly even except for a gap in Oud Lajan, which may represent the

Jewish quarter, and a sparcity in Sangalaj. There are few outside the old town, as most of the residents of the new quarters would have their own facilities, like the Ark quarter. This list of 16 however cannot have been comprehensive (Appendix 5).

Baths have remained similar in form throughout the period under discussion. At their simplest they consist of two large rooms, one for undressing and drying, and the bath itself. Usually, however, there are several rooms with hot and cold baths, steam rooms, places for massage and so on. Often these are a series of low, domed rooms, sometimes below street level, but conspicuous from detailed air photos. Water was heated with charcoal, dung or straw fires, and a constant supply^{was} essential. Baths are often located near the exits of qanats for this reason. The mud brick of the floors and walls was resistant to heat and only grew harder with wear. The predominance, in surveys, of baths founded by the aristocracy is largely a result of their conspicuousness. Guild groups and small minorities did not have the capital to embellish their baths. The larger ones did, however, contribute to the beauty of the town with tilework and marble paving.* The constantly recurring theme of contrast between Tehran and Isfahan appears again here. Isfahan had the most beautiful baths,

* Some of the earliest tilework depicting human and animal figures comes from baths where the ban on reproducing the human form, which restricted the decoration of mosques to abstract forms, was not felt. For this and other reasons baths came to be known as the dwellingplaces of devils.

but by the 19th century they were all in a state of dilapidation. Tehran's baths were never monumental, but always practical, better maintained and grew in numbers with the town.

Today, hammams are still being built in both cities. The bath is often the newest and only brick-built structure of a poor quarter, and usually electricity has been installed for heating and lighting. They can be distinguished by the lines of red cotton towels which hang out to dry on the roof and entrance. These new baths are improvements both structurally and hygienically on the old mud beehive vaults which were cleaned out only once a week and were the source of many diseases. Both old and new still exist in both towns, but the newer types are encouraged by health authorities and popular with Persians in general. They provide a valuable and cheap service and help maintain a social tradition. The public bath is more evident today as a ubiquitous feature than the mosque, palace or even bazaar, and is a Persian urban feature which has survived westernisation, by adaptation.

PART 4

FOREIGN ESTABLISHMENTS

Any large town, especially a national capital, attracts to it people from other countries for purposes of trade, social and cultural contact, and international politics. This contact may have very

little effect on urban morphology, commerce may be carried on through native traders, diplomatic missions may visit a court, be housed there and leave. When, however, the city is rich enough, or a long-standing capital, permanent establishments occupied by or belonging to foreigners become part of the town and aid in its development.

Both Tehran and Isfahan have favoured such colonisation. The choice of Isfahan for capital came when the Safavids had brought strong rule and relative stability to Persia. Its subsequent period of wealth and power coincided with the Elizabethan period, when European powers were extending their influence by trade and exploration. Tehran also became capital after a period of anarchy when the Qajars established themselves and gained control over the whole country. This was during a period of very rapid development, especially in transport and communications, which made it easier for Europeans to reach and live in Middle Eastern countries.

Both towns, then, at different periods have presented conditions suitable for foreign penetration and influence. In this study it is the growth of foreign establishments rather than influence which is considered, although the latter also shows itself indirectly in townscape - in architecture, for instance. "Foreign" here usually means European, not because they have necessarily had the greatest influence, but because European culture is so different from the Persian, or Asian in general,

it is easy to perceive its effect.

The earliest foreign establishments in Isfahan were those of traders and missionaries. Diplomatic missions such as that of Contarini, the Venetian ambassador, in 1474, and the Sherleys in 1599, were temporary. Both the Dutch and British East India Companies had factories in the Isfahan bazaar in the 17th century. These were lavish buildings in the Persian style. The British factory, according to Chardin, had been the palace of the disgraced Yarchi Ba shi, whose property was forfeit to the king.⁶⁴ When the company were offered this site they chose it for its proximity to the main bazaar. The palace was large and spacious, consisting of three buildings, with gardens and pools. However, by mid-17th century, it was falling to ruin as it was not then occupied permanently, but used only as a holiday resort for factors from Gombroon on the Persian Gulf. British representation here was from 1617 to 1722.⁶⁵ *

The Dutch factory was not far to the north near the Madrasedh Safaviyeh, the site being now built over and impossible to locate. Struy's sketch showing both factories is obviously inaccurate.⁶⁶ It was, however, another beautiful building with ample accommodation for

* Lockhart, op.cit. claimed to have found the site of this house and garden at the end of a short alley leading west from the Qaysariyeh Bazaar. He said it was known locally as Timcheh-i-Farangiha, Foreigner's Market. It is, however, not known of today.

residences and warehouses. Chardin speaks of a high gate bearing the company's arms.⁶⁷ Struys⁶⁸ and Careri⁶⁹ join in extolling the beauties of the garden with its fruit trees and fountains. The Dutch factory was established soon after 1623, but Dutch influence soon reached or overtook that of the British in importance.

Struys gives a very varied list of merchants who traded in Isfahan - English, French, Italian and Hollanders, also Indians, Tartars, Turks, Armenians and Georgians.⁷⁰ European merchants remained in Isfahan until the Afghan attack, and some experienced the dreadful siege, but all foreign trading was crushed by the fall of Isfahan and the period of anarchy which followed. Fresh supplies of European goods were rare in the Isfahan bazaar until mid-19th century, when the factory products of Victorian England and Tzarist Russia appeared in large quantities. The inland position of Isfahan was always a disadvantage for foreign trade, entailing a long caravan journey across mountain and desert and Europeans preferred to conduct their business from either Gulf or Caspian ports.

In connection with trade, European craftsmen, watch-makers, goldsmiths, jewellers such as Tavernier and Chardin, visited the Safavid court, but were usually commissioned by the king and lodged at his expense, sharing workshops with royal craftsmen.⁷¹

The religious broadmindedness and tolerance of Shah Abbas I was

illustrated when he allowed European orders to establish themselves in Isfahan and even housed them himself. The Portuguese Augustinians established in 1598, lived in a royal palace near the Masjid-i-Jami'. Their presence annoyed the strict mullas of the Husaynite family who held sway there, but the king, who had done this deliberately, would not allow the monks to leave.⁷² Their palace had many gardens and marble basins, and the apartments were painted and gilded. No doubt the courtyard style of building was well-suited to their needs. In Chardin's day there were only three or four monks and seven or eight servants, so most of the palace was uninhabited, but previously their numbers had been greater.

The Italian Carmelites also had a royal house in the Maydan-i-Amir quarter, established 1608, which had been used for foreign ambassadors; it was old even then and had been much damaged by heavy rain. Its large gardens and good water-supply are described by early residents in their regular reports.⁷³ There was a good hall and chambers, domestic offices, a church being added in 1638. The French Capuchins first had a royal house but later moved to one built by themselves in Kerron.⁷⁴

The first three monastic houses were close to each other³⁵ but away from the only possible object of their missionary enterprise - the Armenians of Julfa. However tolerant the king may have been, he was

unlikely to allow proselysation of Muslims. Effectively, then, they could only work among Jews or Armenians, Being under royal protection, which was necessary for their security, they had to accept the accommodation provided, although the Capuchins took steps towards independence. There were some Armenians in Isfahan, however, and the Jews of Jubareh were accessible.

Later Safavids, influenced by Muhammad Baqir-al-Majlisi and Muhammad Husayn, reversed the policy of religious toleration. Their acts of bigotry included the forced conversion of Jews, the law of apostate's inheritance,* and the expulsion of Armenians from Isfahan. There was now even more reason for the move to Julfa. The Carmelites moved in June 1652.⁷⁵ A period of discord between Christians and Muslims and also between the Roman Catholic and Orthodox Armenians over sectarian differences followed. Missions were recalled and re-established; hospices were set up and abandoned and new orders came on to the scene. The Jesuits were established in Julfa from 1653 and the Dominicans from about 1684.⁷⁶ In 1716 Bell found all five orders represented in Julfa, although numbers were small.⁷⁷ The sites of these establishments are difficult to locate, although the Armenian Catholics still use the Dominican church, built 1697.

European missionaries also witnessed the Afghan conquest, notably Father Krusinski, who left a vivid history of the siege.⁷⁸ Even

* This law allowed a renegade Armenian, on becoming Muslim, to claim his relative's property.

afterwards some missions remained. In 1736 there were still three convents, Augustinian, Carmelite and Capuchin, the latter in Isfahan, the others in Julfa.⁷⁹ In 1746 a Questionnaire of the Sacred Congregation revealed there were three churches in Isfahan, those of the three orders which had convents, and three in Julfa, of the Jesuits, Dominicans and Carmelites.

From the Carmelites' chonicle of their activities in Persia, it is known that the Julfa residence was abandoned in 1757 when it was seized by the Persians for non-payment of a loan.⁸⁰ Conditions had become more and more precarious for foreign missions in this uncertain period. Both their sites were ruined by 1800 and the location of the Isfahan convent cannot be traced. In 1933 a vineyard in Julfa was still known as the garden of the Carmelites, although no buildings remained.⁸¹

The other communities withdrew sometime in the 18th century. Sercey deplored the expulsion of the Capuchins from their church and vineyard in Julfa after doing much to assert the rights of the Armenians.⁸² Gobineau saw the former Jesuit convent⁸³ and Dieulafoy the church with a clocktower, which had belonged to the Dominicans⁸⁴ both in Julfa. Foreign influence in Isfahan was at its lowest ebb in the late 18th century and foreign establishments were practically non-existent, although foreigners continued to live in Julfa.

They reappeared in the 19th century with European trade influence. Isfahan became the "Paradise of Lancashire and Glasgow cottons", and Manchester its universal clothier. European merchants were allowed to have offices in Isfahan, but no Christian could stay there overnight. In 1869 the Church Missionary Society opened a school and hospital for Armenians in a large compound in Julfa. In 1888 a branch of the New Oriental Bank, subsequently Imperial Bank, was set up. Towards the end of the century restrictions on Christians were relaxed and the Consul-General of Russia was residing in Isfahan although his British counterpart remained in Julfa. Other European establishments followed in the move; the C.M.S. bought land in 1899 and built a church in 1904. A college was opened by French mission fathers in the Chahar Bagh.* Later the British Consulate bought a garden in the western suburbs, but subsequently sold it when the consulates were withdrawn in 1952. 7

With the growth of textile and other industries under Reza Shah, foreign influence was felt in the importation of German machinery, managers and technicians. These industries were hampered during the war years by the lack of spare parts from Germany. The schools of the C.M.S. such as the Stuart Memorial College and the Behesht Ayin girls' school, founded in 1910 and 1932 respectively, were taken over in the late 1930s and incorporated into the government education system.

* Since 1950 its site has been occupied by the American Consulate.

Today foreign establishments are numerous and influential in Isfahan. All fields are represented, commercial and industrial firms, religious and social missions, Consulates, the British Council and so on. (Map B)

It is unlikely that any European lived in Tehran before it became capital; few even visited it. Tehran was too small to attract traders or missionaries without the magnet of a court. Diplomatic representation was, however, a concomitant of status rather than size, and the residences of European and other emissaries were the first permanent European establishments.

The first years of the Qajar dynasty saw European powers jockeying for diplomatic influence in Persia, especially Britain and Russia. By 1810 both powers had permanent representatives in Tehran. The British residence was near the New Gate. The land was given by Fath Ali Shah, having originally belonged to Muhammad Khan, Zamburakchi Bashi.⁸⁵ A solid house, in English fashion, but with a flat roof was built here for Sir Gore Ouseley with a wing used for offices, stores and staff quarters,⁸⁶ which included a bath-house and zurkhaneh. The southern wall of the garden was near to the city wall, where, as Eastwick complains,⁸⁷ a sally-port would have obviated the necessity of wading through muddy streets.⁹ Fig. 4)

• After the Treaty of Turkomanchai, 22nd Feb. 1828, Persia lost Erivan and Nakhchivan provinces to the Russians, and paid a large sum to them. Also the Russian minister in Tehran, Gribefeldoff, rescued Georgian women, who were now Russian subjects, from slavery in Persian households. This stirred up hatred and the Russian legation was attacked by a mob on February 12th 1829

This house was universally praised as being the best in Tehran, handsome by comparison, and the district airy and tolerably clean.

The Russians were located elsewhere, but after the 1829 massacre, when their envoy and several other Russians were killed, they moved into the Ark.⁸⁸

European influence was chiefly through military advisors. With General Gardane came officers from Napoleonic France in 1807. In 1809 Sir John Malcolm arrived with several Anglo-Indian officers. British influence ousted the French and another group from India arrived in 1834. These were dismissed in 1836 and the French again renewed their influence. All these were, however, transient, housed in the Ark, and often out of Tehran on manoeuvres or accompanying the Shah.⁸⁹

Foreign establishments have played an important part in the development of Shemiran, first as a summer resort and then as suburbs. The European representatives joined in the summer migration of two-thirds of the population.⁹⁰ In 1833 the British Legation began using the village of Qulhak as a "yeilak" or summer resort, a settlement of about 500 people, 100 houses in 1862.⁹¹ In summer 1835 Muhammad Shah made the village over to Sir John Campbell and all succeeding British Ministers.⁹²*

* The minister was thus made virtual overlord of the village, with the right to exact 30 tomans tax per annum, to nominate the village headman, and was theoretically responsible for the maintenance of law and order.

At first the mission had no special property, tents were used on a large scale in several parts of the village. There were already several villas and gardens belonging to Persians in the village and a three acre garden was rented for the mission in 1860 from the heirs of the Imam Jami' of Tehran. In 1862 this land and several other pieces were given to the British as a gift from Nasir-ud-Din. This grant also included water rights. Eastwick describes a chancery building of mud in the south-west corner of the garden with living quarters still in tents under the fruit trees and poplars. There was a yakhchal contiguous with the north-west and a dry ravine behind, the course of the Dulab stream. Land was added later in the 19th century and early 20th by purchase from Persian landlords and peasant owners. Houses were built for the ambassador and his staff, gradually replacing the tents. The only reduction in the area of the compound was in 1928 when a strip of land was sold to the Tehran Municipality for road-widening. With this money a wall and entrance was built to replace the wooden palisades. The area is now about 44 acres. Building continued in the 20th century but there is still much spare land in trees and gardens. Now only the ambassador moves for the summer. The only non-residential building is the British School in the extreme north (Fig.32) The special rights of the ambassador over the village were surrendered in 1928. Responsibility for order and justice had already been taken over by the Chief of Police for Shemiran.

BRITISH EMBASSY SUMMER QUARTERS GULHAK

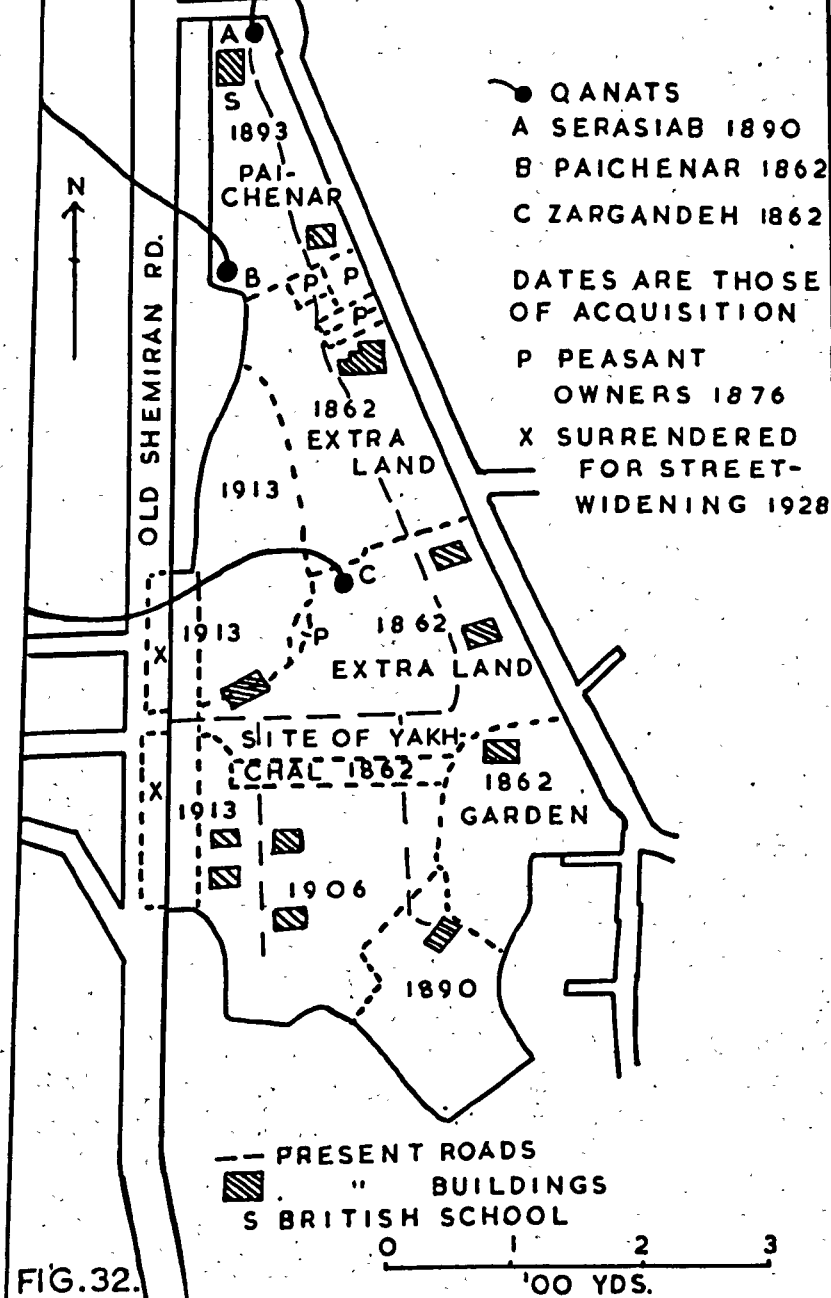


FIG. 32.

The British Summer legation at Qulhak has been discussed in detail as an example of similar foreign establishments in Shemiran. This was perhaps the most elaborate, but similar means of acquisition, styles of living and influence on villagers are found in other cases.

The Russians had similar rights and a similar establishment in the village of Zargandeh, $\frac{1}{2}$ mile from Qulhak. They also built permanent structures. Their rights were surrendered in 1921. The Turks and French, the only other foreign powers to have permanent representation in Tehran before 1870, respectively owned and leased land in Tajrish. Other missions subsequently established had summer quarters of some kind. The Germans were first tenants of the British at Qulhak and then went to Dizashub. The Austrians leased property in Rustamabad. (Fig.25)

Although the conflicting influence of Britain and Russia remained strongest through the 19th century, that of France and Germany was growing and several other European nations had enough interest in Persia to initiate diplomatic exchanges. By 1884 Austria and the U.S.A. also had legations and the Dutch a consulate. By 1900 Italy and Belgium were added to the list.

As new diplomatic missions were set up, new premises were found for those already established. This followed the accession of Nasir-ud-Din and the remodelling of the town. The 1892 map shows

several missions on or near the street variously known as Khiaban Ala-ud-Douleh, Ilkhani, Doulet and Boulevard des Ambassadeurs. The largest was the British Legation, which moved in 1873. This is the present site, a walled enclosure of 11 acres, including large gardens. A fine gateway, bearing Queen Victoria's initials faced on to the Boulevard. Being financed through India, the residency was built by Indian Army engineers, in a style which has been described as "Indian Romanesque" or "Byzantine". The main building occupied three sides of a court, the chancery wing incorporating the famous campanile clock-tower. Many travellers considered this the first and best house in Persia. It was solidly built and well-maintained, incorporating decorative motifs from India - a cupola like an elephant howdah, Persia - stalactite and mirror-work, and Britain - regency panelling. Four other houses were built for secretaries, solid, unpretentious and English. The gardens also excited much admiration. After only 15 years the grounds were thick with shady trees, with winding pathways and runnels of water. Behind the residency was a garden with brimming pools, swans and peacocks. Curzon concludes, "the coolness and seclusion of the entire enclosure is one of the most agreeable and uncommon features of Tehran."⁹³

The Turkish or Ottoman Embassy was also impressive, having a magnificent gate inscribed in gold. The Dutch consulate and German embassy were also on this street with the French and Austrians not far

away. (Fig.5) The U.S. legation is not marked on the map, but was on the Boulevard near the German Embassy, according to Binder a building of truly republican simplicity.⁹⁴ Later the building now occupied by the Tehran Club was rented by the Americans. The Russians had now moved from the Ark to re-occupy the house in the old city, on the south of Gaslight street. Later the Italians and Belgians joined the Boulevard group.

The congregation of legations and residences of rich Persians in this district led to its dubbing "Belgravia" and even "European Quarter" although the number of Europeans in Tehran at this time cannot have exceeded 500.⁹⁵ Other establishments run by Europeans followed. The first European hotel was Prevot's run by a French-German, formerly the Shah's chef, often mentioned by travellers but rarely praised. It was situated south of the legations on the Boulevard des Ambassadeurs. In 1883 a competitor - the British-run Albert Hotel, was established nearby.⁹⁶ The Indo-European telegraph also had their offices in the south of the Boulevard, with the Tehran Club to the north.* By the turn of the century European and Armenian restaurants had been attracted to the European Quarter as well as excellent shops owned by Dutch and French traders.

* The Tehran Club was dominated by the English, and for a long time no Persians were allowed to be members or even guests. The club has now taken over new premises, those formerly occupied by the American legation.

From mid-century European goods had begun to appear in the bazaars in large quantities, especially Russian, German and British, with which the best bazaars were piled high to the apparent exclusion of Persian goods. Manchester goods, cheap prints, German cutlery and Birmingham ware were everywhere in evidence.⁹⁷ Even in 1875 the only European firm actually represented was Zeilger & Co., foreign firms were not greatly in evidence.

Missionary enterprise was however active. The American Presbyterians extended their mission from Urumiyah to Tehran in 1872. A school for Armenians near the Qazvin gate was opened in 1873, and a church, built 1894, school and residences in a three acre compound west of Boulevard des Ambassadeurs. By 1913 there were over 600 children in the schools with boy and girl boarders, and attempts were being made to found a college.⁹⁸ In 1875 the Soeurs de St. Vincent de Paul founded an orphanage and girls' school, to which Europeans, Armenians and some Muslim girls went for study and housecraft. There was also a hospital. These sisters were sometimes received by the royal ladies and afforded them their only contact with Europeans.⁹⁹

Thus nearly all the late 19th century European establishments were concentrated in a distinct quarter.* This attracted Persians who

* Also, the Imperial Bank had premises on the Boulevard and a large rented building on Tupkhaneh square, often praised by travellers for its architecture and tilework. This bank became the New Oriental Bank in 1890.

aspired to western ideas of progress, led by the king, and paved the way for the formation of Tehran's modern commercial centre. Another educational establishment on European lines was the Dar-ul-Funun where French and German instructors were employed.¹⁰⁰

After 1850, in quick succession, parties of British Austrian, Hungarian, Italian and French military advisors came and went. Uniforms of the 1880s and 90s followed the styles of Austria and the Cossacks. At the same time a police force of about 300 men was formed under an Italian, Count Montiforte. They had distinctive uniforms and manned guard-houses throughout the city. The Gendarmerie, with Swedish officers, was formed about 1920.

