

310  
Integrated Urban Design Guidelines  
for the Historic Quarters in Isfahan, Iran

by

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A Master's Report

submitted in partial fulfilment

of the requirements for the degree

Master of Regional and Community Planning

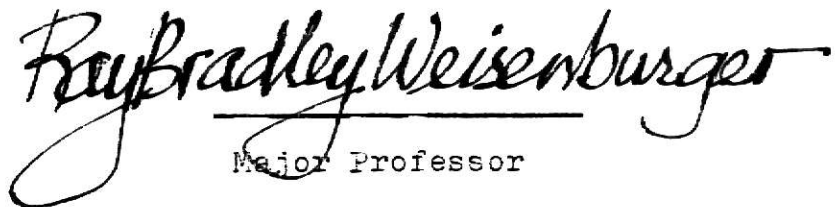
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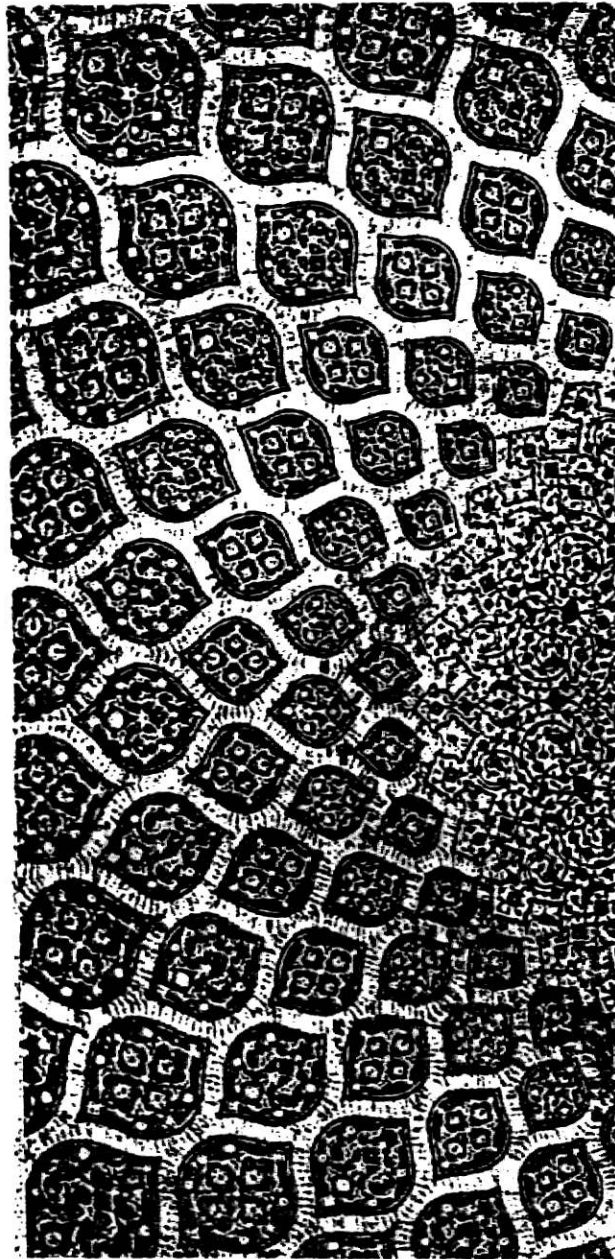
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To my beloved birthplace, Isfahan,  
and to my late father who taught  
me nationalism under the sky of  
this city.



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My gratitude also extends to my major advisor Professor Ray Weisenburger and the honorable members of my graduate committee , Professors: Eugene McGraw, Michael Suleiman, and Fayez Hussein, for their valuable time and undaunted willingness to be of help to me.

Akbar Baharian Mehr

## introduction

Isfahan, the radiant Capital of the Moslem Safavid State and recently one of Iran's most important industrial cities, has undergone a drastic change in the last few decades. The process of westernization has been rapidly gaining ground, swallowing up some things worth preserving as well as others not worth holding onto.

This city, the guardian of the greatest collection of national monuments in all Persia, has easily been ruined in the cause of "progress" and the problems stemming from modern urban design in the historic areas have heavily overshadowed the heritage of her glorious past.

The city of Isfahan is inevitably the greatest tourist attraction in Iran. Therefore, it is the hope of the author to scrutinize the existing problems and offer urban design guidelines to create a more liveable environment and maintain the charm and the picturesque quality of this ancient city about which a Persian poet once wrote; "Isfahan is half of the world."