The tram-service was another foreign-run venture, financed first by a Russian Jew and later sold to a Belgian syndicate. Stuart believed it to be really owned by the Russian government.¹⁰¹ The influence of Russia over railway concessions is discussed by Curzon and Stuart.¹⁰² A sugar factory founded by Belgians was however by 1903 abandoned and useless.¹⁰³ The gasworks for street lighting were established by the French.

All types of European establishments grew in size, number and influence in the 20th century. A foreign business quarter grew up around Tupkhaneh Square and along Lalehzar and Boulevard des Ambassadeurs. Briceux mentions several banks, two large pharmacies, French and German,

a Belgian Press and a French bookshop in Lalehzar alone.¹⁰⁴ With increasing industrialization and westernisation the variety and scope of foreign goods increased. Foreign influence is also shown in the form and lay-out of the shops from the introduction of plate-glass to the opening of the first department store.

Educational establishments, usually attached to religious missions prospered. The American Elburz college was opened in the 1920s, then outside the gates in a campus of 60 acres, with over 1,000 students. This was a very strong educational force in Persia. The Roman Catholics and Anglicans also had schools which were nationalised under Reza Shah. These were for long the only true educational establishments in Persia and have greatly influenced Persians who attended them. The Presbyterians also had a hospital in Tehran, now closed down. A dispensary attached to the Jeanne d'Arc school still gives free treatment to the poor.

Diplomatic missions, however, remain the most important foreign establishments in the townscape of Tehran. The 20th century has reinforced the Boulevard group, with a swing west away from the Lalehzar/Sa'adi commercial area, and the growth of a new embassy area along Takhte-Jamshid. In 1922 Fortescue's list includes several newcomers, the legations of Spain and Afghanistan, and the consulates of Norway and Sweden.¹⁰⁵ Russia moved into a wooded park to the

north of the British after 1917. The walled compound is still mainly a pinewood, but the buildings are in heavy Russian style. France and Italy are now neighbours on Avenue France. The French owned this land in 1890 and moved in 1895. Avenue France has also been popular with smaller nations such as Sweden and the Vatican. Turkey and Germany remain on Avenue Firdousi (ex-Ambassadeurs) with rebuilt and modern premises. In the 1920s the Americans acquired and built in a large park just north of Takht-e-Jamshid. (Map A) The size of the embassy is closely related to the influence and interest of the country in Iran. Large embassies attract smaller. Some incorporate the residence of the chief representative and sometimes those of some or all of his staff.

The British Embassy has remained in its 100 year old site, now occupying valuable land in the heart of the modern centre. Buildings were added sporadically in the 1920s and 30s but the embassy retained its walls and the monumental gateway on Firdousi Avenue. In 1963 this was removed and the wall on that side replaced by railings. Internal rebuilding and renovation is proceeding on a large scale, showing that the enclave will remain and the land will continue to be removed from the urban land-market.*

* Even as late as 1950 the British Embassy was selling at large drinking water from its own qanat, which was considered to be of very good quality. It was then in competition with the Bank-i-Melli which also sold water from its own sources.

The proximity of large embassies has affected local shopping patterns. The Firdousi curio shops are an example of this. Those of Takhte-Jamshid are known to be more expensive in relation to the American market.

Whereas western influence is visible in all the larger cities of Iran, foreign establishments are really important only in Tehran. Distinct quarters of embassies are a feature of all capitals like London's Belgravia, Washington's Mass. Avenue, and are even planned in some cases as in New Delhi and Brasilia. The tendency to large compounds, small neighbourhoods in themselves, is found everywhere where the native culture differs greatly from that of the establishing power. They are not found in Rio de Janeiro or Washington except among Oriental powers, but western nations build them in Tehran, New Delhi and Tokyo. Whether this insularity is good is debatable, but it appears to be a natural tendency. Embassies are also usually found in richer neighbourhoods. The rich seek prestige in intercourse with foreigners and vice versa. Smaller embassies attach themselves to larger for similar reasons. The expediency of concentration in a compound, and as effective a degree of self-sufficiency as possible is well-illustrated in the troubled conditions of the Middle East. On the other hand the larger the embassy the more obvious a target it becomes. High walls may be effective protection, but they also engender resentment that aliens should so effectively take

over large slices of their territory, especially, as in the case of the British and Russian embassies in Tehran, when the land has become valuable to the development of the town.

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CHAPTER 8

POPULATION

The study of population growth in any town is beset with many problems. When a town in Iran is considered these problems are greatly aggravated. No scientific census of Iran was taken until 1956 and before that only spot surveys of certain towns had been made in the 1930s. There are other sources which, however imperfect, can be used to throw light on the growth of population in Persian cities. These are estimates of population made by travellers. However, at very best these are reasoned but approximate ideas, and usually guesses of a very subjective nature. They are based on the travellers own experience of Eastern towns which in some cases was large and in others almost nonexistent. The definition of a town and even of an inhabitant varied from individual to individual, making any comparison dangerous. The better estimates are those based on number of houses and numbers per quarter, which are more easily discernible, but here again are problems. At certain times many houses stood empty and it was difficult to distinguish these from the inhabited ones. Family size, or number of persons per house, known to vary widely in time and space also had to be estimated. With all these reservations in mind it is possible to trace the growth of population in Tehran and Isfahan, realising always the tenuity and unreliability of the material.

Although Isfahan existed in Sasanian times and Tehran during the period of Rey's ascendancy, no estimates of population appeared until Europeans began visiting the cities. Tehran was probably a village with a fairly stable population of a few hundred people similar to many others on the Iranian plateau until interest was shown in it by the early Safavids. Herbert, in the 1620s, saw 3000 houses here which could mean up to 30,000 people,¹ but even when it became capital the population cannot have been more.

Isfahan, however, had long been a fully-fledged town, a regional capital, garrison town, centre of industry and trade. Its population probably fluctuated with the visits of the army and court either of a prince-governor or king, and with the varying tides of war. Timur is said to have massacred 70,000 here as a reprisal for rebellion in the 14th century. This figure is no doubt exaggerated, but gives some idea of the order of population then. Recovery was quick, and, when Barbaro visited it in the 1470s he gave an estimate of 50,000 inhabitants.² Thus at its most prosperous before the Safavid era, Isfahan had under 100,000 population.

As Safavid capital under Shah Abbas I, Isfahan grew in size, population, wealth and prestige. Europeans visited it and formed impressions of its magnificence which gave rise to surprisingly high estimates of population. Don Juan quoted 80,000 householders and

360,000 souls about 1600.³ Herbert found Isfahan "populous for inhabitants" with 70,000 houses and 200,000 people.⁴ Tavernier, while giving no figure, realised that although the area of land covered with buildings was the same as at Paris, the latter had ten times as many inhabitants because in Isfahan every family had its own house and every house its garden.⁵ This was a source of error to travellers used to the crowded post-medieval towns of Europe. Whereas Herbert's estimates gives an average of 3 persons per house and Don Juan's 4, which seem low unless all buildings are included, Olearius' figures of 18,000 houses and 500,000 people give the excessive figure of 30 per house. Population was, however, rising rapidly at this time.⁶ Chardin gives two estimates for mid-17th century, 1,100,000 and 600,000, which are perhaps the extremes with the true figure somewhere between.⁷ The number of buildings was 29,469 inside the walls and 8,780 outside, a total of 38,249, which, if a middle figure of 850,000 is taken, gives 22 per building, again rather high. This suggests that nearer half a million is more realistic. However it must be taken into account that households were large then, with many servants and large harems. Such was the importance of the town-country link then that estimates of population might have included the tributary villages of Isfahan, whose numbers were in the hundreds. Dependent on them for food and raw material supplies, and for labour, towns were apt to set their

boundaries wide, to include what would today be called "hinterlands". Thus the cluster of population in the Isfahan area may well have exceeded a million. A 17th century Jesuit writer also mentions the element of foreign traders in the population, many in permanent or semi-permanent residence which considerably augmented his estimate of 400,000.⁸

Chardin compares Isfahan to the great cities of Europe, "je crois Isfahan autant peuplé que Londres qui est la ville la plus peuplée de l'Europe." Thus Isfahan may have been the largest city in the world in the mid-17th century despite its location in a desert and in a country harassed by periodic wars, invasions and massacres.*

The most dramatic feature in the population history of Isfahan is the drastic drop in numbers between 1700 and 1800. Olivier⁹ in 1796 quotes 50,000, Jaubert¹⁰ and Dupré¹¹ 100,000, Ouseley¹² and Kinneir¹³ 200,000, a drop to about one tenth of the former total. Many regarded this as being due entirely to the Afghan invasion. No doubt many thousands were killed and died of starvation during the siege of 1722, but Isfahan had survived and recovered quickly from

* Evidence of the comparative size of cities can be obtained from the prominence given them on maps. The Hotz collection of maps of Persia and the Middle East, to be found in the Royal Geographical Society's map library, includes several from the 16th and 17th centuries. One by Sr. Sanson d'Abbeville, entitled "Empire du Sophy des Perses", shows "Hispanhan" as the largest city in Persia, approached only by Baghdad in size. Maps of about 1700 by French and Dutch cartographers which are of very high standard for the period, show the whole of the Middle East of which the leading towns were Cairo, Jerusalem, Constantinople and Isfahan, the two latter usually marked as equal in size and slightly larger than the other two.

such disasters before. The calamity from which Isfahan could not recover was the removal of a large and flourishing court, the disruption of trade by civil war and the stifling of industry which the first two factors brought about. The removal of the court function was, however, not immediate or complete. The Afghan rulers took over Isfahan as their capital, but they lacked the sophisticated Safavid tradition of patronage, and the troubled times did not encourage rebuilding. The later Zands saw the strategic position of Isfahan and used it as their advance capital against the Qajars in the 1780s. But these were only temporary checks in the loss of function. Large numbers of people were involved in the presence of the court.¹⁴ The royal household was perhaps 6,000 persons, and the royal workshops employed some 5,000 men besides the host of aristocratic families and office-seekers and thousands more artisans and merchants operating under their patronage. It was not only the Afghan attack which affected Isfahan, but also the wars of Nadir Shah, the internecine struggles of the Zands and their final combat with the Qajars, and their effect on Isfahan's population worked not directly through massacre and starvation, but through a withdrawal of function, administrative, commercial and industrial. If the institutions and organisation had survived, rural reservoirs could have been drawn on to man them, but once they were destroyed population dwindled.

In the 19th century Isfahan's population remained fairly stable

as the city stagnated, with revivals from time to time under energetic governors like Hajji Muhammad Husayn Khan: His governorship may explain the rise in estimates from 100,000 in 1800 to 200,000 in 1810. This governor gave Morier his figure of 400,000.¹⁵ The re-growth can thus partly be ascribed to a comparatively peaceful period once the Qajars were established. Morier's figure would, however, seem excessive considering circumstances and the consistently lower estimates of later travellers, when the period of security had lasted several decades. Whereas there is some agreement over the figure of 200,000 for the 1820s, around 1840 Boie¹⁶ and Dubeux¹⁷ estimate only 60,000 and Flandin¹⁸ 100,000. There seems no reason for a diminution even though the minor boom of earlier in the century was over. (Appendix 6).

Morel's map of 1840 shows inhabited houses of Isfahan by quarters (Fig.33). There are 8,370 inhabited houses which would give a population from 42,000 were 5 per house taken as average, or 83,700 if 10 were average, as Morel suggests. These figures are again fallible, but this is the first survey considering distribution, compiled by serious workers who spent many months studying the city in co-operation with local men and so has more validity than other estimates. It supports the figure of 100,000 for mid-19th century given by several authors. In the second half of the century a lower group of estimates, 50, 60 and 70,000 and an upper group of about

Quarters

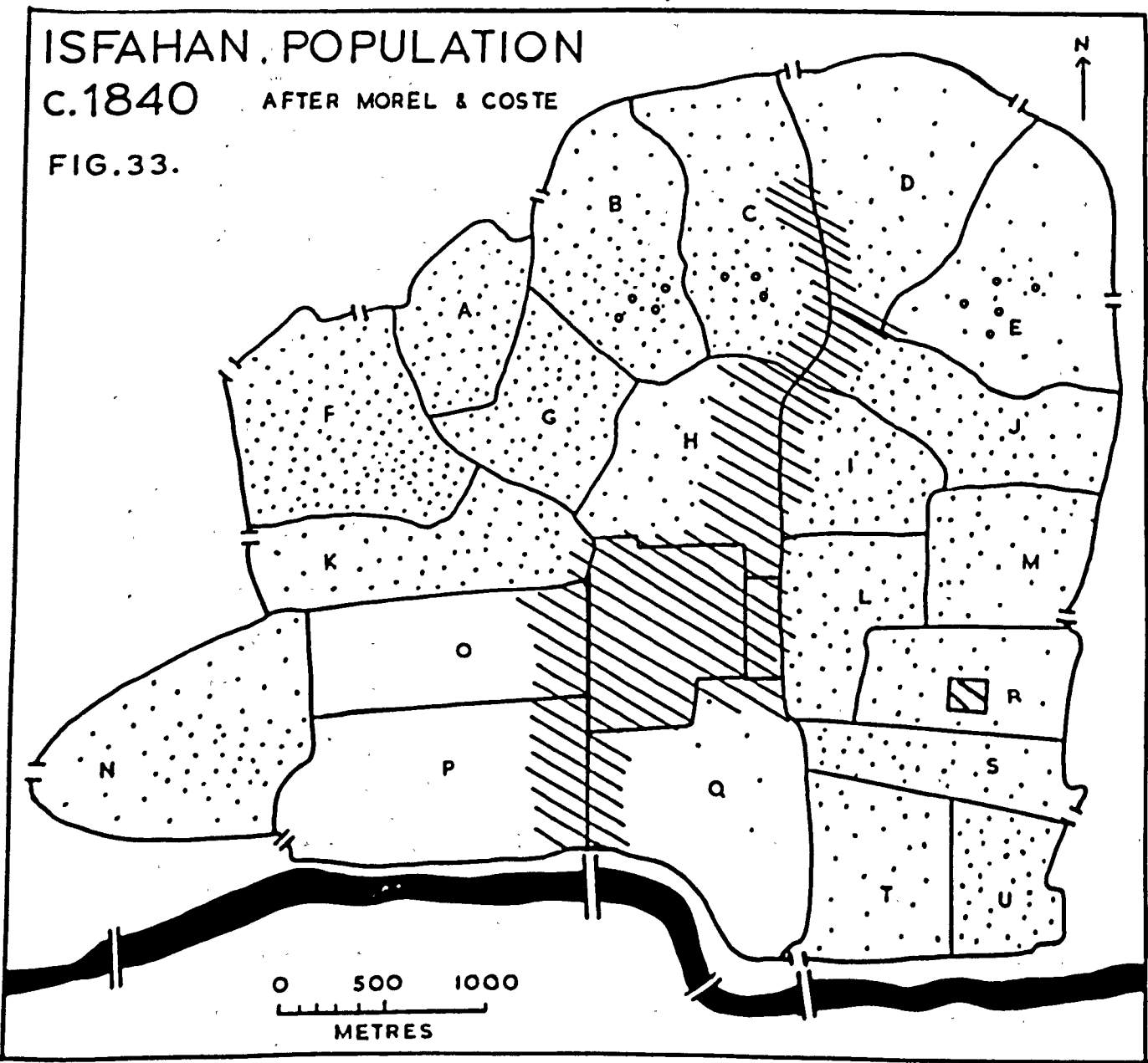
A.	Dervazeh-i-No	Names after Coste
B.	Der Decht	10 inhabited Muslim houses
C.	Hussein-abad	shown by one dot.
D.	Gaoudi-Maksoud-Beg	10 inhabited Jewish houses
E.	Djoubareh	shown by one open circle.
F.	Bid-abad	Non-residential land-use
G.	Derkouchk	ruled.
H.	Nimaver	
I.	Meidan-i-Kohneh	
J.	Meidan-i-Mil	
K.	Mahalleh-i-No	
L.	Mahalleh-i-Baghat	
M.	Kiarroun	
N.	Loumban	
O.	Chems-abad	
P.	Abbas-abad	
Q.	Tcherkh-Ab	
R.	Pa-kalaa	
S.	Talvaskoun	
T.	Khadjou	
U.	Djamala-koula	

ISFAHAN, POPULATION

C.1840

AFTER MOREL & COSTE

FIG.33.



200,000 are given. Curzon realised this disparity and said that whereas a Persian in the 1890s would probably cite the higher number, competent authorities reduced this to 70 to 80,000.¹⁹ If the higher estimates are ruled out as exaggerated or referring to an area wider than the city itself, a slow but steady rise can be seen from mid-century during the governorship of Zill-us-Sultan with Isfahan's revival as a commercial and military centre.

The confusion of 19th century estimates is due to the nature of the city at that time. Wide expanses of ruins led many to believe that areas were inhabited when they were not. Travellers saw crowds in the bazaar, not realising that the rest of the city was empty. Estimates were even more arbitrary because the ruined walls were inconspicuous and the town, therefore, difficult to define. Hence it is supposed that errors were largely in exaggeration and the lower figures are taken as more realistic.

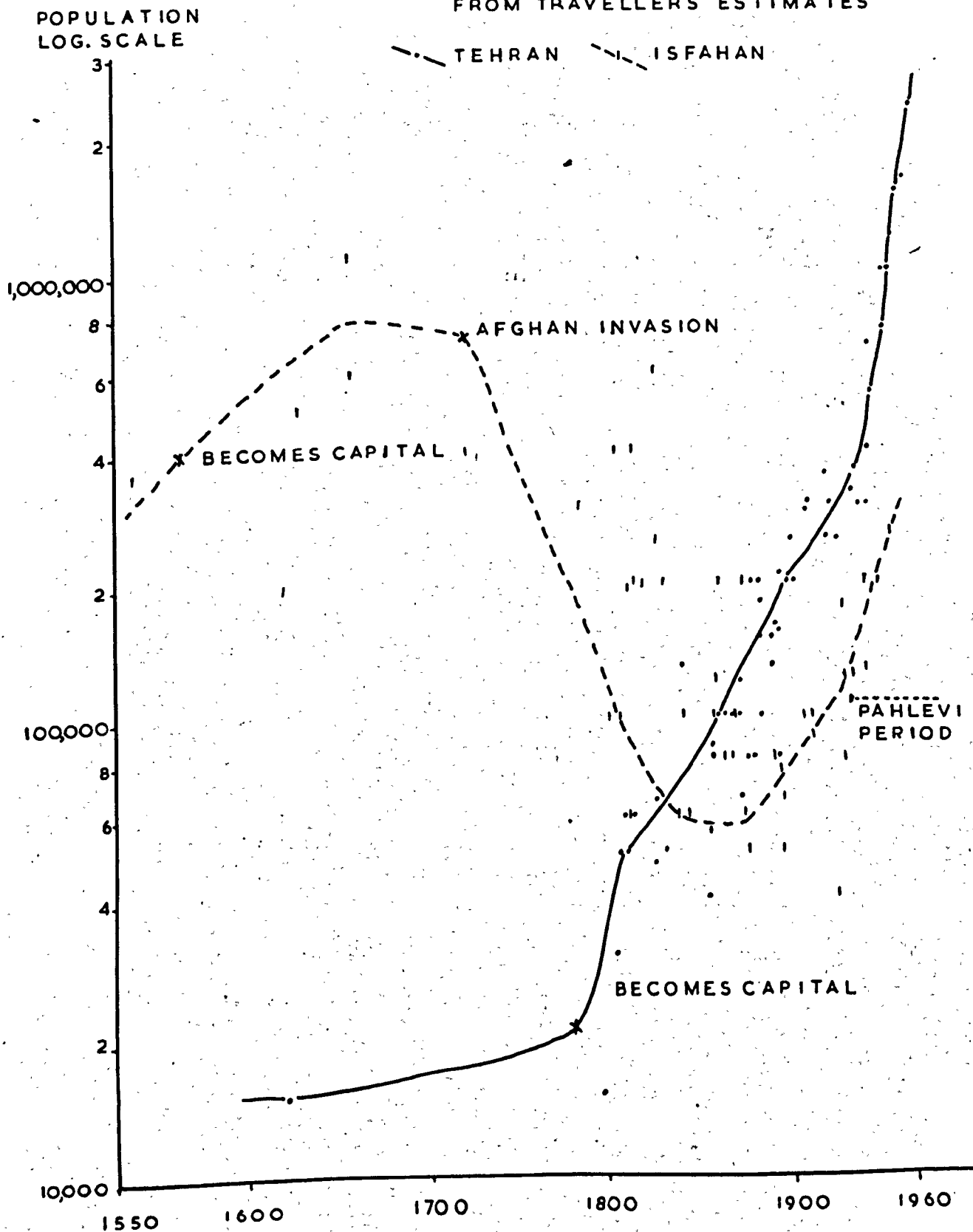
The considerable range in estimates continued into the 20th century, but a general increase to the agreed figure of 100,000 for 1900 is perceivable. Certain travellers give surprisingly low figures even for the 1920s, such as Nevill's 40,000.²⁰ But by 1930 120,000 is quoted by Godard²¹ a fairly reliable figure from a man working in a Persian government department and with a wide knowledge of the city.

The first real census was held in December 1940. In a radius of 6 kms. from the centre of Isfahan, including Julfa and some small villages, there were 204,598 people. This shows accelerated growth from industrialisation. The 1956 census covered the census district of Isfahan city. The total was then 254,708 persons. Further growth is obvious although even if 50,000 over 16 years were correct, it is a small increase compared to that of Tehran at that time. The Isfahan Master Plan quotes for "the city of Isfahan" in 1961 a population of 273,000,²² a growth of 20,000 in 5 years. A figure of 3.3% growth per annum by natural increase plus immigration is also quoted which projects to nearly 650,000 by 1985. Thus it will have taken almost 300 years to regain the population of Isfahan's golden age. However, this will not happen for the same reasons. Only the influence of a powerful court such as that of Shah Abbas I could have raised Isfahan to its early pre-eminence in population. The removal of this feature brought about a more dramatic and long-lasting ruin than physical devastation. This alone does not kill a town, many have risen again from ruins and ashes, but when its *raison d'etre* is removed a town can at best survive at a lower level of existence and with a drastically-reduced population. Only its situation in a rich oasis on a perennial river saved Isfahan from the fate of Istakhr and Sultaniyeh. (Fig.34)

TEHRAN AND ISFAHAN-POPULATION

FIG.34.

FROM TRAVELLERS' ESTIMATES



The functions which Isfahan lost were transferred to Tehran. Being a much smaller town with no tradition of centrality, of commerce or industry, it took some time for this to affect population. Also the town was less suitable in site and situation than Isfahan had been. Olivier saw these difficulties,²³ saying that despite the efforts of Agha Muhammad to populate his new capital, and help given to merchants and craftsmen coming to establish themselves there, the population was scarcely 15,000, including the royal household and bodyguard of 3,000. He was confident, however, that population would grow attracted by the court, through merchants, manufacturers and 'foreigners'. Jaubert, estimating 30,000 population, agrees enthusiastically that Tehran "acquerra par la residence du souverain un surcroit de population et de richesse qui la rendra digne d'être la capitale d'un des plus vastes états de l'Asie."²⁴ Other estimates for 1810 range from 40 to 60,000 showing an increase from the 1780s of 500%. This illustrates the power of attraction which a town is endowed with on becoming a capital, a period which cannot be traced for Isfahan owing to lack of material. However, many writers add to their estimates the proviso "when the king is resident" and Kinneir admits that it would be impossible to state population with accuracy as it varied from time to time.²⁵

The heat and unhealthiness of Tehran, and the natural instinct of the Qajars, descended from Turkoman nomads, to migrate to higher

summer quarters, led to the summer exodus of all but the poor and essential workers. No one knows if one would have occurred without the other. Shah Abbas usually left Isfahan for his Caspian resorts in summer, but only the court followed him. The migration was brought about by a combination of physical and cultural factors, and was on a very large scale. In June, July and August, Tehran's population was about 10,000, only one sixth of that in winter. Population was highest at No Ruz, the New Year holiday in March, when many flocked to Tehran for family gatherings and traditional festivities. When the king departed for Sultaniyeh and Oujan in May, many Tehranis migrated to Shemiran, some 7 miles north, and spent the summer encamped in gardens attached to the many villages.²⁶ As only the well-to-do could afford to rent land the small number left behind illustrates how great a proportion of the population belonged to this class or were attached to it. Many were tribal chiefs who rejoined their people in summer quarters. Dubeux, however, recalls that even the poor, whenever possible, sent their women and children to nearby villages for the last two months of summer and the first of autumn.²⁷ The town therefore looked very different in winter and summer. As Sercey remarked, "on ne doit pas oublier que les villes de Perse sont des camps de boue habités par un peuple nomade."²⁸

After early rapid growth the rate of population increase began to level out. Growth continued largely by immigration rather than

natural increase, as Tehran was very unhealthy. Houses were crowded together, water was scarce and impure, fevers and intestinal diseases very common and often fatal. When Gobineau visited Tehran in 1855 cholera had been raging for seven or eight years.²⁹

In mid-century, Tehran's population reached 100,000, equalling estimates for Isfahan and overtaking all other Persian cities except perhaps Tabriz and Meshed. Half the population continued to emigrate in summer. The progressive reign of Nasir-ud-Din brought about an increase in the rate of growth again. Basset's estimates of 120,000 for 1872 and 200,000 for 1884 are reliable as based on thorough knowledge and long residence.³⁰ The former followed the cholera epidemic and famine of 1871-2 which had flooded the capital with thousands of refugees hoping for relief from the king. Aid was first forthcoming from European sources and finally from the authorities, and public works such as road-building and moat-digging were undertaken, leading in many cases to permanent settlement.

Many estimates for the 1880s, however, fall below Basset's being nearer 150,000 or even lower such as Lefevre-Pontalis' 80,000 in 1892.³¹ Mme. Serena voices the difficulties and uncertainties of estimating population in a country where there was "ni état civil, ni cadastre, ni recensement, et la sex ^efeminin ^eéchappe à tout controle."³² Curzon again gives two estimates, old inhabitants, he says would quote no more

than 175,000, but from reckoning births and deaths and the amount of food brought into the city, population was 200-220,000.³³ A century of being capital, consisting of an early period of rapid growth, 1790-1820 and one of more steady growth following with some acceleration after 1860, had increased Tehran's population fifteen times.

The 20th century continued this trend. Stahl quotes 250,000 for Tehran in 1900, with surrounding villages adding 100,000.³⁴ (Appendix 6)

"Censuses" of a kind were being taken by 1917, but were probably little better than the estimates. Forrescue quotes one for 1919 of 250,000 which, he said, showed a startling decrease from the year before due to famine and influenza and typhus epidemics.³⁵ Figures were issued by the Municipality after 1921 and these were usually quoted by travellers. No further figures are, however, available for numbers migrating to Shemiran. In the 1920s this was still continued, but with the improvement of living conditions in the 1930s it became less universal. Dangers of epidemic were not lessened until the early 1950s when a piped water supply replaced the "joub". Permanent residence in Shemiran was made possible by motor transport and heating and Shemiran, from a summer resort, became a middle and upper class suburb.

Official figures actually go back to 1883 when 106,482 was quoted. A survey in 1891 gave a result of 160,000 but these were admittedly

"unscientific". The first serious census was that of the newly-created Municipality in 1922. This was repeated in 1932, 1941 and 1950. In the national census of 1956, Tehran had a population of 1,512,083. An estimate for autumn 1959 from rates of growth was 1,706,000. By 1964 it was said to have reached 2 million and thus will probably outstrip Prof. Naraghi's estimate for 1971 of 2,350,000.³⁶

From the confusion of figures issued since 1920 one main trend is very clear - that of a tremendously accelerated rate of increase. Population doubled from 1922 to 1939, again by 1940 and again by 1960. The present growth rate is around 125,000 per annum, that is 8.5%. This equals the percentage increase of the period 1932-40 and between the two was a period of slightly reduced rates due to war, difficult economic conditions and consequently less immigration. Birth and death rates and immigration figures are, however, difficult to reconcile with rates of increase calculated from censuses. (Fig. 34) Overall trends shown on the graphs are probably correct, although almost all the figures are open to attack. These curves would follow those of economic growth and decay, could these be plotted, high points indicating times of growth, usually during the presence of a court, and a drop in population, the removal of this function. In greater detail times of strong rule and peace have encouraged growth, while political and economic insecurity discourages it. Superimposed on this fluctuating trend there is in both cities, but especially Tehran,

the post-1920 world-wide growth of cities, the urban revolution brought about by new methods of transport, communications and building. That this has been accompanied in Iran by an industrial revolution and the introduction of modern medicine and hygiene has enhanced the effect on population growth. Checks on population of the type which occurred in the 18th and 19th century no longer have effect. Even the removal of the function of capital would not now have the disastrous effect on Tehran as it did on Isfahan in the 18th century. Large towns now have other functions and power is not vested solely in a court but spread among politicians and speculators. The town is no longer a parasite living by drawing on an empire, it has become the scene of economic activity and an important basis of the economy.

When examining the composition of population in a Persian city, the most obvious divisions, and those which have the greatest effect on townscape are not those of class, but of race and religion. Maps of Tehran and Chardin's account of Isfahan shows that the houses of nobles were scattered, the only area resembling an aristocratic quarter being Safavid Abbasabad and the Tehran "European quarter", which also contained "peasant houses". This scattering may derive from the settling of tribal chieftains with their entourage of followers

around them, and would be encouraged in Tehran under the Qajars, a strongly tribal dynasty. In time this distinction would disappear but still many townspeople claimed to work for or be under the patronage of some lord.³⁷ Names of streets and quarters identical with those of Turkish tribes are found on the 1892 Tehran map. Also a group of houses for hostages from Turkmenistan near the Shemiran gate was noticed by several writers.³⁸ (Fig.35)

Quarters for Persians from other cities or districts are also found, with their own mosques, baths and takiyehs. These were often groups of merchants (cf. Isfahan). All these groups, however, were bound together by common religion, except for Sunnite tribes such as the Kurds. More fundamental asppulation groups were the religious minorities of Jews, Zorastrians and Armenian Christians.

Religious toleration has always been a feature of the Persians. People of different faiths have been allowed and even^{er} encouraged to X live among them and appreciated for their special qualities. Of the twin-towns which constituted Isfahan in early Islamic times, one was Yahudiyeh, the Jew town, which according to Benjamin of Tuleda in mid-12th century contained 15,000 Jews.³⁹ Traditionally these descended from a Jewish colony transported and settled here by Nebuchadnezzar. Certainly Jews have been established in the Isfahan area for centuries, but their origins are uncertain.* Yahudiyeh,

* A shrine to the south of Isfahan, Esterkhatun, is associated with the Jewish Queen Esther. Graves in the cemetery surrounding this place have stones with inscriptions in Hebrew dating back 1,000 years, indicating the even greater age of the shrine itself.

KEY TO FIG. 35 REFERENCES TO POPULATION GROUPS, TEHRAN 1892

Armenian +

1. Armenian houses
2. Street of Armenians
3. Armenian peasant houses
4. Houses of Armenians and foreigners
5. Armenian school
6. Armenian church
7. Little caravanserai of the Armenians
8. Land of Yahya Khan, the Armenian
9. Land of Michael, the Armenian.

European and Turkish o

1. Indian and British Embassy
2. Russian Embassy
3. Land of Ruski Sahab
4. (House of) Ruski Sahab
5. Houses of chief Russian Merchant
6. Ottoman Embassy
7. French Embassy
8. Land of the French Embassy Secretary
9. German Embassy
10. Austrian Embassy
11. Dutch consulate.

Arab ■

1. Arab district
2. Street of Arabs
3. Arab Takiyeh

Zoroastrian ■

1. Zoroastrian caravanserai
2. " school

Jewish ●

1. Jewish quarter
2. Street of Jews
3. Jewish Cemetery

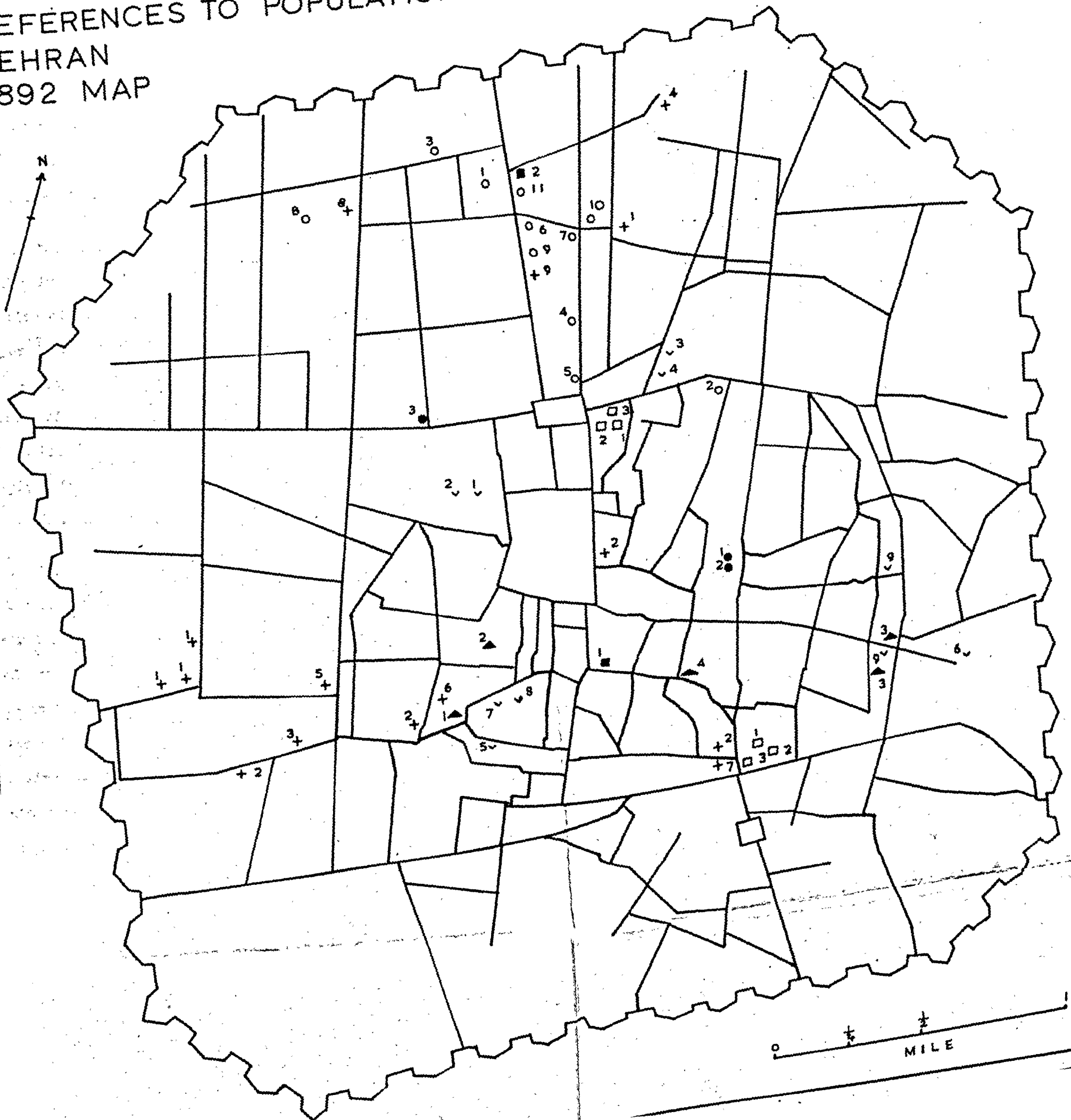
Locality (Persian) ▲

1. Takiyeh of the Qummis
2. Takiyeh of the Kermanis
3. Street of the Natanzis
4. Caravanserai of the Yazdis.

Tribal ▼

1. Street of Afshars
2. Takiyeh of the Afshars
3. Street of Berbers
4. Takiyeh of the Berbers
5. Street of Kurdish children
6. Ruined Kurdish fortress
7. Khalaji district
8. Takiyeh of the Khalajis
9. Street of Qaraqanis

REFERENCES TO POPULATION GROUPS
TEHRAN
1892 MAP



however was not solely Jewish, a Masjid-i-Jami' existed here, ancestor of the present one. Jubareh, a derivative of Yahudiyeh, was in the 17th century one of the primary divisions of the town and quoted as one of the original villages from which the town grew.

Under the tolerant Shah Abbas I, the Jewish community flourished, especially in trade. Later Safavid monarchs, however, initiated persecution of non-Muslims, including the Jews. Des Landes,⁴⁰ Bell⁴¹ and Fryer⁴² all mention considerable numbers of Jews. They were merchants, especially druggists, and "mechanics" and lived apart although their shops were mixed. Thevenot⁴³ and Chardin⁴⁴ however, said that the Jews were few in numbers, wretched and poverty-stricken. All imply a distinct Jewish quarter, part of Jubareh, where two or three small synagogues were situated. No hint of actual numbers was given.

The continuity of Jewish settlement in north-east Isfahan is illustrated in Morel's map of 1840 (Fig.33) 120 Jewish houses are marked, giving, in his ratio of 10 per house a population of 1,200. Gordon in 1833, however, found only 300 Jews.⁴⁵ The quarter remained squalid and miserable; "cet ensemble de ruelles infectes, où grouillent un millier de malheureux", as it was described by Nijeholt.⁴⁶ The streets were even narrower than the rest of the city, twisting, turning, crossing each other to form the most complicated of networks.

The houses were usually one-roomed hovels of mud without furniture or windows. There were still two or three synagogues and a Jewish school. Curzon, considering the Persian Jews as a whole found them poor, ignorant and persecuted.⁴⁷ There were about 3,700 in Isfahan living by hawking, begging, trade in arak, wine and opium and other professions, not considered respectable. Although in Isfahan they had higher status than in Shiraz and Meshed for instance, certain restrictions in dress, trade, inheritance and movement were imposed on them, others being added after the outburst of anti-Jewish fanaticism instigated by Shaykh Agha Najafi in 1889. On the positive side, schools for Jews had been founded by a Christian Jew and the Alliance Universelle des Juifs. The Jewish community was one of the few possible fields for Christian missionary endeavour in Persia and thus benefitted from the social services it provided. Early 20th century estimates by Aubin⁴⁸ and Bricteux,⁴⁹ quote 5 or 6,000 Jews, the increase showing some amelioration in conditions. The 1956 census found 4,496 persons of Jewish faith in Isfahan with a male-female ration of 100-95.5.

The old idea of a Jewish quarter has now broken down, although Jubareh is still considered such by Isfahanis. It remains the most squalid quarter, a maze of narrow, unpaved street, with irregular building lines and low doors leading to semi-underground houses, few having courtyard gardens, but with a pool for water-supply. This may

be a lasting result of the 19th century ruling whereby Jews were prohibited from building their houses as high as their Muslim neighbours and thus is an example of religious discrimination affecting townscape. The streets are impassable for motor traffic, with a gutter down the centre and an only partially-covered cess-pool outside each house from which manure is collected. Few Jews remain in the quarter, indistinguishable in appearance from the poor Muslims among whom they live. Many have emigrated to Israel and now encourage their relatives to join them. More successful Jews have moved to the south of Isfahan where a new synagogue has been built. The Master Plan lists three synagogues,⁵⁰ all, however, are inconspicuous.

Medieval minarets and mosques old and new are scattered through Jubareh, showing that it can never have been solidly Jewish. Baths and small local bazaars are found as in all the older quarters. Jubareh is the centre of craft industry of the most primitive kind. Workshops of weavers, spinners and dyers are often underground, badly lit and ventilated. Weavers are distinguishable by the noise of their handlooms, spinners by the large wheels they use, the yarn being transported by donkey and the waste littered about the streets, and dyers by the racks of dark-blue and orange skeins drying on the rooftops. Although today there is no Jewish quarter as such in Isfahan, that Jubareh was one formerly has led to its survival as a comparatively untouched and backward area.

Tehran also had a Jewish quarter and a sizeable Jewish community. A Jewish quarter in Oud-lajan is marked on the 1858 and 1892 maps, a series of alleys around an open space. (Fig.35) Few travellers mention this community and its origin is uncertain. Basset, who probably worked among them, estimates there were 1,500 in the 1870s.⁵¹ Many came from the village of Demavend, probably attracted by the growing commercial importance of Tehran. Trading was their main occupation as well as manufacturing wine and arak, and doctoring. They had 10 synagogues and two or three schools. Such was their poverty, however, that in the 1871-2 famine, 300 Jews died in Tehran despite relief from their co-religionists in London. Orsolle gives a frightening description of the Yahoudi-mahalleh, "the stinking alleys of this abominable ghetto", and the bazaar "composé de quelque échoppes disloquées et approvisionnées avec des marchandises gâtées, et des detritus ramassés dans les rues."⁵² The American and other missions however helped in their education and welfare. Curzon found 4,000 Jews in Tehran enjoying a fair position.⁴⁷ An estimate for 1921 quoted 5,000 Jews. Many Jews prospered by becoming "dallals", dealers in antiquities and carpets, catering for the increasing flow of European visitors to Persia. They were well-suited to the role of go-between and dealer and Jewish women could penetrate the harems to purchase fine pieces. By 1924 rich Jewish merchants were occupying houses in the European quarter. This new prosperity may account for the

very large numbers of Jews recorded in the 1956 census, 35,161. The male-female ratio is more exaggerated than at Isfahan, 100:95. Also 2% of the population of Tehran are Jewish as opposed to 0.7% in Isfahan. This illustrates the attraction of the capital, especially for men and the possibilities there for the advancement of non-Muslims.

The Tehran Jewish quarter survives today with about 6,000 families, many being old people. It is also a backward area but similar to much of old Tehran. There are several synagogues, some merely rooms of houses, and others newly-built but unpretentious. Christian and Jewish missions have provided schools, orphanages and clinics. Here also Israel is drawing off population but not to the same extent as in Isfahan. The more prosperous Jews live in the northern suburbs, many are still carpet and curio merchants and many are successful in commerce and the professions. Anti-Jewish prejudice is often cited to explain their absence from the highest administrative positions, but this is not evident in everyday life. The Jews are more ready to identify themselves as Persian than the Armenians.

The Zoroastrians, although Persian by race have always been set aside by adherence to their ancient religion. Staunch Zoroastrians fled before the Arabs to the remote towns of Yazd and Kerman where they are found in the greatest numbers today, but many groups must have

remained in rural areas, especially around Isfahan which still contains Zoroastrian relics.

Most 17th century writers mention the Zoroastrian settlement of Gabrabad* to the east of Julfa. This was built by Shah Abbas I for the Zoroastrians and consisted, according to des Landes⁵³ and Le Bruyn⁵⁴ of one long street. The Khaju bridge was said to have been built as access to it. The older bridge on this site perhaps was, but not that of Shah Abbas II as the Zoroastrians' land in his time was being appropriated for the building of Sa'adatabad. Little is said of the appearance of Gabrabad, to des Landes it was "un beau village" but Bell⁵⁵ spoke of the "Giaurs" as indolent, and living in nasty huts or tents. Chardin however mentions 1500 families of Zoroastrians from Kerman and Yazd, many of whom returned after Abbas I's death. At this time there were only 300 houses, of Zoroastrians working as ploughmen, goatherds and handlers of goat's wool.⁵⁶ According to della Valle Gabrabad was intended as an element in Shah Abbas' tetrapole, explaining its importance at that time.⁵⁷ It was however doomed to be short-lived. Late-Safavid persecution was effective against the Zoroastrians, weak in power and numbers. Many were evicted for the building of palaces and le Bruyn mentions conversions which were probably forced. By 1794 Olivier stated that the Zoroastrian quarter no longer existed.⁵⁸ Its inhabitants had fled or become absorbed in the Muslim community. No Zoroastrians are

* The element "Gabr" is a term meaning "infidel" applied by Muslims to Zoroastrians.

mentioned in 19th century estimates of population except for one of 6 for 1883. Although Stewart in 1911 claimed that some came from Yazd for the opium harvest.⁵⁹ In 1956 there were only 86 Zoroastrians in Isfahan, 37 men and 49 women and, only 14 in the rest of the Isfahan census district. These are probably agents from Yazd, Kerman or even Bombay, acting for trading companies.

No definite Zoroastrian quarter can be located in Tehran, although Morel said one existed.⁶⁰ (Fig. 35) There were "a few Zoroastrians" according to Binning,⁶¹ and to Ussher 4 or 5, these being gardeners protected by the British.⁶² Basset however found 150, merchants in silks, calicoes and carpets, these being products of Yazd and Kerman.⁶³ Williams-Jackson's estimate was 324.⁶⁴ Curzon quoted several hundred⁶⁵ and a 1921 estimate suggests 400. Numbers fluctuated with the state of trade reflecting the occupations of the Zoroastrians as liaison-men with their headquarters. The British Legation gardeners were traditionally Zoroastrian and the British championed them in the removal of a special poll-tax which had been levied on them before 1882. The 1956 census gives 4,627 Zoroastrians in Tehran, the male-female ratio of 100:88, illustrating the preponderance of traders or new immigrants.* Zoroastrians have had little effect on townscape or population structure in Tehran or

* Classified as Zoroastrians in the 1956 census were 767 men, 1009 women in Kerman, and 585 men, 767 women in Yazd.

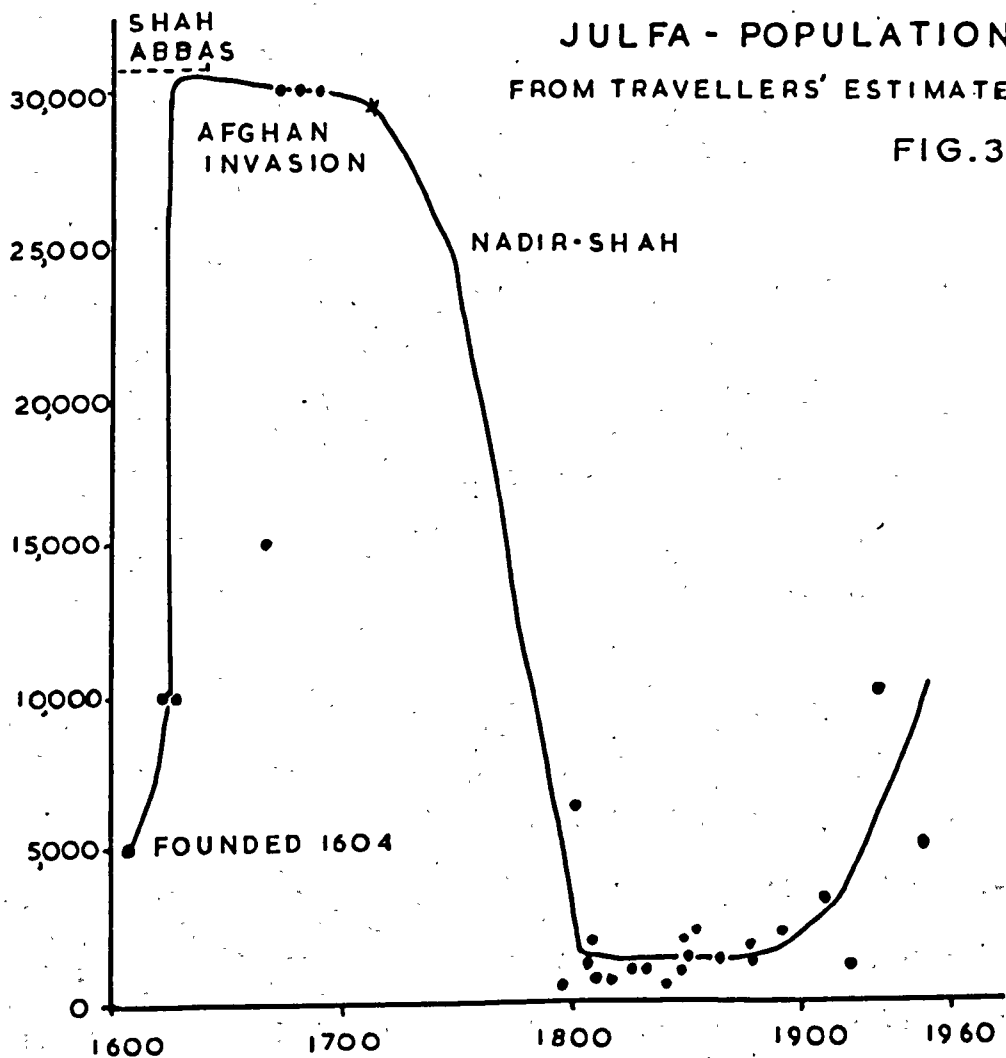
Isfahan.

The Armenians are the largest non-Islamic group in Tehran and Isfahan. The Isfahan community is not as old as the Jews' but was also formed by planned colonisation. Part of Armenia near the Araxes river was in the late 16th century in dispute between the Ottoman Turks and the Safavid empire. In order to lay waste the frontier region and prevent the Turks from exploiting the population for their own benefit, Shah Abbas I removed up to 400,000 Armenian families, often forcibly, by cutting off water supplies and armed attacks. Some 27,000 families were settled in Gilan to stimulate the silk trade, but the majority succumbed to the humid and malarial climate of the Caspian coast. Of the 24,000 moved to Mazandaran, only a quarter are said to have survived. Many were settled in the Isfahan area, most became Muslim, but a Christian community was settled about 1604 in a satellite town of Isfahan across the Zayandehrud to the south-west, which was named New Julfa after the Armenian town of that name on the Araxes, and later simply Julfa. At first this settlement grew rapidly through further immigration, often voluntary, of Armenians from their devastated homeland. The Armenians were orthodox Gregorians with many Roman Catholics, especially from the province of Nakhchivan.

Such was the story of the founding of Julfa as told by the Armenians themselves and recorded by Fr. Paul Simon the Carmelite.⁶⁶ Herbert estimated Julfa's population at 10,000.⁶⁷ Olearius found 12 churches and 3,000 houses, a population of perhaps 30,000 showing a rapid increase and great prosperity.⁶⁸ (Fig.36) Shah Abbas had great confidence in the thrift and commercial abilities of the Armenians and wished to encourage trade and industry in his new capital. The Armenians were valuable go-betweens in dealing with Christian nations. The original town was well laid out and surrounded by cultivated land and gardens. Some of the original churches such as the Vanak Cathedral and the Bethlehem church of 1606 and 1627 still remain. Their style is similar to that of the Safavid mosques although the domes are unornamented brown brick, decoration in the form of murals and tilework being for interior show only. An Armenian monastery, a nunnery and European monastic houses were also established at this period.⁶⁹

Under Shah Abbas II other groups of Christians including Nestorians, Copts and Jacobite Syrians were sent to Julfa and enlarged the place with their quarters which formed New Julfa. Tavernier said they came from other suburbs of Isfahan.⁷⁰ (Olearius did in fact find Christians living in Isfahan, Georgians, living in a part of Hasanabad called Nassara meaning non-Muslim, behind the Masjid-i-Shah. They were tolerated, he said, being merchants and rich men, but congregated for peace and

POPULATION



security.⁶⁸⁾ To Tavernier the Julfans had more advantages than any other Christians in the east for they enjoyed land and privileges. The king did not allow any injustice against them, nor that any Muslim should live in Julfa. However, a Carmelite report of 1657 suggests that the colonisation of New Julfa was in an attempt to "purify" Isfahan for religious reasons.

When the Armenians were prosperous, their houses, although of mud, were as well built and cheerful as the best in Isfahan and Julfa was the richest and most beautiful suburb. Two principal streets said to be $1\frac{1}{2}$ leagues in length traversed the town and most of the streets were lined with chenars, and running brooks, much cleaner than those of Isfahan. Des Landes considered Julfa the same size as Tours and "de mesme figure"⁷¹ and to Chardin it was "peut-etre la plus gros bourg du monde."⁷²

In the newer part added by Abbas II the roads were wider, straighter and planted with trees, but the houses were less beautiful, having perhaps been built rapidly to house the refugees. The usual institutions of a Persian town existed in Julfa - bazaar, market-places, baths and caravanserais, the main distinctive feature of the townscape being the Christian churches with their plain domes, and the vineyards in the courtyards from which wine was made for sale to Muslims. The quasi-grid pattern of street and madis which persists in Julfa

today may be the remains of the planned lay-out of Safavid times, although from later vicissitudes it is difficult to reconstruct its extent. (Map B)

Besides the primary division into old and new Julfa there were quarters representing groups from certain areas after which the quarters and the people themselves were named, such as Nakchiwan and Erivan in Armenia and the suburbs of Isfahan from which Christians were removed - Shaykh Sabana, Shamsabad. Le Bruyn claims that Julfa had its own kalantar and quarter heads.⁷³ Old Julfa belonged to the grandmother of the then (1703) king who protected the citizens against persecution and forced conversion. The other quarters belonged to the "Nagasi-Baesjie" ^{or} of chief painter.

By 1672 Fryer⁷⁴ estimated there were 6,000 families in Julfa and Le Bruyn 2,000 families in old Julfa alone in 1703, with a small community of European missionaries, craftsmen and traders. The increase was due as much to forced concentration as to natural increase. Even by Chardin's time the town was not so rich or well-patronised as before. Taxes levied on Armenians grew with the increasing cupidity of the later Safavids. Under the influence of a fanatical mullah Shah Sultan Husayn and Shah Sulayman began persecution in earnest. Laws such as that of the apostate's inheritance, and ridiculously low indemnities enjoined on Muslims who injured

or killed Christians, were promulgated. In 1673 the Armenians were even prohibited from entering the city to sell their goods. The survival of the settlement was only ensured by its physical separation from Isfahan, its self-sufficiency from the gardens and fields around it, and the dependence of Isfahan upon it for trade and manufactured articles.

The Julfans suffered greatly in the Afghan attack, theirs being the first suburb occupied after a strenuous but hopeless resistance, and the base for assault on the city itself. The town was pillaged and the inhabitants badly treated. They were then considered traitors by the Isfahanis and later by Nadir Shah who inflicted savage penalties upon them, forbade their worship and placed them under a ban of permanent social ostracism. After his death in 1747 thousands of Armenians fled from Julfa to Georgia, India and Baghdad. Carmelites visiting Julfa in 1758 found it depopulated with village dwellers having moved in presumably to cultivate the vacant gardens. Population fell catastrophically and has never since been able to reach its former level. (Fig. 36)

Olivier in 1796 found that Julfa had suffered little in its buildings but greatly in its population with only 800 families remaining.⁷⁵ The former immense commerce was almost nil and there was no bishop. He still admired the wide streets, the elegant and commodious houses,

the vineyards, orchards and vegetable gardens. Ouseley⁷⁶ and Morier⁷⁷ calculated 300-400 houses, agreeing with other estimates of 2 to 3,000 remaining in Julfa and the surrounding suburbs. Travellers recognised the former beauty of Julfa by the handsome houses and churches which had survived. Of the latter different numbers are quoted but most saw the cathedral with its lofty dome, paintings and belfry. Julfa was surrounded by a mud wall, high but thin. Defence was necessary as the city was repeatedly threatened by Bakhtiari tribesmen. According to Morier, the towers and battlements were repaired probably with the help of Amin-ud-Douleh, patron of Julfa.

Population was however dwindling every year in numbers and respectability, amid a general air of squalid misery. The town had its share of the ruins which then characterised Isfahan, although, according to Flandin, it did not have the appearance of complete desolation found in the Muslim quarters.⁷⁸ Here at least some attempt at repair was made. Stocqueller considered that the Christian community here were industrious and that their position would improve.⁷⁹ Non-Christians began to colonise Julfa, Sercey speaks of good houses in the hands of Turks and Persians.⁸⁰

Population estimates for mid-century vary enormously, it was probably about 1500. A characteristic feature was imbalance between the sexes and age groups. Lady Sheil saw crowds of young men in

the streets, out of work.⁸¹ Binning comments on the lack of shops, manufacturies and any atmosphere of activity and industry.⁸²

Persecution was still common and also jealousy and mistrust between the religious factions of the Armenians themselves. With such an aura of hopelessness the young people, especially men, left if possible, leaving an ageing and predominantly female population, living largely on remittances from abroad. Their few occupations included sock-knitting, wine-making and market-gardening. Wills called Julfa one of the curiosities of the east which would probably cease to exist in 50 years.⁸³ Youths saved enough for their passage to India and did not usually return, and so the place was decaying and with it the ancient dress and tongue.

The poor and oppressed nature of the Julfans led to a cramped style of living, quite different from the openness and enthusiasm of Safavid times. Persecution had meant that the richest and best houses, especially those along the river, were most ruined and the population had retired to the poorer areas where they lived hidden behind wooden gates and the end of a maze of passages not daring to show any sign of wealth for fear of further exactions. Parts of Julfa were dirty and unkempt; others were orderly and clean. The little "maydan" contained only a few wretched shops selling only first necessities. In the late 19th century Julfa showed a double face. Curzon's description "cribbed, cabined, confined"⁸⁴ was agreed with by

Biddulph in both the moral and material sense.⁸⁵ He described Julfa as "miles of most inconceivably filthy lanes and alleys ... carefully designed to lead nowhere and closed at either end by great heavy gates". It was very difficult to find one's way around owing to the great height and similarity of the walls on either side of the narrow lanes with no names or signposts. Curzon added that it was a relief to escape from the squalid precincts of Julfa even to the spacious ruin of Isfahan. On the other hand Mrs. Bishop attacked Curzon's description, saying the Christian town had a well-built and well-peopled nucleus, not mixed up with ruins, but clean and comfortable.⁸⁶

Others, however, while admitting that Julfa was a labyrinth of alleys even narrower than those of Isfahan considered them quaint, clean and well-kept and praised the streams lined with trees which were to others merely open sewers. The latter group included many residents in Julfa who had lived in the better parts of the town. All Europeans were then obliged to live outside Isfahan and it was natural that they should associate themselves with the Julfa Christians, especially as there were suitable houses to let here. In areas of European residence standards of cleanliness and hygiene were higher.

Julfa was also the scene of renewed missionary effort. The Church Missionary Society established a church, school and hospital

here in 1869. However, resentment from the Armenian hierarchy was a distinct bar to progress.⁸⁷

Population continued to dwindle. In 1880 Basset suggests 2,500⁸⁸ and Curzon the same, of which 80% were Armenian. Suggestions that trade was improving towards the end of the century did little to alter the Julfan's apathy, an attitude which living on remittances did little to dispel. Conditions did, however, become better with the 20th century. The Armenians were no longer persecuted. Christians could now live in Isfahan and, by 1908, 30 merchants had shops and many artisans worked there. Armenians were employed in banks and the Telegraph and there was even an Armenian newspaper. At the same time, Muslims were taking over shops in the maydan of Julfa. This mixture was, however, beneficial. By 1909 Bradley-Birt could describe Julfa as a busy, thriving, commercial city, the people having greater character and variation than in any other Persian town, which had prospered and thrived despite overwhelming odds.⁸⁹ This was reflected in a re-growth of population. In 1908 Aubin estimates 3,200⁹⁰ Later estimates give 10,000 for Julfa in 1940, 6,000 for the Armenian community only in 1946 and 5,000 in 1950. The 1956 census does not list Armenians separately, nor does it give a figure for Julfa which in any case would also include Muslims. The number of Christians is 5,021 for Isfahan city which seems rather low. It can only be assumed that Julfa today has a population of 10 to 15,000.

Julfa today is very similar in ground plan and townscape to other Isfahan suburbs. Parts of the ancient grid pattern survive, especially in the east-west madis. There is the old street pattern of narrow walled alleys only a few of which have tree lined streams and which are angular rather than winding. Superimposed are the new streets, wide, usually surfaced, again running east-west. In Julfa itself these have become assimilated, but through the surrounding Muslim villages they have cut wide strips, as yet unsurfaced and lined with partly-demolished buildings, all part of the planned extension to the south and the linking up of arterial roads. The walls and gates of Julfa had disappeared well before Reza Shah.

Only a very small portion of brick-arched bazaar remains near the square, but arches across the street marking the sites of former gates, are common. Houses near the square are still inhabited by Armenians. Here streets are wide and clean and many houses have high arched gateways decorated with blue and white plasterwork. Houses 3 and 400 years old are still to be found in good repair and with decorative paintings of some age. This is the nuclear part of Julfa centred on the square and cathedral. Muslims and Armenians can be distinguished by the dress of the women. The atmosphere is generally pleasant, far more so than in the older quarters of Isfahan such as Jubareh. Of the original 12 or 13 churches, three only are now used, the Cathedral and the Churches of Mary and

Bethlehem although there are several other very old churches. There is no Armenian quarter in Isfahan itself, but better-off Armenians inhabit the new southern suburbs. (Map B)

In general, the fortunes of the Armenian community have followed those of Isfahan in its rise, fall and re-growth. The present population bears a similar relationship to its maxima, that is about 30%, as does the city's.

In the redistribution of population from Armenia some groups may have made their way to Tehran. In 1805 there were sufficient Armenians to justify the building of a new church. No estimates of numbers are however found until Basset's account in 1871 when there were 110 Armenian families in two distinct quarters, 40 near the Shah Abdul Azim Gate and 70 near the Qazvin gate⁹¹ There were about 1,000 Armenians in the city and 300 in Shemiran. The community was fairly prosperous merchants and artisans with two churches, a school and their own caravanserais. The shops on Sabz-i-Maydan were kept mainly by Armenians dealing in European goods. Stuart states that all the washermen were Armenian.⁹²

Several references to Armenians are made in the 1892 map including the two areas quoted by Basset. (Fig.35) Near the former Shah Abdul Azim gate there is the Street of the Armenians and a caravanserai named after them but the early 19th century church is not marked. Near the

old Qazvin gate is another street and an Armenian church. This and the bazaar church are probably the ones mentioned by Basset. Adjacent in the newly-enclosed area an Armenian school is marked and also "peasant houses" belonging to Armenians, perhaps the poorer members of the community. Another area further west is perhaps one newly settled. A third Armenian street, not mentioned elsewhere, is marked south-east of the Ark. An obviously prosperous Armenian called Michael even held land on the fashionable "Boulevard des Ambassadeurs". The scattering of areas of Armenian settlement shows that they were better tolerated and respected and certainly better-off than the Jews of Tehran.

Their prosperity is shown in growth of population in the 20th century. One estimate for 1921 is 4,000, for 1929 5,000. By 1956 the census of Tehran records 63,153 Christians, of whom the largest proportion are Armenian, as further illustrated by a 1961 estimate of 55,000 Armenians in Tehran. The male-female ratio is weighted on the male side, indicating recent immigration. This influx came about during the World Wars, firstly after the Russian revolution and the massacres in Turkish Armenia and with later uncertainty over the position of Armenia, a Soviet Republic within the U.S.S.R. Almost all 20th century Armenian refugees have settled in cities and Tehran was an obvious and convenient choice, with Tabriz and Isfahan. There has also been a considerable reverse

flow. This has been encouraged by the Soviet authorities and also by Armenians who consider this the best means to assert the independence of their homeland. Many families have been split by these means, but movement between Iran and Armenia is not easy for political reasons.

The Armenians in Tehran play a far bigger part in the life of the city than their numbers warrant. New immigrants were quick to colonise the new style of residence unit, the two, three and four storey flats which sprang up along the new street of Reza Shah. They have built churches, schools, clubs and welfare centres for their people, mostly in north Tehran with some concentration on Avenue Naderi. The Armenians are shopkeepers, skilled tradesmen and business men. Many doctors, dentists and lawyers are Armenian. They are found in high government offices. Poor Armenians still try to be in business on their own account. Intermarriage between Armenians and Muslims is very rare, the former tend to look down on the latter and attempt to identify themselves with Europeans on the basis of religion. They are, however, Persian by nationality, unless Soviet Armenia could emerge as a second Israel and in fact are very valuable members of the community. These remarks apply also to small groups of Nestorian, Assyrian and Chaldean Christians in Tehran and

Isfahan.

Apart from these three main minority groups others have played smaller parts in the population composition of Tehran and Isfahan. In 17th century Isfahan there were large numbers of Indians, Banians as they were called. Olearius⁹³ and Tavernier⁹⁴ say 10 to 12,000 and Thevenot⁹⁵ 14,000; they were merchants and bankers or money-lenders who lived in the caravanserai where they had their goods. It is uncertain if these were Muslim or Hindu, but the former is more probable as they mixed easily with the Persians. With the annihilation of Isfahan's trade, the Indian merchants disappeared except for small groups carrying on overland trade. The only mention of Indians in Tehran were dervishes living in huts outside the Qazvin gate, noticed by Hommaire de Hell in 1846⁹⁶.

The activities of Europeans in Tehran and Isfahan has already been outlined.⁹⁷ In Isfahan they were initially merchants, craftsmen and missionaries and their numbers in the 17th century cannot have exceeded 100 except when very large groups visited the town, and in any case their residence was temporary. In the 18th and 19th centuries they were confined to Julfa. A late 19th century estimate

is 30. Today there are probably again 100 but their residence is intermittent and they are not included in the census. Their effect on the city is enormous but indirect.

The number of Europeans in Tehran in the 19th century is variously estimated at 50 to 500. Initially only members of legations and military advisors, the numbers of Europeans connected with trade and commerce grew in the 20th century. Their numbers are now large, swollen by the American Military Mission and the personnel of numerous aid projects, but it is difficult to estimate numbers as they fluctuate rapidly. As in 19th century Tehran the "European quarter" became the most fashionable, so today areas occupied by Europeans in the northern suburbs and Shemiran have a certain prestige value engendering the building of high value residential property there. Similarly, high rents paid by Europeans, usually subsidised, have pushed up surrounding rentals so as to exclude all but Iranian families of high income. This has been responsible in part for the superfluity of luxury residence and large amounts of speculation in the 1960s.

Population size and composition has had a profound effect on the townscape of Tehran and Isfahan. Size of population determines the extent of a town considering the style of houses, their density and the frequency of non-residential land-use, features which differ greatly,

as has been illustrated, between countries. Growth of population is shown in new suburbs such as now surround Tehran; decrease is shown in abandoned buildings and ruins as shown in Isfahan's 19th century townscape. Unevenness in population composition has led to the crystallising out of distinct quarters occupied by religious and racial minorities, often more for convenience than by active force of persecution. Differences in townscape in these quarters may be a direct result of cultural differences, such as the prevalence of churches in Julfa, or indirectly, by attitudes toward the group concerned, as would explain the backwardness of the Jewish quarters of Tehran and Isfahan. Townscape varies in that it is an expression of culture and thus embodies in a practical way both the material and non-material characteristics of urban population.

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P A R T III

THE ANALYSIS OF URBAN CHARACTERISTICS AND THE APPLICATION OF THEORIES OF URBAN GEOGRAPHY.

The growth of Tehran and Isfahan and the development of certain conspicuous urban features, has been considered in Parts 1 and 2 of this thesis, with attempts to reconstruct urban morphology at significant periods. It is now possible to analyse the factors which have controlled and directed growth in these cities; to examine how far theories of urban geography can be applied in the case of Persian towns, and tentatively to suggest how characteristic features in the urban morphology could form a trait complex typical of, and distinguishing, Persian towns.

CHAPTER 9

Part 1

ORIGINS AND GROWTH

As has been pointed out¹ human settlement in the Tehran and Isfahan areas reaches back into pre-historic times. It is therefore very difficult to assess the period at which the settlements, which were to become Tehran and Isfahan, originated. There were villages in the Tehran area from 5,000 B.C., although from the position of the earliest tepehs it appears that settlement has moved northwards, suggesting a comparatively late date for the establishment of Tehran. In the case of Isfahan, four villages are named in early accounts as the original settlements,² while later it appears in the form of a twin-town, so strictly speaking Isfahan itself did not emerge until the settlements were walled as one¹ even though the name was used before this.

The question why settlements came into being in these areas is easier to explain. The physical configuration of Persia has always limited the areas of settlement to the periphery of the central deserts (Kavir-i-Narmak and Dasht-i-Lut). The Tehran and Isfahan areas both lie in this band of cultivable land between the desert and the Elburz and Zagros ranges respectively. Water is the main determinant for agricultural location in Persia, but both areas were sufficiently endowed, the Varamin plain from the Jajirud and the Isfahan plain from the Zayandehrud, even without the use of qanats.

The existence of agricultural areas is relevant as it has been accepted that an agricultural surplus is a prerequisite of the urban "implosion" which brought about the city.³ The Tehran area did indeed produce the city of Rhages, the Parthian capital, but not so the Isfahan plain; the centres of Achaemenid and Sasanian rule were further south or west. There is no evidence that the Isfahan plain supported more than a garrison town - Sepahan¹ - at this period. Political factors obviously come into play.

The cultivated zone, watered by centripetal streams thus became the settled area of the Iranian plateau. It also served as a routeway for trade and invasions. Alexander passed through the Tehran area in his pursuit of Darius III in 330 B.C. The southern flank of the Elburz was the route to the Greek kingdom of Bactria and later to the Central Asian metropolises of Samarkand, Balch and Bokhara. Along it goods were exchanged between Byzantium and China, especially silks and spices, after which the route has been named. From the Tehran area routes could conveniently strike off southwards, passing west of the "Sea of Salt" (Fig. 2a). However, the easiest Elburz crossings were not in the vicinity of Tehran. Proximity to the Sefid-rud crossing gave advantages to Qazvin, and the town of Firuzkuh is better off in this respect. The Karaj-Chalus and Ab-Ali - Amol crossings are not at all easy, but were chosen for road construction after the long establishment of Tehran as capital.

This is an example of artificial nodality. These routes were not of initial importance.

The route south-west of the Dasht-i-Lut ran somewhat east of Isfahan, through Kashan, Na'in, Yazd and Kerman. (Fig. 2b) However, the commercial significance of Isfahan's central position cannot be denied. Its situation made it the hub of routes from Qum, Hamedan, the Gulf ports, Shiraz and even Khorasan, rather than merely a link on a chain.

Trade was no doubt the original factor which raised Tehran from the status and function of a village, but equally important was a negative factor - the destruction of the towns of Rey (Rhages) and Varamin.¹ However, unless Tehran had achieved some previous superiority there seems no reason why it and not any other village in the vicinity should have grown to town status. Perhaps Tehran had some measure of administrative importance. Early accounts speak of Tehran as the residence of a local governor. This is universally accepted as a strong basis for urbanism. At what stage does a settlement develop into a town? The answer is when urban characteristics have been acquired. However, the characteristics whereby towns may be defined vary in space and time.

Isfahan had greater commercial importance than Tehran, as here

manufacturing was developed early, and also administrative importance, but these functions cannot be measured quantitatively through lack of data. Nor can the criterion of population size be used as the estimates which exist for this period are patently unreliable and in any case the definition of urban status by population is unsatisfactory. Morphological features are often described by such early reports of Tehran and Isfahan as exist. It would be convenient to adopt the town-wall as a symbol of urban status. This would mean that Isfahan became a town under the Buyids, although Jey and Yahudiyeh are known to have been walled in the 9th century. Tehran was not walled until the mid-16th century. D'Allessandri declared that walling was in fact unusual in the late 16th century.⁴ Whereas the town-wall may have been indicative of status in Medieval Europe, it cannot be assumed to have had the same significance in Persia. The question of the status of a town when its wall is destroyed or allowed to decay, also arises.

The so-called Friday Mosque, more correctly Congregational Mosque, is another possible indicator of urban rank. Early writers record the existence of Congregational mosques in both Jey and Yahudiyeh.¹ Such a title is only likely to be adopted when more than one mosque exists in a settlement, comparable to the cathedral and parish churches in a European city, although this relationship should not be pursued

in any other than a morphological sense. The significance of the Masjid-i-Jami' of Isfahan both as an architectural symbol of the various cultural influences on the city, and as the centre of the pre-Safavid town has been discussed.⁵ In Tehran, however, references to a Congregational Mosque do not appear before 1800, although one surely existed. Again lack of data invalidates a useful criterion.

The morphological manifestations of the two functions already discussed are of commerce - the bazaar, and of administration - the palace, or governor's residence. Shah Tahmasp also endowed Tehran with a bazaar, but no doubt some accommodation for trade already existed. Long before Tehran was walled, Clavijo saw a house there for the representative of the governor of Rey province.⁶ Continuity through to the "Duke's house" of Herbert, is possible.⁷

The volume of trade and industry in early Isfahan presupposes the existence of bazaars, in fact the first European visitors praise its caravanserais above all.⁸ (It is interesting to see a similar opinion voiced in Herbert's remarks on Tehran) Although no traces of palaces now exist, it is known that Isfahan was the residence of a provincial governor in Achaemenid times.

The definition of urban status in Persia seems to lie in the acquisition of certain administrative, commercial and religious functions, embodied in the morphological features of palace, bazaar and

Masjid-i-Jami'. Tehran did not reach this status until well after the Mongol invasion of 1220. Urbanity was only just crystallising at the time of Clavijo's visit (1403) but had been fully acquired by 1600 helped by Shah Tahmasb's patronage. Even so the process took a century and a half, being a gradual one, hampered by periodic invasions and disturbances to trade, and many setbacks may remain unrecorded, much building unchronicled. Inadequate though this summary sounds, no more can be done except thus to attempt to interpolate from very meagre evidence.

In Isfahan the acquisition of urban status took place at a much earlier period. Under the Achaemenids and Sasanians Isfahan was already a garrison town with a powerful governor, and commercial functions were no doubt present in servicing the armies. During the Jey/Yahudiyeh period both elements had urban status, exemplified by Jey's strong defences and the Jewish colony of Yahudiyeh, which must have been occupied with trade and industry.

Given urban status, what were the factors encouraging further growth? Commerce and administration continued to play a large part. The former is cumulative given the right conditions whereas the latter depends on subjective political decisions. As shown, Isfahan was well placed as a centre of commerce and a collecting-point for industrial raw materials. Given settled political conditions for trade and

industry to expand, as they did under the Caliphate, the whole of the Islamic East was a potential market. Isfahan's commerce became strong enough to recover quickly from the Seljuq invasion¹ and the wealth of Seljuq building which has survived to the present day exemplifies this prosperity. Although Isfahan's later history was more troubled, the fact that it was so often attacked indicates its wealth and strategic importance. The successive dynasties of Seljuqs, Il-khans, Timurids and Turkomans all had representatives in the city but commerce remained the *raison d'être* of Isfahan's growth and the impetus for its rise to pre-eminence was, as yet, lacking.

In discussing the history and morphology of Tehran and Isfahan it has been emphasised that the presence of a royal court was the paramount factor in giving a town supremacy in size, population and wealth. The reasons for this, the attraction of population, the concentration of resources and wealth, royal and aristocratic patronage of trade, industry and public works need not be reiterated at length here. Isfahan in the 17th century was patently a "primate" city, to which all the life of the country flowed, around which the economic activity of an empire revolved, perhaps even a parasitic growth, but one that was accepted, as the peasant accepted the fact that his effort supported the sumptuous life of his aristocratic landlord.

The removal of capitalhood brought disastrous consequences which illustrate the negative side of the argument. The acquisition of new functions and status leads to growth, but their removal may reduce the size, population and wealth of the town. Isfahan however could fall back on its commercial functions which saved it from complete annihilation in the 18th century, when authority was precarious and ephemeral. Although the driving force behind commerce in Isfahan was gone, the town retained its commercial equipment in the form of bazaars, which aided continuity. Under the Qajars, Isfahan was again an administrative centre, but only under progressive governors was there a positive effect on the town's growth. How Isfahan basked in the reflected glory of the Zill has been described.⁹ Yet, being capital no longer, nothing could reinstate Isfahan on its former grand scale..

Having acquired city status by similar functions of commerce and administration, Tehran grew slowly in the 17th and 18th centuries. It enjoyed a certain amount of royal patronage under the Safavids, was strong enough to repulse the first attacks of the Afghans and attracted the attention of the Zand rulers although Shiraz proved a more convenient capital. Again the acquisition of capitalhood was all important. Tehran had little tradition of industry and its trade was largely of an entrepôt nature. This with the comparative poverty of the Qajars as opposed to the Safavids, who had been well-established

when Shah Abbas moved to Isfahan, made growth slower and less spectacular than it had been in Isfahan. However it took place in a similar way; population expanded, commerce was encouraged and the town enlarged and embellished by royal and aristocratic building. Towards the end of the century elements of westernisation began to appear, but until the 1920s Tehran remained functionally the capital of an oriental dynastic state with all that this implied, just as Isfahan was the seat of a provincial Qajar governor and a commercial centre still based on the bazaar, caravanserais and camel caravan.

Until the advent of the Pahlevi dynasty, both Tehran and Isfahan could be described as "pre-industrial cities" having many of the morphological and sociological features of this type as described by Sjoberg.¹⁰ This generalisation does not, however, overlook the fact that innovations such as gas and electricity had been introduced into Tehran. However, after 1926 industrialisation began in earnest, with all its indirect and far-reaching effects on urban life. Both cities were endowed with modern industry, a new function in Tehran, but a re-expansion under modern conditions of Isfahan's traditional function, with textile products still pre-eminent. Superimposed on growth through industrialisation in Tehran was that brought about by the intensification of its administrative functions. Not only was bureaucratic centralisation on Tehran encouraged by modern means of transport and

communication, but with modernisation government agencies proliferated with the resultant expansion of opportunities for employment.

This encouraged the concentration of modern business enterprises in Tehran, banks, insurance companies and international trading concerns. This acquisition of new functions and re-intensification of the old, coupled with modern techniques of building and transport which brought about rapid urbanisation and suburbanisation in Europe and America, took the form of a veritable population explosion in Tehran. The town's tremendous expansion has been described above.¹¹ Tehran was now an excellent example of the "primate city" as shown by 20th century figures and the ratios with other leading towns.¹²

<u>Population in thousands.</u>					
	<u>Ratio</u>				
1935	100-61-39	Tehran	360	Tabriz	219 Meshed 139
1956	100-19-17	Tehran	1,512	Tabriz	290 Isfahan 255

(1935 figures from Jefferson's article, 1956 figures from census)

It has often been remarked that other Iranian towns have been neglected in the advancement of Tehran. This is inevitable when centralisation is so marked.

Isfahan's old functions have been revitalised and serve as a basis for renewed growth, although even now population is only half that of

the lowest 17th century estimates. The textile industry is flourishing, and Isfahan is established as a regional centre of high rank. The new function of tourism has been added as much due to modern enterprise in restoring ancient buildings and providing tourist amenities as to the city's historical heritage. Physical growth has been impressive but not on the scale of Tehran's. Isfahan remains overshadowed by Tehran. It seems unlikely now that the capital will be moved again and so the relative positions of Tehran and Isfahan in the urban hierarchy are fixed. The interplay of factors which has governed the rise and fall of Persian cities is thus a matter of the acquisition of functions, the most powerful of these being capitalhood, and perhaps the most enduring that of commerce, based as it is on physical attributes, including nodality.

Having examined the forces governing growth or decay, one may attempt to delimit stages of growth. Griffith Taylor¹³ and Mumford, following Geddes¹⁴ have suggested stages of urban development. Their terms are largely comparable. Griffith Taylor's classification cannot apply totally in the case of Persian towns; commercial and industrial quarters were one and there was no segregation of upper and lower class housing. Mumford's stages are more general in application. The accompanying table is a very tentative attempt to equate stages -

of growth in Tehran and Isfahan with these stages. These may be compared with the cycle of erosion theory which is useful as a theoretical framework but which must be adapted in individual examples and take into account possible breaks in the cycle through rejuvenation and acceleration or deceleration in the process. Thus Tehran grew rapidly from being a small town into a national capital, although its size was never commensurate with that of Isfahan at the same stage. By the early 19th century it showed some of the aspects of Tyrannopolis as the dynasty degenerated. Rejuvenation in the form of a new and progressive ruler eradicated all symptoms of decay, although the present over-centralisation may not be without its dangers.

Isfahan appears to display an almost complete cycle having risen to pre-eminence only to fall, but not solely through internal decay. It is very difficult to define the change from the Megalopolitan to Tyrannopolitan stages. Here again it was rather the degeneration of the rulers and their rapacity in draining the country's resources to finance the extravagances of their courts which contributed to the weakness of the country, thus encouraging the Afghans to attack. Isfahan fell, but although throughout the 18th and 19th centuries it exhibited the characteristics of a Nekropolis or senile city - large parts of it were abandoned, and the community had shrunk in importance - it still retained the limited commercial function of the polis. Stages of development in Tehran and Isfahan are therefore closely connected

with the establishment, life and fall of the dynasties which have patronised them. Thus a scheme may be drawn up which might also apply to other Persian towns. This again is a cycle which must be adapted to specific conditions.

STAGES OF URBAN DEVELOPMENT

<u>Griffiths Taylor</u>	<u>Mumford</u>	<u>Tehran</u>	<u>Isfahan</u>
Infantile	Eopolis	Pre 1400	Pre-Achaemenid
Juvenile and Adolescent	Polis	1400-1790	500 B.C.-600 A.D.
Early mature	Metropolis	1790-1920	600 A.D.-1590
Mature	Megalopolis	1920-1964	1590-1650
Late Mature	Tyrannopolis		1650-1722
Senile	Nekropolis		1722-1800
	Polis		1800-1920
	Metropolis		1920-1964

As has been emphasised above, a town's capacity for regrowth after physical devastation has been proved many times in Persia. Meshed has been repeatedly sacked through its troubled history, yet thanks to the continued veneration of the shrine of Imam Reza, it has always quickly recovered. Tabriz has several times been reduced to ruins by disastrous earthquakes, but its position in an area continually disputed between Russia, Turkey and Persia has endowed it

with strategic importance which has always led to its rebuilding in situ. Similarly the destruction of Isfahan by the Afghans need not have led to its decay if its prime function had not been removed. No force other than the presence of an autocratic monarchy could have raised Tehran from a market town, like many others, to a centralised capital of over 2 million inhabitants. Functional power has therefore been the chief force in the growth or decay of Persian cities.

STAGES OF DEVELOPMENT IN A DYNASTIC CAPITAL

	<u>Tehran</u>	<u>Qajars</u>	<u>Isfahan</u>	<u>Safavids</u>
1. Early period of establishment and growth.	1795- 1834	Agha Muhammad Fath Ali Shah	1590- 1629	Abbas I
2. Middle Period Slow growth	1834- 1896	Muhammad Shah Nasir-ud-Din	1629- 1666	Shah Safi Abbas II
3. Later period and fall	1896- 1926	Muzaffar-ud-Din Muhammad II Sultan Ahmed	1666- 1722	Sulayman Husayn
		<u>Pahlavis</u>		
	1926- 1964	Reza Shah Muhammad Reza Shah		

Effects on town

1. Expansion, immigration, endowment with attributes of capitalhood. Capable and strong rulers.
2. Continued growth, new additions often frivolous, draining of resources for royal projects. Rulers still may be strong.
3. Extortion, heavy taxes, little new building except for pleasure. Defences neglected, decay evident, Weak rulers. Fall results in large-scale abandonment unless new dynasty chooses same capital.

Part 2CLASSIFICATION

Any attempt to apply modern theories of urban geography, based on and designed for European and American towns, to Persian examples, is fraught with many difficulties. As has been pointed out, very little in the way of statistical data is available, and very often theories and concepts based on numerical evaluation, including those on the urban economic base, accessibility, wholesale and retail trade etc., which have been found useful where data is plentiful, are totally inapplicable. However statistical documentation is not wholly lacking, having been published, since the 1920s by municipal and national authorities, including planning agencies, and the 1956 census allows comparisons between towns.

This study, however, confines itself to the general theories of urbanism, relevant to the theme of examining and typifying Persian cities, but emphasises the need for special techniques in studying them. As examples of what can be done in the field of urban geography in Persia, with the material available and based on European concepts, an attempt is made here to classify Tehran and Isfahan first by reference to their functions and secondly to their place in the urban hierarchy.

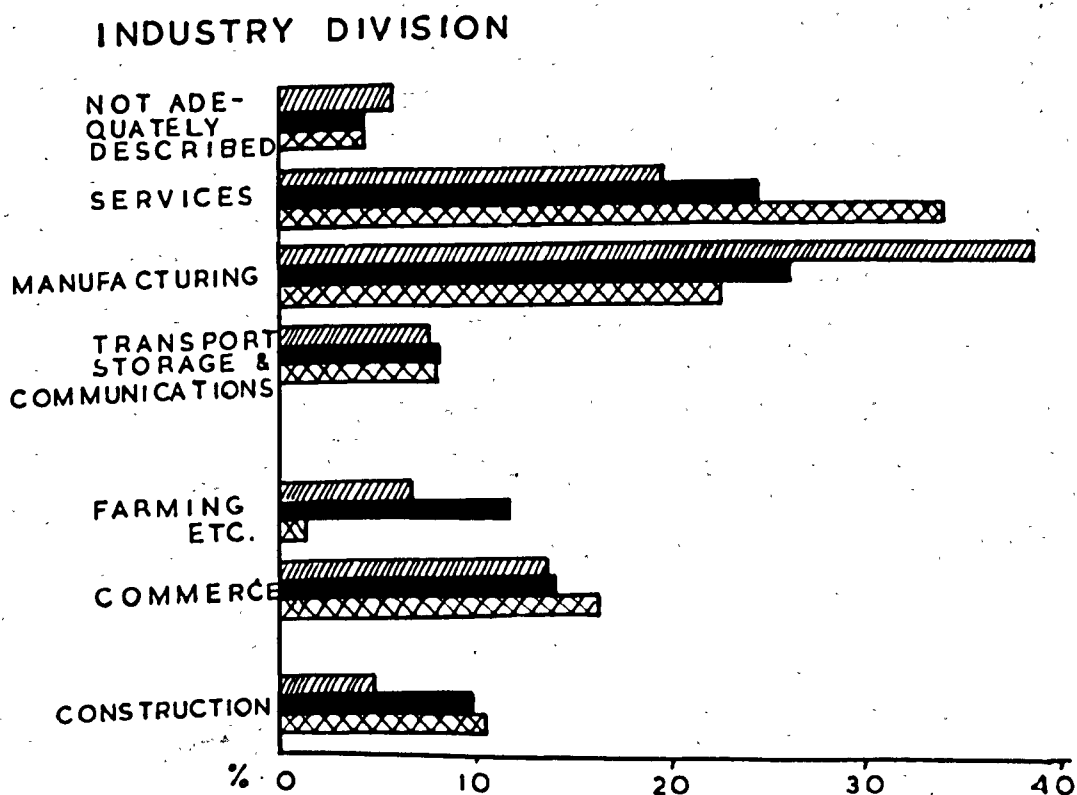
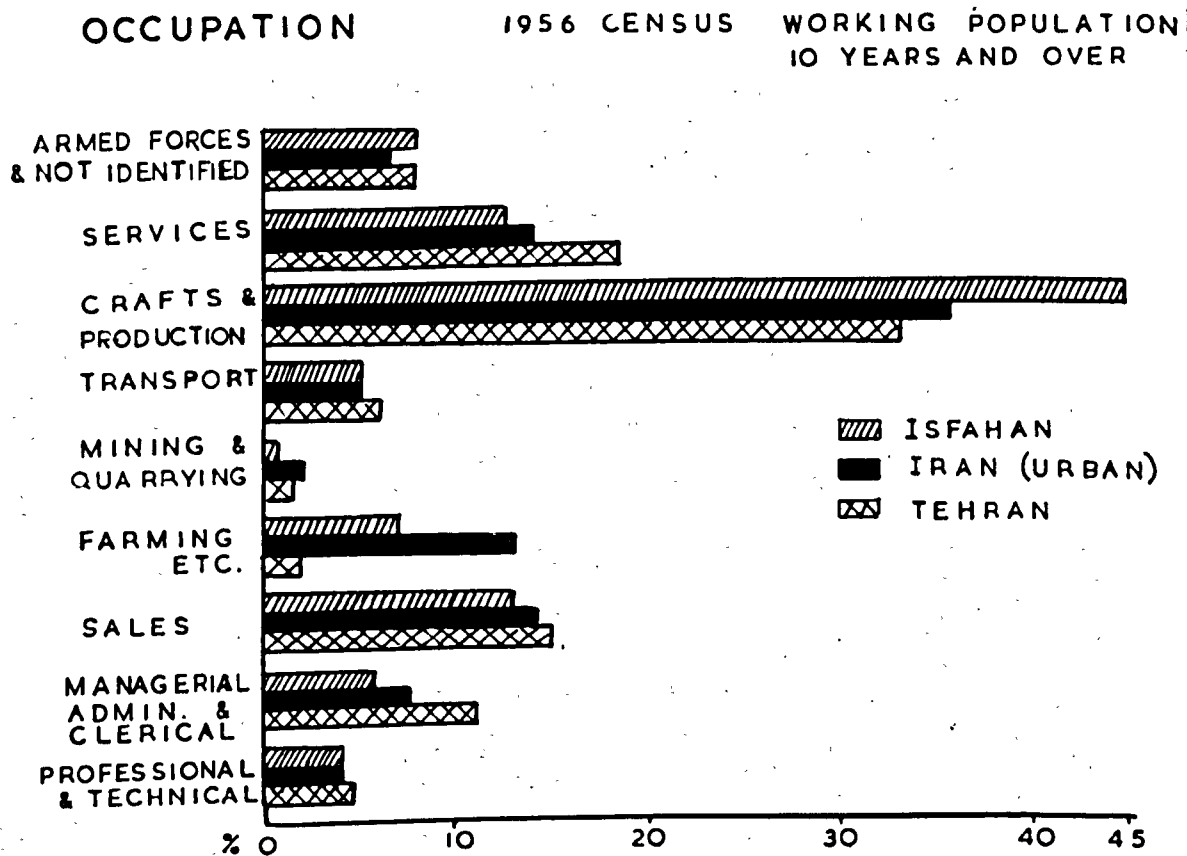
Typological classifications of towns have usually been based on employment structure. This is dealt with in two tables of the 1956 census, "Occupation of the employed population 10 years and over" and "Industry Division of the employed population", the difference being

that the former's categories of professional, technical, managerial, administrative, clerical and related occupations are divided in the latter among the industries which are thus served, or classified under Services. The "Sales" category is thus augmented to become "Commerce" and "Transport" increased considerably. However, the functional picture obtained from both schemes are similar. (Fig.37 (Appendix 7))

It is noteworthy that employed population in Iran includes workers from the age of 10 upwards. Female labour affords only an infinitesimal proportion of all occupations except manufacturing and services and numbers are even small in the textile industries of Isfahan. The figure of 13% in farming, forestry, hunting and fishing may seem excessive for an urban population. This is, however, concentrated in the centres of 5 to 10,000 population where, despite the undoubted presence of urban functions, agriculture may still employ many of the inhabitants. This is a complicating factor in defining urban status in Persia, as discussed below. Again in the break-down of Occupation tables, service occupations are predominantly domestic or "protective" and a sizeable proportion of those engaged in retail trade do not operate in shops. An understanding of traditional Persian social and economic customs is necessary to explain all these facts, which would not appear in a similar examination of European or American cities.

TEHRAN AND ISFAHAN - EMPLOYMENT STRUCTURE

FIG. 37.



The categories of the Occupation and Industry Division tables do not allow the application of all Chauncey Harris's types, based on examples from North America,¹⁵ as they do not distinguish between retail and wholesale trade, this being difficult in practice. However, for his type A manufacturing city, manufacturing should account for at least 74% of employment in manufacturing, retailing and wholesaling and manufacturing and mechanical industry be at least 45% of all workers. As in Isfahan the figures are 73% and 40% (using Commerce instead of retail and wholesaling) the town corresponds more closely with the B type which has indices of 60% and 30-45% for the same factors. This would put Isfahan in the same category as Buffalo, Syracuse, and Pittsburgh in the U.S.A. manufacturing belt. The anomalies are obvious when the historical background of Isfahan is taken into account. Tehran having the figures of 40% and 23% for the manufacturing centre formulae, falls into the category of diversified cities, including New York, Los Angeles, Chicago and Boston, which is appropriate for a city of metropolitan status and a seat of centralised services including administration, with a not inconsiderable industrial base.

However urban geographers have been voluble on the shortcomings of Chauncey Harris's classification. It is more logical and satisfying to turn, as later writers have done, to the national employment structure and try to distinguish types from deviations from it. As many such classifications were designed for application in specific countries, for example, Pownall's for New Zealand¹⁶ and

Nelson's for the U.S.A.,¹⁷ these cannot be applied directly to Iran. Even where similar data is available it is not grouped under similar headings. However, using the principle, the employment structure of Tehran and Isfahan may be compared, on a percentage basis with that of urban Iran. (Not the whole country as 75% of the working population are peasant farmers.) (Fig.37)

Isfahan's percentage exceeds the national only in manufacturing, but then by a considerable amount, emphasising its function as a manufacturing centre. Its administrative functions are not underlined. This must await classification by rank. While having a larger percentage in farming than Tehran, Isfahan still does not approach the national figure. The application of Pownall's scheme for constructing means for towns of certain sizes would correct this. Tehran exceeds the national figures in occupations connected with the town's status as capital. Thus classifying it as a diversified or multifunctional centre. Primary industries, as would be expected, are minimal and manufacturing below the national percentage. It is significant to note that many classifications conclude that the majority of towns are multifunctional and only the manufacturing centre emerges as a definite type. The use of employment structure as the basis for classification explains this and also the masking of functions which may have greater importance than figures for employment can indicate. Thus a typological classification of towns in any country, if it is

based on employment, is unsatisfactory. It can, however, be usefully coupled with a classification based on rank and the construction of an urban hierarchy.

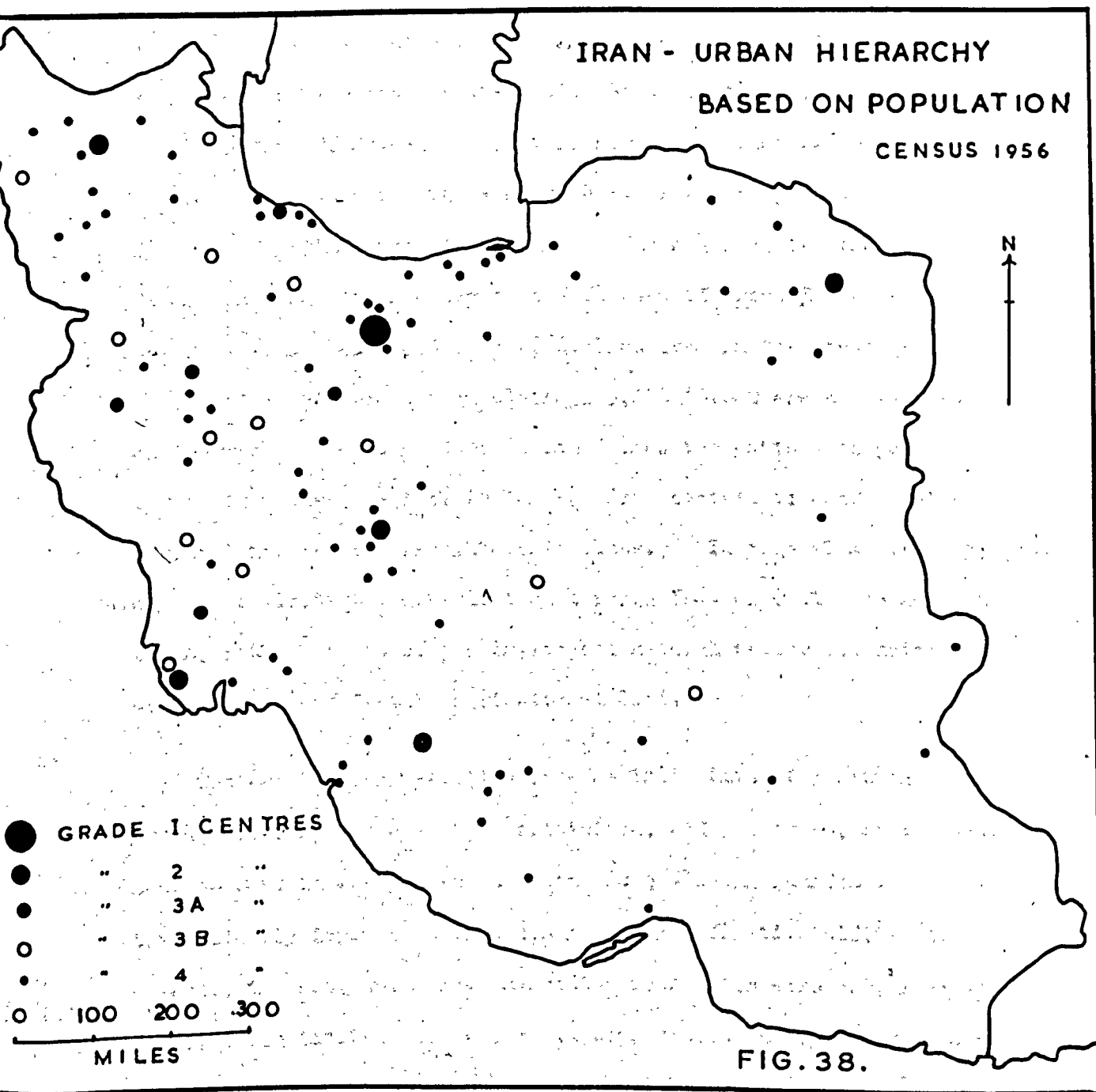
Towns have been classified by rank on the basis of several criteria including size, administrative status and importance as service centres. The service equipment of a town has served to indicate its status in the schemes of Smailes and others.¹⁸ If such a scheme could be devised for Iran, Tehran and Isfahan would appear high on the list as they are far in advance in providing services both of the modern and traditional types. Similarly if accessibility by bus services could be mapped, as done in England by Green,¹⁹ and Carruthers²⁰, a hierarchy of bus centres could be drawn up. Such data would be very difficult to obtain in Iran where timetables are rarely written down and services spasmodic. Few towns in Iran are on railways and private cars are few outside the largest towns, but bus fares are low and taxis and hired cars are widely used. All this must be taken into account were a hierarchy based on accessibility devised for Iran.

Smailes found that the categories of his hierarchy for England and Wales could broadly be correlated with size of population. Whatever criticism is directed against the use of population as an indicator of urban rank, it is a factor easy to apply, easy to compare and for which data is usually available even in underdeveloped countries. Also in a

country where urbanisation and industrialisation on a 20th century scale is only just beginning, where the urban population is only 31.4% of the whole, it is obvious that the majority of those in urban places must be engaged in providing services, and the anomalies of manufacturing areas, large in size, but lacking in services, do not exist.

The 1956 census of Iran gives population figures for 186 "Urban places", that is, places of over 5,000 population. A dispersal diagram serves to determine significant breaks, from which categories may be derived (Appendix 8) (Fig.38) Tehran, the primate city must obviously occupy Grade I, much as London does in hierarchies for Britain. It is followed by the five major regional capitals, all of which, except Abadan, have been capitals of Persia, with long histories of strategic importance. Abadan has grown to prominence only recently as the centre of the oil industry, while the traditional centre of Khuzistan is Ahvaz. Grade three towns are almost wholly confined to the west of Iran, following the overall distribution of population. The class is divided into an upper group of five including the major regional centres of Ahvaz, Resht and Kermanshah, with Hamedan which shares the regional role of Kermanshah, and Qom, a religious centre.

The 3B centres are again concentrated in the west, but Yazd and Kerman appear as the largest centres for south-eastern Iran. It is indicative of the poverty of this area that its regional capital, Kerman should appear so low in the hierarchy. The scatter of Grade 4



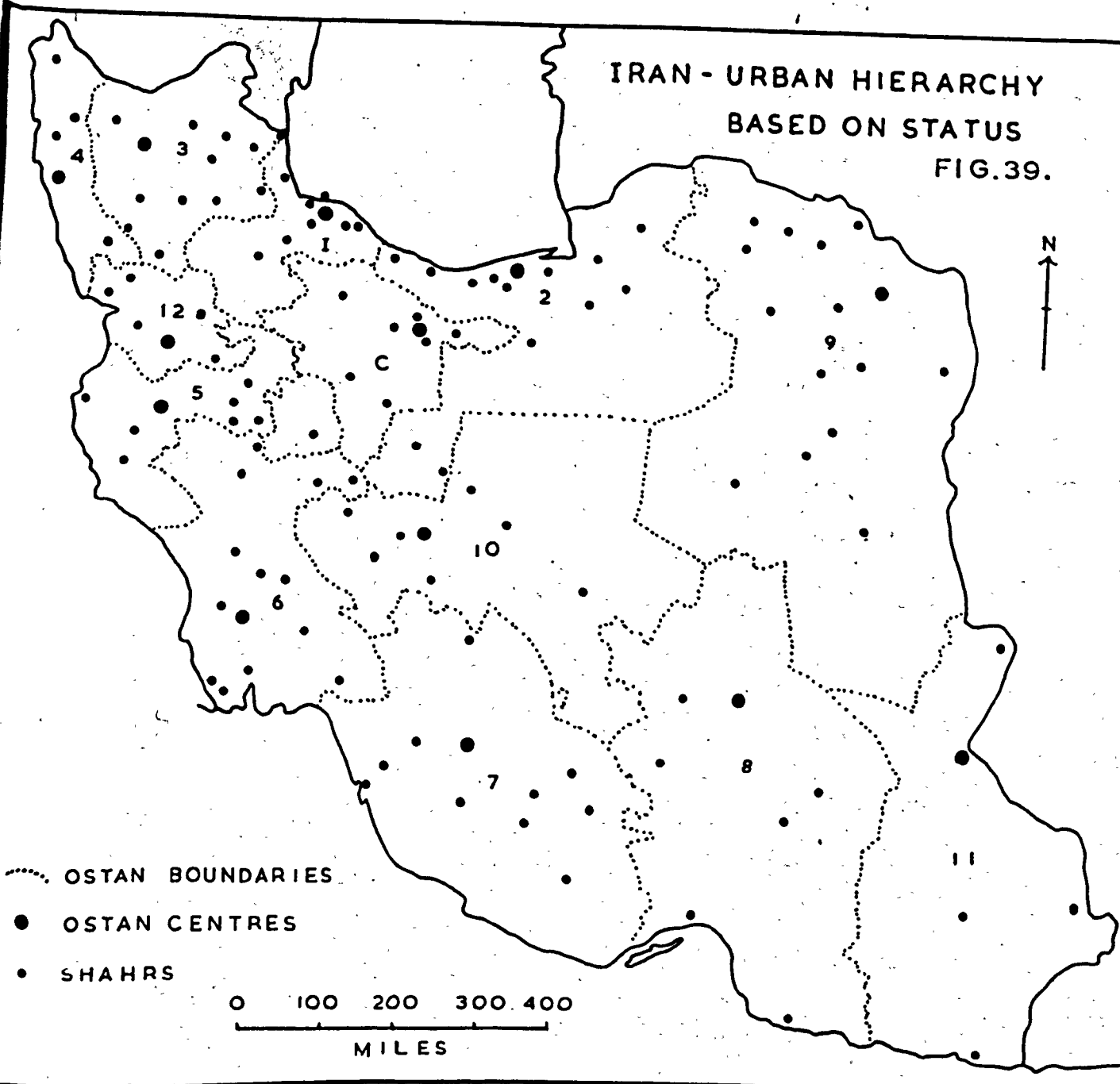
centres follows the distribution of population with a concentration in the densely populated Caspian provinces, in the Isfahan oasis and to a lesser extent in the plains of Khuzestan and the Zagros near Hamedan and Shiraz, where they serve as market centres for peasants and nomads. Those near Tehran may perhaps better be considered part of Greater Tehran. The overwhelming pre-eminence of Meshed in Khorasan is shown by the absence of Grade 3 centres here. The south-east has a scarcity of centres even in the lower grades. Ninety other places with populations 5,000-10,000 are not included on the map or table. These again follow the pattern of population, but it is noteworthy that in Eastern Iran centres of considerable regional importance come into this class. In general a hierarchy based on size reflects the distribution through Iran of wealth to support towns, both in terms of population and natural resources, chiefly well-watered and fertile agricultural land.

The use of administrative rank as indicative of position in an urban hierarchy has also been criticised, and justly so, in a country such as Britain where borough status is jealously guarded and where towns closely impinge on each other making definition difficult. However, in Iran, Ostan and Shahrestan boundaries were only recently (1937) reconstituted from the ancient provinces and adjustments are still being made. Also towns are usually well-spaced, the only incipient conurbations being Greater Tehran and Abadan/Khorramshahr.

Iran is divided into 13 "Ostan" or provinces, known by name and number (Fig.39) The Ostan centres form the regional capitals, which include Tehran and four of the Grade 2 centres. In each case, and in the case of Sanandaj these are also the largest towns in the province. However in the other seven provinces there exist towns larger in population than the Ostan centre, several in the cases of Sari and Ahvaz. These are both in areas where population is dense and towns numerous. Other anomalies may be due to particular historical circumstances.

The Sharestans, 136 in all, into which the Ostans are divided are each based on a city or "shahr". Size is no exact indicator of administrative rank as one shahr is a Grade 2 centre, two are Grade 3b, ten Grade 3c, fifty-nine Grade 4 and fifty-one Grade 5, that is, below 10,000 in population. The smallest shahrestan has only 758 inhabitants and 26 have under 5,000. In other countries doubts would be voiced as to whether these could be called towns at all, in fact they are not considered "urban places" in Iran, as seen above. However, as a "shahr" they must contain a minimum of administrative equipment. On the other hand there are Grade 4 centres which are not shahr, the largest being Tajrish with 26,500 and Aghajari with 24,200. Several of these are dependencies of large towns. (Appendix 8) Just as extremely small towns with the status of "shahr" may be found in

IRAN - URBAN HIERARCHY
BASED ON STATUS
FIG.39.



sparsely populated areas, so large centres in densely populated areas may lack this distinction.

These two methods of producing a hierarchy indicate the fact found already in western countries that administrative rank does not reflect size as it is designed to cover the country with administrative centres regardless of the size of towns present in an area. This, however, does not affect the position of Tehran and Isfahan, the former leading the hierarchy both as primate city and capital and the latter appearing in the second rank as regional centre and Ostan head.

Although it is not proposed to enter into the problem of defining and delimiting the urban field or sphere of influence as a concept of urban geography, it may be asked if the relationship of the shahr to the sharestan in Persia is that of the city to its region? Like all pre-industrial cities, Persian towns have had to carve out for themselves tributary areas from which the agricultural surplus could be gathered for food and raw materials and from which population could be drawn to expand the city. This was necessary for the city's very existence. In return the city extended services to its region, marketing, administration and defence. Only the largest towns, being the seats of kings or princes, or trading centres, could extend their influence further afield. The core area of the tributary region will remain constant even though the fortunes of the town fluctuate. This

has now been officially constituted as the shahrestan. However, it must be remembered that once this is delimited officially the head of the shahrestan will attain a degree of artificial nodality not perhaps warranted by its size and equipment. Where no such boundary exists, the forces of attraction and accessibility have free play. Also the size of the shahrestan does not vary with the importance of the shahr. Some of the largest shahrestans in eastern Iran are centred on the smallest shahrs. The shahrestan of Chahbehar in Baluchistan is more than twice the size of Tehran shahrestan. Obviously in some respects Tehran's sphere of influence covers the whole country. The shahrestan whilst important and interesting historically, is now mainly a unit of administrative convenience and so must be handled with care when urban fields are under discussion.

The foregoing attempt to classify Persian towns on the basis of a typology and a hierarchy has two purposes. Firstly, and more relevant to this thesis as a whole, it places Tehran and Isfahan in their positions in Iran and in relation to the other towns, showing where their functions, built up through the historical factors discussed above, have brought them at present. Secondly the attempt to apply specific concepts of urban geography as developed in Europe may be valuable in the study of Middle Eastern towns in general and Persian towns in particular.

Part 3THE TRAIT COMPLEX

The idea of the trait complex as a useful device in the description and analysis of phenomena on the earth's surface has often been developed by geographers. In "Urban Hierarchy of England and Wales", Smailes chose his symbols of urbanism, expressed them as a formula, and concluded that where all were present, a fully-fledged town existed.¹⁸ Although the primary object of this study was to devise a hierarchy, it may also be said that Smailes, in his choice of significant features, typified the British town of the 1940s in its simplest terms.

The same idea is implicit in much of Mumford's work on the historical development of cities.²¹ In discussing a city typical of a stated area at a stated period, he describes the morphological features which distinguish the type. For example, in discussing the ancestral forms and patterns of the city, he examines the ancient cities of Mesopotamia and Egypt and sees in the congregation of citadel, temple, palace, cistern and granary, the trait complex of urbanity under the prevailing conditions. Each represented a driving force which contributed to the "urban implosion" from which the city was born, religion, administration and economic power. Each force was embodied in some building of physical feature observable in the townscape. Similarly the Greek city of Athenian times was distinguished by its grouping of market, theatre and gymnasium, and Roman cities, by their distinguishing features of public baths and arenas.²² Much later the

paleotechnic industrial city had as its main elements the factory, railway and slum.²³ These examples do not claim to enumerate all the morphological features of the towns in question but rather only those which are significant in distinguishing them as types and in differentiating them from towns in different areas and at different historical periods. Smailes recognised the use of the trait complex in his description and analysis of townscapes.²⁴ In discussing townscapes comparatively he saw great scope for generalisation and the recognition of recurrent associations and important constituent elements as the bases of types. He saw this as an aid to the classification of towns, as functional classifications were not always satisfying, leading, as seen above, to the conclusion that most towns are multifunctional. His examples were rather elaborate, but that of the British County town can be applied to Carlisle, York, Durham and many others, with little difficulty. The typification of the British seaside resorts is equally apt and applicable. It is a very important point however that all these examples of trait complexes are limited in their applicability, in space and time and in the size and status of the towns under consideration. Nevertheless it is possible to discover in Persian cities, morphological features which are typical of them and which may be drawn together into a trait complex along the same lines.

The basic complex of bazaar, mosque, hammam, and maydan can

certainly be said to be typical of Persian settlements as a whole as it is found even in villages. However in cities qualifications must be made. The bazaar is a network of covered streets including shops and associated caravanserais, which is still the heart of a Persian city. In a city a certain proliferation of religious building is typical, with representatives of the specialised forms of mosque, madraseh, takiyeh and imamzadeh. One mosque usually has the title of Masjid-i-Jami', the Congregational Mosque; one of the largest, most ornate and well-kept. It often has a strategic position with relation to the centre of the historical kernel of the city, and often the chief bazaar leads from it to the principal city gate.²⁵ Baths also proliferate in towns. The maydan shares with the Masjid-i-Jami' the central position in the historic Persian town-centre. It may sometimes act as a "parvis" to the mosque. Although even a small village will have its open space, it is only in towns when this is regularised and surrounded by ornamental arcades, as in Isfahan.

Added to these traditional morphological features must be the elements of the new avenue and roundabout, created under Reza Shah and still being extended in many towns. The pattern of wide tree-lined boulevards with roundabouts at their intersections embellished with a statue, a small garden, and perhaps a pool, has been overlaid on the former irregular street-pattern. This has been the greatest step towards uniformity in Persian townscape since the adoption of Islam gave pre-eminence to the minaret and the mosque.

These then are the typical morphological features of the Persian town. The evolution of these features - bazaars, mosques, other religious buildings, baths and squares have been examined in detail in part 2 of this thesis. Many trends noted there may also be found in similar studies of other towns. Those which have been important regional centres often show in their townscape the modern counterpart of the citadel, the administrative quarter on its site, such as Kerman. Those which have been capitals have palaces and gardens such as found in Shiraz. Walls and other defences usually have little surface expression today, and quarters inhabited by racial or religious minority groups have often broken down as in Tehran and Isfahan. Tehran and Isfahan are not only typical Persian towns, but typical of cities which have been capitals of dynastic states in the orient. In this respect certain features of townscape are similar to those found in similar cities in Northern India such as Delhi, Agra and Jaipur, as well as Istanbul and Cairo.

It is maintained that such a concept, that of the urban trait complex, has relevance to the theories of urban geography and could usefully be extended and applied elsewhere. Hartshorne has said that the geography of an area is represented by a limited number of characteristic features, and that these phenomena vary in space.²⁶ This applies also to the geography of towns. The study of the evolution of Tehran and Isfahan with special reference to these significant and spatially variable phenomena thus has wider geographical meaning.

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APPENDICES

Appendix 1.

GATES OF ISFAHAN, ACCORDING TO TRAVELLERS

See also fig. 10

	17th Century			18th Century		19th Century	
	<u>Tavernier</u>	<u>Thevenot</u>	<u>Chardin</u>	<u>Le Bruyn</u>	<u>Careri</u>	<u>Macgregor</u>	<u>Coste</u>
<u>Herbert</u>							
De-oridest	Der Dekt	Der-decht	Deredechte	Darideft	Der Dext	Daridast	Derdecht
	Der Tokchi	Der Tokchi	Tokchi	Togt-sjie	Der Tocxi	Togtshie	Tokhtchi
Youbara			Joubaré	Sjoebarn	Guibare	Shoebarn	Djoubareh
Sheydack			Seidahmedion	Seydach	Sect-	Saidak	Seid
Madayan				Moedjoen	Hamedeyan	Moedjoen	Ahmedioun
Kerroen			Kherron	Karoen	Herrum	Karoen	Kiarroun
Hazena-baut	Nasanabad	Nasanabad	Hassenabad	Hassanabaet	Assannabaet	Hasanabad	Khajou ^a
Dodwaet	Der Sha	Der Cha	Deulet	Doulet	Daulet	Dowlat	
Lamboen	Vasal Lembon	Vasal Lembon	Lombon	Lembon	Lombun	Lamboen	
Mergh ^b	Der-Mark	Der-Mark			Mod-bac ^c		
Tebrizabaut	Vasal Schab	Vasal Scab		Navv	Abbasi	Nao ^d	
				Cykaroen		Cy Karoen	Kiarroun N.W
				Hadsjie			
Cherbaugh ^b							Tcharbag
Gouidest ^b							Zilleh
Chaly ^b							Marnoun
							Sipoulek
							Djouhouzan
							Bidabad

a - successor at end of New Chahar Bagh

b - shut up "lately".

c - perhaps refers to Kitchen Gate of Palace

d - refers to new suburb of Abbasabad/Tabrizabad.

Tavernier and Thevenot's gates were "near the harem".

Appendix 1TEHRAN, CITY GATES

First wall built by Shah Tahmasb 961 H. - 1554

Darvazeh Hazrat Abdul Azim	- named after shrine at Rey to the south
" Shemiranat	- named after area of Elburz slopes
" Qazvin	- named after city to the west
" Doulab	- named after village close by to the east.

Added by Afghans

Darvazeh Ark	- named after palace quarter
later Darvazeh Doulat	- Royal or State Gateway, as on 1858 map.

New Walling late 18th century by Agha Muahmmad Khan Qajar
Five gates named above retained in same positions.

Added by Muhammad Shah

Darvazeh Muhammadiyeh	- named after the Shah, as on 1858 map
or Darvazeh Nou	- New Gate, so named by Gobineau, Binning, etc.

Last Walling 1860s and '70s, by Nasir-ud-Din Shah

Darvazeh Doulat	- successor of earlier gate
" Shemiran	- successor of earlier gate
" Doshan Tepeh	- named after hill to east of city and royal shooting lodge there.
" Doulab	- successor of earlier gate
" Mashhad	- named after city in Khorasan, main exit to east.
" Pol-i-Ra'ahan	- Railway Bridge Gate, exit of railway to Shah Abdul Azim shrine.
" Shah Abdul Azim	- successor of earlier gate
" Ghar	- Cave Gate, named after brickworks to its north and south
" Khaniabad	- named after village close by to southwest
" Nou	- so named by Browne, successor of earlier gate
" Gomrok	- Customs Gate, main exit to east but by 1922 traffic moved to Qazvin gate (Fortescue)
" Qazvin	- successor of earlier gate
" Bagh-i-Shah	- named after royal garden to west
or " Asb Davani	- Race-course Gate, so named by Browne
" Yusufabad	- named after royal garden to north
or " Bihjatabad	- so named by Browne after royal garden to north.

Appendix 2CARAVANSERAIS OF ISFAHAN, NAMED BY CHARDIN

<u>Owners</u>	<u>Named after Trade</u>	<u>District</u>	<u>Miscellaneous</u>
Mirza Rezi	London cloth	Kashan	Stable
Maksud Assar (2)	Rice-sellers	Lar people	Holat
Mollayen Beg	Rope-merchants	Multanis	Payder
Lelebec	Cotton-carders	Khorasanis	Vine Palace
Saroutaki	Exchange	Babylonians	Elephants
General	Bankers	Kaulis	Royal slaves
Emir Bec	Pomegranate-sellers	Gulpeygen	
Hakim Muhammad		Indians	
Mecheldar Ba shi		Dergezin people	
Père Compagnon			
Mir Ismael			
Begum			
Mirza Ismael Kavechi			
Mirza Koudchec			
Ali			
Ali Couli Khan			
Sefi Mirza			
Geddeh			

<u>Named</u>		<u>Suburban</u>	
Owners	19	Kadjouc	15
Trade	7	Abbasabad	24
District	9	Shaykh Sabana	3
Miscellaneous	6	Kherron	2
Royal	3	Bidabad	11
	<u>44</u>		<u>55</u>
Total named 99		Overall total quoted 1,802	

(Names as in Description d'Isfahan Ed.Langlès Paris 1811, Vols. 7 & 8)

Appendix 2

CARAVANSERAIS OF TEHRAN, AFTER 1858 and 1892 MAPS. (See also
figs. 19 & 20)

<u>Named after owners</u>	<u>Other</u>
Hajji Hadi	'Alam Shikan (world-shatterer)
Hajji Kamal	Golshan (flower-garden)
Hajji Nadir Ali	Golshan shikan
Hajji 'Abdul Vahhab	Dalan daraz (Long Hall)
Hajji Mukhtar - Dust Ali Khan	
Hajji Seyyid Mukhtar	Qaysariyeh
Hajji Mulla Ali - 'Ala-ud-Douleh	
Hajji Hasan	Garden Kaj (Twisted neck)
Hajji Zaman	Yazdiha (People of Yazd)
Hajji Sayf-ud-Douleh - Zoroastrians	
Timcheh Hajji 'Ali	Nou (New)
Shah	Naqarehkhaneh (Drum-house)
Navvab	Timcheh Zargarha (Goldsmiths)
Amir	Timcheh of the Armenians
Kalantar	Khudai (of God) - Hajji Seyyid Mahmud
Sulayman Khan	<u>Added by 1892</u>
Shaykh Ja'far	Chihil Tan (40 bodies - shrine)
Ahmad-i-Kur	Orchard of Amin-ul-Mulk
Mirza Isma'il	House of Amin-ul-Mulk
Mirza Abbas	
Mirza Maruz Vazir	

Appendix 3YAKHCHALS AND BRICKWORKS

Ice has always been essential for preserving food during the long, hot summers of Iran. As well as being obtained directly from the mountains, ice was manufactured in towns by means of the "Yakhchal". This consisted of a mud wall, up to 30 ft. high,--running east-west for about 100 yds. On the northern side of this a trench was dug. During winter nights shallow enclosures nearby were flooded with water, which then froze, and the ice could be dug out and stored in the deep trench. Further layers were added to build up a considerable thickness of ice, which would not melt, being in perpetual shade behind the high wall, and covered with straw. In summer the ice was dug out in blocks and sold.

Sometimes the yakhchal also incorporated a domed building beneath which was a lined pit, also for storing ice. Yakhchals often consisted of several of these walls and storage domes.

Yakhchals in Isfahan are mentioned by Chardin, (Vol.7 p.429) and Struys (Chap. 32 p.324) who described an ice-pit 40 foot deep, with a clay wall 10 fathoms high. Furrows were dug and "set all over with water". No other writers, however, mention ice houses in Isfahan. Only a few small ones remain, some of which, however, are still being used.

In Tehran they were always important even though the town is near

high mountains. Olivier (Vol. 5, Chap 3, p.92-4) said that the icehouses provided ice abundantly in summer and at a very low price. Feuvrier (Chap. 3 p.203-4) added that although ice was brought from the permanent snowfields of Demavend all the year round, the town had ice houses, extensive shallow basins inside walls, and the ice was stored in closed reservoirs. They are still being used although there are fewer now because ice factories are more efficient and hygienic, and can handle great quantities of ice quickly, all the year, with no storage problems. Municipal authorities in Tehran and Isfahan have attempted to prevent the use of "yakhchal" ice in direct contact with foodstuffs, but have not been wholly successful.

Few Yakhchals are shown within the walls in 1858 (Fig.4) but Krziz's map marks several to the east outside. By 1892 these and others had been enclosed within the new walls (Fig.21). These 12 yakhchals are all named after their founders - hajjis and courtiers. They are scattered over the new area, with a group in the east, probably for reasons of water supply. By 1956, when the first air-photographs of Tehran were published, all these, except one, had been built on. If this took place early with houses in the courtyard style, their sites are undistinguishable. Others were built over later with more modern houses, and the lines of houses and streets follow the pattern of the old walls. The Hajji Aqa Muhammad yakhchal has, however, survived and is used as a nursery, employing the steady

water-supply from a qanat, and making use of the walls for shade.

Air photographs reveal many yakhchals outside the line of the walls. There is a grouping to the east and to the south-west. Many are disused but the solid walls are a distinctive feature in the townscape. Some date from the 19th century, but some are comparatively modern. They are now used as garages, storage for timber and other heavy and bulky supplies, and many are gradually being demolished for building, as can be seen along Kh.Rey. None of the existing Tehran yakhchals have the domed chamber attached. In other towns it is the dome rather than the walls which has survived.

Brick-making was an essential local industry in Iran before the days of modern transport. In its simplest form it consisted of digging a pit, mixing earth with water to a suitable muddy consistency forming bricks roughly by hand and drying them in the sun. This could be done by anyone wishing to build a house. Borrow pits could be found even in the centre of towns. Several are prominent on the 1858 Tehran map (Fig.4) and the quarter name "Chal-i-Maydan" is said to derive from this. Once a pit was dug out it was almost useless for building without expensive infilling, and usually remained an open space or rubbish heap.

Tehran's brickfields have always been to the south of the town. The firing of bricks in great square kilns to produce a more durable

product became the practice, but these were only used in the more sumptuous buildings. Lime-slaking accompanied brick-firing and produced a complex area of pits and mounds mentioned by 19th century travellers. This included the strange earth dwellings in disused pits, used by very poor families, and as stables. Part of this area was included in the 19th century walls. Curzon said that the vazir had the monopoly of the industry. Fig. 5 shows land belonging to him in the south of the city, but the kilns themselves bear the names of merchants and aristocrats. The brickfields moved slowly south as supplies of clay ran out, but still proved a check to the southward development of Tehran, for even when the land was vacated it was difficult to build on. Several of the old, square brick kilns exist today, although all the land formerly within the walls has been reclaimed.

The brickfields of Tehran now cover a very large area in the south and south-east of the city. The building boom since 1930 has encouraged tremendous expansion in the industry which now exports bricks to other cities and even to Persian Gulf states. Modern methods are employed and oval kilns, heated by coal and oil, with conspicuous chimneys have replaced the old. Local low-grade coal from Elburz fields is used, and a variety of grades of brick produced. The multiplicity of kilns and chimneys scattered among pits and piles of raw and fired bricks creates a distinctive landscape, not completely

hidden by ribbon development along the main roads, and when a pall of black smoke hangs over it, it is a rather ugly area.

Growing air pollution and the wastage of land has led the municipality to press for the removal of the brickfields away from the town. This is, in fact a natural process; when the area taken by a company is worked out, it must leap-frog the intervening fields and move south or east. Companies are quite pleased to do this as unused land is plentiful and cheap. The task of reclaiming vacated land is less easy, and the large areas of chaotic wasteland which remain are more undesirable than the brickfields themselves, as they serve no useful purpose. Residential development is, however, beginning in the area.

No travellers comment on the brick-making industry of Isfahan, probably because it was away from the town and main roads to it, and shrouded by trees. It has probably always been to the north and north-east of the town where desert land comes nearest and where expansion is possible without encroachment on agricultural land. After 17th century expansion, little new building was undertaken, and the ruins provided such raw material as was needed, so there was little demand for bricks. Today the brickfields are like those of Tehran on a smaller scale and there is no pressure on them to move. The Master Plan allocates them space contiguous to present establishments. Little expansion is likely now that supplies from Tehran are of good quality and easily available by road.

Appendix 4RELIGIOUS BUILDINGS OF ISFAHAN named by Chardin

<u>Mosques</u>	<u>Named after founders or persons commemorated.</u>	<u>Other</u>
Mirza Rezi	Coje Seilf-ud-Din	Darbetiq
Shah	Imam Kuli Kahn	Zulfogar
Mirza Moain	Fath Alla (Lufullah)	Green
Rustam Khan	Nezur-ul-Mulk	Old Cathedral
Hulukhan	Dilenchi Khan	Sengerieh
Mufti	Zein-al-Abedin	Fortress Kemarzerin
Hakim Daoud	Mecheldar Bashi	<u>Suburban</u>
Ali Bekrek	Aqa Nur Joula	Lombon
Mulla Negmé	Aqa Chir Ali	Baguer Divoné
Mulla Lamon	Coja Moharram	Sa'adat Abas Palace
Mirza Ismael	Seyyid Ahmad	Royal Slaves
Scander Mirza		Mosques named in city 30
		Cadjouc 12
<u>Suburban</u>		Abbasabad 12
Hussayn	Chief Goldsmith	Shaykh Sabana 2
		Kherron 2
		Ahmedion 2
Mustofi	Mir Kassem Bec	Tokchi 2
		Derdecht 2
Lelebec	Ali Bec	Bidabad 8
		<u>72</u>
Total quoted for Isfahan 162		

(Names as in Description d'Isfahan, Ed. Langlès, Paris 1811, Vols. 7 & 8)

<u>Madraseshs</u>	<u>Named after founders or persons commemorated</u>	<u>Other</u>
Abdulla	Fath-alla (Lutfullah)	"des Anes"
Aqa Kafur	Coja Moharram	Sefevi
Geddé	Vazir des biens legués	Arab
Mirza Cazi	Aqa Chir Ali	Bazil
Shah Tahmas	Nezur-ul-Mulk	Jafarieh
Macsud Assar		Gulguez
<u>Suburban</u>		Guech Khunyon
Ali Bec	Shaykh Yusuf Benna	Zemaun Berahi
Hussayn	Muhammad Saleh Bec	<u>Suburban</u>
		Gloire dy Pays
Madraseshs named in city		19
Cadjouc		8
Abbasabad		5
Shaykh Sabana		2
		<hr/>
		34
Total quoted for Isfahan		48

(Names as in Description d'Isfahan, Ed. Langlès. Paris 1811 Vols. 7 & 8)

RELIGIOUS BUILDINGS IN TEHRAN
from 1858 and 1892 maps and Nijeholt, 1873

<u>Quarter</u>	<u>Mosques</u> 1858 1873 1892	<u>Madrasehs</u> 1858 1873 1892	<u>Takiyehs</u> 1858 1892	<u>Imamzadehs</u> 1858 1892
Oud Lajan	2 3 5	4 4 4	9 10	- -
Chal-i-Maydan (Maidan Schah after Nijeholt)	2 1 5	- - -	10 10	2 2
Bazaar	5 4 5	6 5 7	12 14	1 2
Sangalaj	1 2 2	5 6 5	10 11	- 1
Ark	1 1 2	3 2 1	1 1	- -
New town	2	1	2	1
Mosque of Shah 'Abdul 'Azim	1			
TOTALS	11 12 21	18 17 18	42 48	3 6

RELIGIOUS BUILDINGS IN TEHRAN
from 1858 and 1892 maps.

<u>Mosques</u>	<u>Oud Lajan</u>	<u>Bazaar</u>
	Al Bahram	x Jami'
	Hakim Aqa Mahmud	Shah
	<u>Added by 1892</u>	Seyyid 'Azizullah
x	Houz	Amir
	Ain-ul-Mulk	1 unnamed
	Madraseh Sepahsalar	
<u>Chal-i-Maydan</u>		<u>Sangalaj</u>
	2 unnamed	Hajji Rajab 'Ali
	<u>Added by 1892</u>	<u>Added by 1892</u>
	Amin-ud-Douleh	Shahmadar Khanum
	Saheb Divan	<u>Ark</u>
	Hajji Abul Fath	Zill-us-Sultan
	Shahhab-ul-Mulk	<u>Added by 1892</u>
	Hajji Mousa Muhammad Ja'far	2 unnamed
	<u>New Town 1892</u>	
	Sepah Salar	Projected Navvab Sayf-ud-Douleh
	Vazir	" Sarraj-ul-Mulk

Madrasehs Oud Lajan

Khan Marubi

Mirza Salih

X Daniki

Sa'ad-ul-Mulk

Chal-i-Maydan

None

Sangalaj

Mirza 'Ali Karim

Reza Mirza

Hajji Rajab 'Ali

Yunus Khan

1 unnamed

New Town 1892

Vazir

Bazaar

X Mahaniyeh ?

Shafa Dara

Masad ?

x Bazaar

Amir

1 unnamed

Added by 1892

1 attached to Amir Mosque

Ark

Mem ? Allah

x Dar-ul-Funun

1 unnamed

Takiyehs Oud Lajan

Al Bahram
 X Paminar
 x Daniki
 Riza Quli Khan
 x Sar Chishmeh
 Gayumars Mirza
 x Masjid-i-Houz
 x Oud Lajan
 x Hayyat Shami
Added by 1892
 Pir Zan

Chal-i-Maydan

Abul Qasim Shirazi
 Goldsmiths
 x Women's Bath
 Afshars
 Mirza Qadir
 Pahlavan Sharif
 'Abbas 'Ali
 Riza Quli Khan
 x Sar Pulak
 Arabs
Ark
 x Kesht
Added by 1892
 x Doulat
New Town 1892
 1 unnamed

Bazaar

Muleteers
 X Chihil Tan
 x Zamburak-khaneh
 Brick-makers
 x Haft Tan
 x Khoda Afarin
 x Koud - Deep
 x Malikabad
 Khalajis
 Nouruz Khan
 Suhrab Khan
 Manuchihr Khan
Added by 1892
 x Abbasabad
 x Deep
Sangalaj
 Hasan Hakim
 Afshars
 Miran
 x Dabbagh-khaneh
 Hajji Baqir
 Hajji Rajab 'Ali
 x Himmatabad
 Qummis
 x Monastery
 1 unnamed
Added by 1892
 x Ab Bakhsh Kaz ?
 Mu'ayyar

Imamzadehs Oud Lajan

None

Chal-i-Maydan

Yahya

Seyyid Isma'il

Ark

None

Bazaar

Zayd

Added by 1892

Vali

New Town 1892

Sar Qabr Aqa

x Named other than after founders or persons commemorated

? Name doubtful.

Appendix 5PUBLIC BATHS IN ISFAHAN
named by Chardin.

<u>Owners</u>	<u>Baths named after:</u>		<u>Royal</u>	<u>Miscellaneous</u>
	<u>Guilds</u>	<u>Minorities</u>		
Mirza Rezi	Saffron-dealers	Jews	Kitchen Gate	White
Saroutaki	Stone-cutters		Lelebec Bazaar	Paradies
Rustam Khan	Royal slaves		Sa'adatabad	Throne
Seif-el-din	Hayder dervishes			Choura
Princess				Lavendi
Prévot				Nafchien
Muhammad Rouhalla				Brother of Goose
Hakim Muhammad		Owners	25	Cajouc 21
Shaykh el Islam		Guilds	4	Abbasabad 19
Chief Architect		Minorities	1	Bidabad 4
Khojen Alem		Royal	3	
Mirza Sedre Gehun		Misc.	<u>7</u>	
Chammellan Dechtur			40	<u>44</u>
Mirza Fessieh		Total named 84		
Vazir		Overall total quoted 273		
Shaykh	Jugi			
Aqa Chir Ali	Mulla Shams			
Aqa Zamon	Mir Qasim			
Aytemur Bec	Chief Goldsmith			
Mir Qasim Bec	Muhammad Taher			
Muhammad Taher				

Appendix 5

PUBLIC BATHS IN TEHRAN
from 1892 map

Named after owners

Nuqamar-ul-Haram

Hajji Ali Ahmad Kur

Vazir Nizam

Qavam-ud-Douleh

Mirza Khalam Panah

Navab

Mirza Saleh

Sarraj-ul-Mulk

Son-in-law of Hajji Hasan Abul Hasan,
 Zinat-ud-Douleh, Sani-ul-Mulk

Miscellaneous

Pakhiar

Pit

Treasury

Women's

Golshan

Unnamed 1

Total 16

Appendix 6ISFAHAN POPULATION. Estimates by travellers.

	<u>Year of estimate</u>		<u>Inhabitants</u>
Barbare	1470s		50,050
Don Juan	1560	80,000 houses	360,000
Herbert	1627	70,000 houses	200,000
Olearius	1637	18,000 houses	500,000
Chardin	1665	38,249 buildings	1,100,000 highest 600,000 least
Jesuit	1730		400,000
Jaubert	1800		100,000
Olivier	1807		50,000
Dupré	1807		c.100,000
		with villages	c.150,000
Morier	1808	80,000 families	400,000
Malcolm	1810		200,000
Morier	1811		60,000
Ouseley	1811	under	200,000
Langlès	1811		200,000
Drouville	1812		400,000
Kinneir	1813		200,000
Ker Porter	1821	less than	100,000
Alexander	1827		250,000
Briand	1829		200,000
Gordon	1833		200,000
Boie	1838		60,000
Sercey	1839		60,000
Flandin	1840		c.100,000
Dubeux	1841		60,000
Gobineau	1855		50,60,000
Sheil	1856	under	100,000
Binning	1857		120,000

	<u>Year of estimate</u>		<u>Inhabitants</u>
Malcolm	1861		200,000
Ussher	1865		80,000
Nijeholt	1866		100,000
Morel	1867		80,000
Macgregor	1871		200,000
Mounsey	1872		60,000
Basset	1874		50,000
Ballantine	1875		50,000
de Windt	1891		50,000
Bishop	1891		60,70,000
Curzon	1892	local authorities	200,000 70-80,000
Lefèvre-Pontalis	1892		80,000
Itinéraires	1895		100,000
Chirol	1903	plus villages	250,000
Anet	1907		100,000
Aubin	1908		120,000
Bricteux	1909		100,000
Stewart	1911		90,000
Nevill	1923		40,000
Norden	1928		c.175,000
Armory	1929		80,000
Ross	1931		122,000
Godard	1933		120,000
Morton	1940		127,000
Admiralty	1945		c.204,600
Sykes	1946		200,000
Census of 27th December 1940			47,230 families
Census of 1956			204,598 people
Master Plan 1961			254,708 "
			273,000 "

Appendix 6TEHRAN POPULATION. Estimates by travellers.

	<u>Year of estimate</u>		<u>Inhabitants</u>
Della Valle	1627		15,000
Herbert	1627	Houses 3,000	
Olivier	1796		15,000
"	1807		50,000
Gardane	1807		50,000
Dupré	1807		45-50,000
Morier	1809		60,000
Ouseley	1810		40-60,000
Kinneir	1813		60,000
Tancoigne	1820		45-50,000
Ker Porter	1821		60,70,000
Briand	1829		50,000
Sercey	1839		60,000
Flandin	1840	less than	100,000
Dubeux	1841		130,000
Stuart	1854		40,000
Sheil	1856		80,000
Binning	1856		80-90,000
Brugsch	1860		100,000
Eastwick	1864		100,000
Ussher	1865	less than	100,000
Macgregor	1871		60,70,000
Basset	1872		120,000
Mounsey	1872		120,000
Goldsmith	1874		100,000
Ballantine	1875		80,000
Arnold	1877		50,000 or 80,000
Serena	1877		200,000
Basset	1884		200,000

	<u>Year of estimate</u>		<u>Inhabitants</u>
Orsolle	1885		150,000
Brugsch	1886		100,000
Benjamin	1887	over	100,000
Stevens	1887		180,000
Feuvrier	1889		130,000
Le Mesurier	1889		150,000
Bishop	1891		160,000
Lefèvre-Pontalis	1892		80,000
Curzon	1892		200-220,000
		old residents	155,000
Itinéraires	1895	European estimate	180,000
		Local estimate	200,220,000
Wilson	1896		200,000
Bobek	1934		200,000
Stahl	1900		250,000
Wishard	1908		295,000
Bricteux	1909		300,000
Anet	1910		200,000
Fortescue	1917-18		350,000
"	1919		250,000
Bird	1921		300,000
Cyclists	1925		250,000
Hardoin	1929		300-700,000
Clapp	1930	over	200,000
Wilson	1932		320,000
Ebtehaj	1934		360,251
Bobek	1934		360,000
Filmer	1936		300,000
Von Rosen	1937		360,000

	<u>Year of estimate</u>	<u>Inhabitants</u>
Furon	1938	360,000
Admiralty	1939	300,000
Morton	1940	400,000
Hier et Aujourd'hui	1941	699,116
Admiralty	1942 with district	540,000
Hindus	1949	750,000
Hier et aujourd'hui	1950	1,009,539
Long	1951	1,000,000
Yearbook	1953	1,500,000
Tehran Journal	1954	1,200,000
Monteil	1959	1,599,000
Oberlé	1961	1,600,000
Naraghi	1971	2,350,000

Municipal and Government estimates

1883	106,482
1891	160,000
1922-23	210,000 or 196,255
1932-33	310,000 or 365,139
1939-40	540,000
1942-43	699,110
1950-51	989,000
1956-57	1,500,000 census 1,512,000
1960-61	2,000,000

Appendix 7

CLASSIFICATION OF TEHRAN AND ISFAHAN
by employment structure

<u>Occupation group</u>	<u>Urban Iran</u>	<u>%</u>	<u>Tehran</u>	<u>%</u>	<u>Isfahan</u>	<u>%</u>
Total over 10 years	1,807,325	100	490,727	100	76,905	100
Professional, technical and related occupations	67,586	4	22,638	4.5	3,106	4
Managerial & administra- tive, clerical and related occupations	134,219	7.5	56,096	11	4,264	5.5
Sales & related occupations	255,767	14	73,628	15	10,138	13
Farming, forestry, fishing and hunting occupations	236,556	13	7,759	1.5	5,331	7
Mining, quarrying & well-drilling occupations	20,509	2	7,270	1.5	723	0.5
Transport occupations	87,022	5	28,743	6	3,602	5
Crafts, production process and related occupations	637,774	35.5	162,076	33	33,847	44
Service occupations	251,226	14	91,990	18.5	9,885	12.5
Armed services and occupations unidenti- fiable or not reported	116,666	6.5	40,527	8	6,009	8

Industry division

Total over 10 years	1,807,325	100	490,727	100	76,905	100
Agriculture, forestry hunting and fishing	217,927	12	7,854	1.5	5,693	7

<u>Occupation group</u>	<u>Urban Iran</u>	%	<u>Tehran</u>	%	<u>Isfahan</u>	%
Mining & quarrying	9,698	0.5	518		50	
Manufacturing	473,572	26.5	113,437	23	29,964	39
Construction	178,266	10	53,571	11	3,588	5
Electricity, gas water and sanitary services	8,847	0.4	3,308		366	
Commerce	262,669	14.5	80,320	16.5	10,830	14
Transport, storage and communications	146,413	8.5	41,317	8.5	6,121	8
Services	429,429	25	168,520	34.5	15,500	20
Activities not adequately described	80,504	4.5	21,882	4.5	4,793	6

Appendix 8URBAN HIERARCHY OF IRAN. Classification by size.

Categories from dispersal diagram. Source, Table 12 Vol. 1.
Census of Iran 1956. Population of urban places, i.e. centres of over 5,000 population. Grades 1 to 4 include all those over 10,000 (See fig.38)

<u>Grade 1</u>	Tehran	1,512,000		
<u>Grade 2 (5)</u>	Tabriz	290,000		
	Isfahan	254,700		
	Meshed	241,900		
	Abadan	226,000		
	Shiraz	170,000		
<u>Grade 3 (5)</u>	a)	(13)	b)	
	Kermanshah	125,000	Rezaeyeh	67,600
	Ahvaz	120,000	Ghazvin	66,400
	Rasht	109,500	Ardebil	65,700
	Hamedan	99,900	Yazd	63,500
	Ghom	96,500	Kerman	62,000
			Arak	59,000
			Dezfool	52,100
			Borojerd	49,200
			Zanjan	47,100
			Kashan	45,000
			Masjid-i-Suleiman	43,000
			Korramshahr	43,000
			Sanandaj	40,000
<u>Grade 4 (7)</u>	Khorramabad	38,700	Najafabad	30,400
	Maragheh	36,500	Bebahan	29,900
	Babol	36,200	Shahreza	29,300
	Khoy	34,500	Jahrom	29,200
	Bandar Pahlevi	31,300	Semman	29,000
	Kazeroon	30,600	Gorgan	28,400
	Sabzevar	30,500	Tajrish ^x	26,500
	Sari	26,300	Karaj	14,500
	Naishaboar	25,800	Benab ^x	14,400
	Aghajari ^x	24,200	Larestan	14,200
	Ghasre Shirin	23,900	Birjand	13,900
	Shahi	23,000	Marand	13,800
	Shahre Rey	22,300	Kashmar	13,300
	Amol	22,200	Shapoor ^x	13,200

Grade 4 (7)
continued

Ghoochan	21,200	Sarab	13,100
Malayer	21,100	Varnoosefadaran ^x	13,000
Meyaneh	21,100	Saghez	12,700
Nahavand	21,000	Azarshar ^x	12,700
Mahabad	20,300		
Lahijan	19,900	Neyriz	12,400
Torbate Heidarieh	19,800	Golpayegan	12,400
Arasbaran	19,800	Zabol	12,200
Bojnoord	19,200	Sirjan	12,200
Shooshtar	18,500	Songhor ^x	12,100
Booshehr	18,400	Eghlid ^x	11,800
Dashte Gorgan	18,400	Beroojen	11,700
Bandar Abbas	17,700	Fassa	11,700
Zahedan	17,500	Tooyserkan	11,300
Shahrood	17,000	Khoozan ^x	10,700
Gholhak va Zargandeh ^{xx}	16,800	Khonsar ^x	10,700
Estahbanat	16,300	Mahallat	10,600
Behshahr	16,200	Takestan ^x	10,500
Bam	15,700	Sowma'eh Sara	10,200
Bandar Mashoor	15,700	Riz ^x	10,200
Chaharmahal	15,500	Dashti va	
Meyandoab	14,800	Dashtestan	10,200
Langarood	14,600		
Saveh	14,500		

^x centre not of "shahr" status.

Grade 5 under 10,000 90 centres

Total "urban places" 186.

Appendix 8

URBAN HIERARCHY OF IRAN. Classification by Administrative Status.
 1956 Census See Fig. 39

<u>Ostan</u>	<u>Centre</u>	<u>Grade</u>
Central	Tehran	1
1. Gilan	Rasht	3a
2. Mazandaran-Gorgan	Sari	4
3. East Azarbayejan	Tabriz	2
4. West Azarbayejan	Rezaeyeh	3b
5. Kermanshah	Kermanshah	3a
6. Khoozestan-Lorestan	Ahvaz	3a
7. Fars-Banader	Shiraz	2
8. Kerman	Kerman	3b
9. Khorasan	Mashhad	2
10. Esfahan-Yazd	Esfahan	2
11. Baloochestan-Sistan	Zahedan	4
12. Kordestan	Sanandaj	3b

<u>Shahr</u>	<u>Grade</u>	<u>Shahr</u>	<u>Grade</u>	<u>Shahr</u>	<u>Grade</u>
Abadan	2	Karaj	4	Semman	4
Hamedan	3a	Mahallat	4	Shahi	4
Ghom	3a	Saveh	4	Shahrud	4
Ghazvin	3b	Shahre Rey	4	Arasbaran	4
Ardebil	3b	Shemiranat	4	Maragheh	4
Yazd	3b	Bandar Pahlevi	4	Marand	4
Arak	3b	Lahijan	4	Meyaneh	4
Dezfool	3b	Langarood	4	Sarab	4
Borojerd	3b	Sowma'eh Sara	4	Khoy	4
Zanjan	3b	Amol	4	Mahabad	4
Kashan	3b	Babol	4	Meyandoab	4
Masjid-i-Suleiman	3b	Behshahr	4	Shahpur	4
Khorramshahr	3b	Dashte Gorgan	4		
		Gorgan	4		

<u>Grade 4</u>	<u>Grade 4</u>	<u>Grade 5</u>	<u>Grade 5</u>
Ghasre Shirin	Sabzevar	Damavand	Roodbar
Malayer	Torbate Heydarieh	Khomein	Roodsar
Nahavand	Najafabad	Foomenat	Natanz
Tooyserkan	Shahreza	Tavalesh	Noor
Saghez	Zabol	Damghan	Astara
Bandar Mashoor		Nowshahr	Khalkhal
Behbahan		Shahsavari	Makoo
Golpayegan		Hashtrood	Ilam
Khorramabad		Meshginshahr	Baneh
Shooshtar		Naghdeh	Khorveh
Berrojen		Ooramant	Marivan
Chaharmahal		Garroos	Izeh
Booshehr		Aligoodarz	Abadeh
Dashti va Dahtestan		Dashte Mishan	Darab
Estahbanat		Kohkilooyeh	Minab
Fassa		Ramhormoz	Dargaz
Jahrom		Bandar Langeh	Ferdows
Kazeroon		Firoozabad	Gonabad
Larestan		Rafsanjan	Shirvan
Neyriz		Sabzevaran	Tabas
Bam		Esfarayan	Na'in
Sirjan		Torbate Jam	Faridan
Bandar Abbas		Ardestan	Saravan
Borjan		Chahbahar	
Bojnoord		Iranshahr	
Ghoochan		Shahabade Gharb	
Kashmar		Garmsar	
Naishaboar		Tafresh	

Total 123 shahr

13 Ostan heads

Appendix 9

TEHRAN QUARTER NAMES

Evidence of quarter names in Tehran before the period of the 1858 map is lacking. The town is then shown divided into four "mahalleh" - Oud Lajan, Chal-i-Maydan, Sangalaj, and Bazaar, with the Ark as a quarterspart. (Fig. 9) These quarters had definite boundaries which are unchanged on the 1892 map except that they have been extended to include adjacent areas in the new enclosure. These four quarters appear to have been well-known units which had persisted through the centuries. They are corroborated by travellers:

Macgregor 1871 - Bazaar, Khai Maidan, Oud Larjan, Senghilek.

Nijeholt 1873 - Bazaar, Tshâl-i-Meidân, Audladschân, Sengeledsch.

Stahl 1900 - Bazaar, Tschale Meidan, Audladjan, Sengeledj.

Others mention districts named after the gates they adjoined, like Basset's "Casveen Gate" and "Shemiron Gate" precincts. Such names are found in the new areas of the 1892 map (Fig. 9) Districts named after population groups such as Yahoudi Mahalleh are shown on Fig. 35. In addition inside the main quarters there were subsidiary districts such as Pa Chinar (at the foot of the plane tree) and Sar Chishmeh (at the head of the spring), both in Oud Lajan. However, only the four divisions shown on the map were really important.

Appendix 9QUARTER NAMES IN ISFAHAN

See Fig. 33.

<u>Chardin</u>	<u>Le Bruyn</u>	<u>Coste</u>	<u>Macgregor.</u>
Derdecht	Derredest	Der Decht	Dar-i-dast
Heussinie	Hoescynja	Hussein-abad	Hoecynja
Joubaré	Sjoebare	Djoubareh	Shoebare
Nimaourde	Niemavvort	Nimaver	Niema Wort
Gulbar	Golbaer		Gulbar
Maidoné Mir	Meydoen Mier	Meidan-i-Mil	Maidanmier
Darbetic	Daelbettin		Dashbettin
Kerron	Kerron	Kiarroun	Kerron
	Derre Koek	Derkouchk	Darreh Kock
	Maleynovv	Mahalleh-i-No	Maleynow
	Goude Magsoetbeek	Gaoudi Maksoud Beg	Goude Maksud Beg
	Letver		Letvez
	Basae-Agaes		Basver Agnes
	Sjaer-foi Kotba		Shahr-foi Kotba
	Seltoen Sensjiene		Sultan Senshiri
	Derre Babba Kasim		Darreh Raba Kasim
	Namoafig		Namoafig
	Togtsjie		Togtshie
Ahmedabad		Dervazah-i-No	
		Meidan-i-Kohneh	
		Baghat	Baghet

Suburbs

Abasabad	Abas Abaet	Abbasabad
Cadjouc		Khajou
Cheherestoon		
Chemsabad	Siems-abaet	Chemsabad
Cheic-Sabana	Sjeig-Sebbennaes	
Kherron	Thie-roen	
Ahmedion	Seyid Agmed-joen	Syad Ahmad Jan
Bideabad	Bied-abaet	Bidabad
	Telvvas Kon	Talvaskoun
		Loumban
		Tcherkh-ab
		Pa-kalaa
		Djama-koula

NOTES ON QUARTERS OF ISFAHAN AS SHOWN ON COSTE'S MAP IN

"MONUMENTS MODERNES DE LA PERSE" See Fig.33.

- A. Dervazeh-i-No, in north-west. Not mentioned by other writers but known today.
- B. Der Decht. One of Chardin's primary divisions of Isfahan and name of original village, Deredecht, which he suggests was Sunni, with Heider as its leader and priest. Careri agrees - Hay-dery-dei-desti. Le Bruyn mentions Derredest as abandoned quarter. Known today, area north of Avenue Ibn Sina.
- C. Hossein-abad. Chardin's Heussinie quarter, one of most famous around Friday Mosque, named after famous family said to be descended from Husayn. Le Bruyn's Hoescyn-ja, named after religious men. Known now.
- D. Gaoudi Maksoud Beg. Chardin mentioned palace of same name near may-dan. Le Bruyn. Known now. Also name of village between Abadeh and Shiraz.
- E. Djoubaren. Connected with Yahudiyeh, original Jewish town. Named as one of original quarters by Chardin - Joubare Neamet Olahi, with Persian sect. Careri calls other original village Guibare-hamet-ilay. Cazvini, 14th century, agrees. Known today.
- F. Bidabad. Chardin's Bidabad suburb. Le Bruyn's Bied Abaet, a part outside the walls. Known today.
- G. Derkouchk or Der-i-Mesjid-i-Hakim. Not mentioned by Chardin. Le Bruyn's Derre-koek, Place of Happiness. Only eastern part actually near Masjid-i-Hakim. Mentioned by Mustoufi. Known today.
- H. Nimaver Chardan's Nimaourde. Le Bruyn's Niemavvort. Known now.
- I. Meidan-i-Kohne. Area of old square described by various writers. Not mentioned by Chardin or elsewhere. Known today.
- J. Meidan-i-Mil or Seid Ahmedioun. Chardin's Maidone Mir - Princes' Square, named after square in middle, another name for Darbetic. Another quarter in Chardin's list called Ahmedabad and also suburb of Ahmedion.

- J. (Continued) Mosque of Seid Ahmed built 7-800 years before Chardin's account in Gulbar area. Le Bruyn's Seyid Agmed-joen - the name of a doctor, with alternative Meydoen Mier - Doctor's Square. Known today as Ahmadabad to the north of Avenue Hafez. Known today. Maydan now destroyed.
- K. Mahalleh-i-Baghat. Not mentioned by Chardin. Le Bruyn's Bagoet, said to have been only gardens in the reign of Shah Abbas I. Not known today.
- L. Mahalleh-i-No or Bagh-i-Mourad. Not mentioned by Chardin. Le Bruyn's Maleynovv - new quarter. Both names known today.
- M. Kiarroun. Chardin's Kerron, also suburb of same name. Le Bruyn's Kerron meaning deaf. One of original villages according to Cazvini. Not known today.
- N. Loumban and Tcharsou-i-Chiraziha. Not in Chardin or Le Bruyn. Known today. Safavid mosque of name, Lunbun. Area probably settled by Shirazis in 17th century with Tabrizis. Known today.
- O. Chemsabad. Suburb according to Chardin and Le Bruyn. Known today, north of Avenue Shaykh Bahai.
- P. Abbasabad Chardin's suburb. Le Bruyn's Abas Abaet - largest of parts outside walls, only persons of distinction live there. Known today.
- Q. Tcherkh-ab. Not mentioned previously. Means waterwheel. Known today.
- R. Pa-kalaa. Not known previously but connected with Tabarak citadel. Known today.
- S. Talvaskoun or Telli-oustoukhan. Not in Chardin. According to Le Bruyn outside walls - Sjeig-joessus-i-benna and Telvvaeskon. Known today as Tal-i-Vagan.
- T. Khadjou. Chardin's Cadjouc suburb. Not in Le Bruyn. Obviously connected with bridge, which was named after suburb.
- U. Djamala-koula. Not known elsewhere.

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Arranged in alphabetical order within the following historical

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Reference map A.

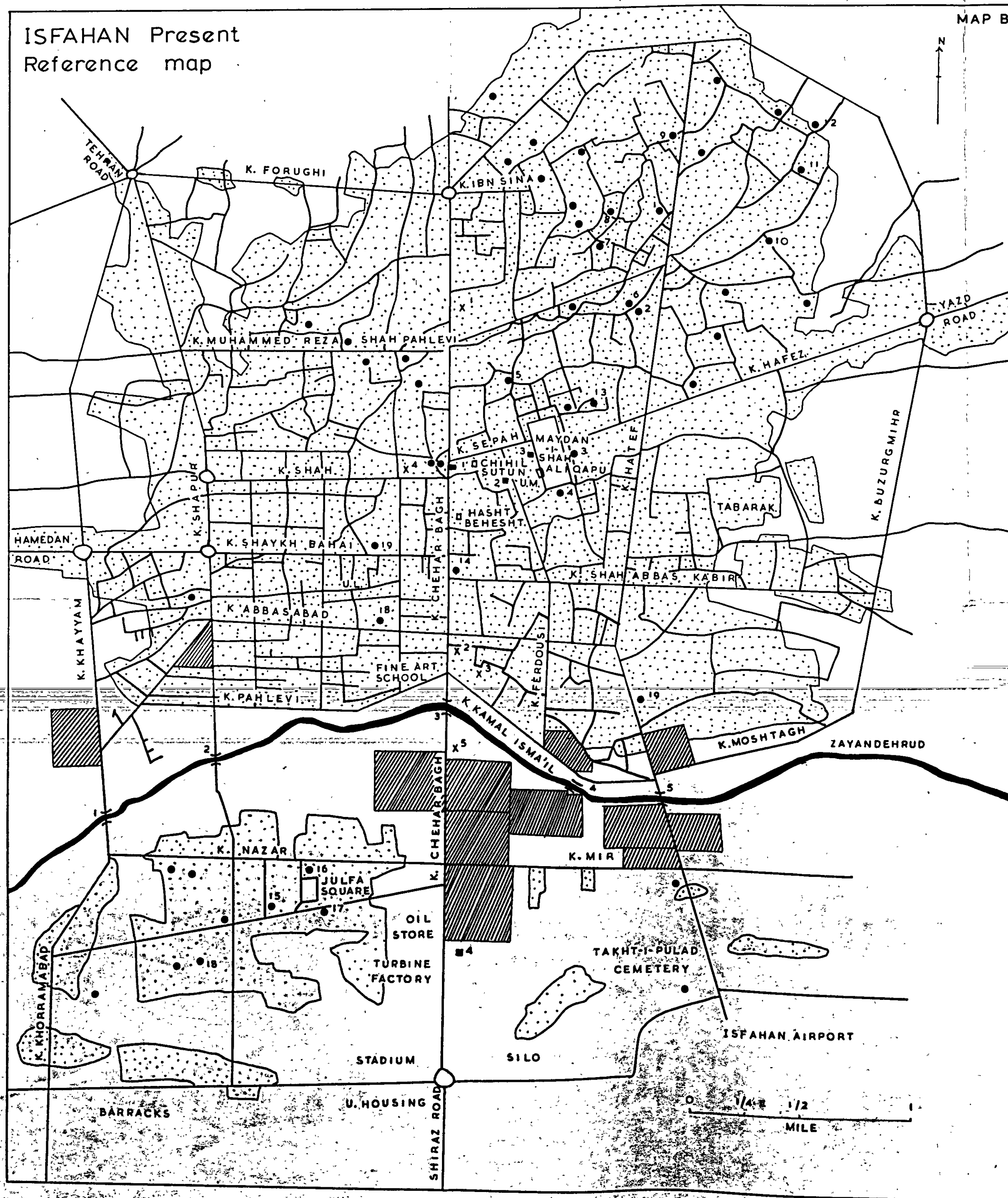
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- MILITARY ESTABLISHMENTS**
- 1 BAGH-E-SHAH BARRACKS
 - 2 OFFICER'S COLLEGE
 - 3 GENDARMERY
 - 4 ARSENAL
 - 5 ORDNANCE FACTORY
 - 6 'ISHRATABAD BARRACKS
 - 7 JAMSHIDIYEH
 - 8 MILITARY HOSPITAL
 - 9 ABBASABAD BARRACKS
 - 10 POLICE COLLEGE
 - 11 SALTANATABAD BARRACKS
 - 12 ROYAL PALACE
 - 13 GULISTAN
 - 14 UNIVERSITY
 - 15 POWER STATION
 - 16 MUNICIPALITY
- DENSELY BUILT UP AREAS**
- OPEN BUILT UP AREAS**
- LINE OF 1800 WALLS**
- 1860**

- FOREIGN ESTABLISHMENTS**
- 1 BRITISH EMBASSY
 - 2 " SUMMER QUARTERS
 - 3 " COUNCIL
 - 4 U.S.S.R. EMBASSY
 - 5 " SUMMER QUARTERS
 - 6 TURKISH EMBASSY
 - 7 GERMAN "
 - 8 FRENCH "
 - 9 ITALIAN "
 - 10 INDIAN "
 - 11 PAKISTANI "
 - 12 IRAQI "
 - 13 AFGHAN "
 - 14 AMERICAN "
 - 15 IRAN-AMERICA SOCIETY
- DETAIL OF ARK, BAZAR, AND
MAYDAN-I-MASHKH AREAS ON**

ISFAHAN Present Reference map

MAP B.



- RELIGIOUS BUILDINGS
- 1 MASJID-I-JAMI'
- 2 " " ALI
- 3 " " SHAYKH LUTFULLAH
- 4 " " SHAH
- 5 " " HAKIM
- 6 HARUN VAYALAT
- 7 DARB-I-IMAM
- 8 BAKHT AQA
- 9 BABA QASIM
- 10 DAR-UL-BATIQ MINARETS
- 11 SAREBAN MINARET
- 12 CHIHIL DOKHTARAN MINARET
- 13 MADRASEH JEDDEH
- 14 " MADAR-I-SHAH SULTAN HUSAYN
- 15 VANAK CATHEDRAL
- 16 BETHLEHEM CHURCH
- 17 MARY CHURCH
- 18 PROTESTANT CHURCH & SCHOOL
- 19 CATHOLIC CONVENT & SCHOOL

- ✕ BRIDGES
- 1 MARNUN BRIDGE
- 2 IRON " "
- 3 ALLAH VERDIKHAN " "
- 4 AQUEDUCT " "
- 5 KHAJU " "

- X CONSULATES
- 1 RUSSIAN
- 2 AMERICAN
- 3 FRENCH
- 4 SITE OF BRITISH
- 5 BRITISH COUNCIL

- PUBLIC OFFICES
- 1 MUNICIPALITY
- 2 GOVERNOR GENERAL'S OFFICE
- 3 POLICE
- 4 LABOUR WELFARE

- U.M. UNIVERSITY MEDICAL FACULTY
- U.L. " FACULTY OF LETTERS

▨ TEXTILE FACTORIES

▤ BUILT-UP AREA

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