Chapter One  
History of planning in Isfahan  
(226-1597 A.D.)

Situated near the geographic center of Iran, Isfahan occupies a choice site. Its temperate climate, fertile soil, and adequate water supply from the Zayandeh River made it from the earliest times a logical area for settlement. Its name probably was acquired in the period of the Sassanians, 226-652 A.D., "where this place is mentioned in literary sources under the name of Aspahan."<sup>1</sup> And, "The abbreviation ASP for Aspahan, armies, also appears on some Sassanian coins from the fourth century onward."<sup>2</sup>

The essential precondition for agriculture and urban growth in such a situation has been a sufficient water supply provided to Isfahan and its hinterland by the Zayandeh River, which has the most abundant water flow of all the rivers of the land-locked Iranian interior.

Under the Sassanians, the city consisted of two distinct quarters, Yahudyeh (Jewish city) and Jayy (proper city), where all its dwellers were Zoroastrians. Zoroastrianism had been the religion of Persians from the days of the Achamenids (563 B.C.) until it was almost extinguished by the persecutions following the Arab invasion in the seventh century.

Yahudyeh had been considered with Jewish population whose descendants still live in Isfahan and trace their origins back to

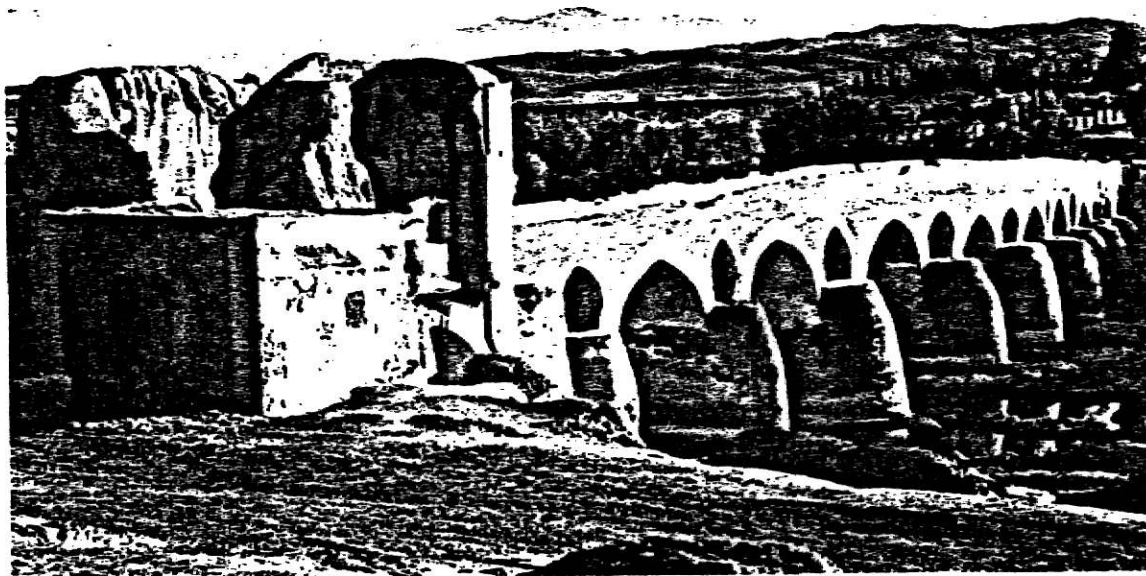
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<sup>1</sup>Anthony Welsh, Shah Abbas and the Arts of Isfahan, (New York: The Asia Society Inc., 1973), p. 11.

2H. Gaube, Iranian Cities, (New York: University Press, 1979), p. 67.

the times of the Babylonian captivity. Some Arab authors have believed that; "Though legend asserts that it was Nebuchadnezzar who had first settled the jews in Isfahan, they probably arrived in late Sassanian period."<sup>3</sup>

Yahudyeh is the ancestor of present-day Isfahan, while only a few ruins, a debris mound, and a medieval bridge bear witness to ancient Jayy. The Shahrestan bridge is the most important relic over the Zayandeh river ; "Its great stone piers are probably Sassanian , and not a little indebted in their design to the Roman engineers who were taken prisoners with their emperor, Valerian. The upper part is pierced by pointed arches which allow the maximum flow of water when the mountain snows melt."<sup>4</sup>



(figure 1)

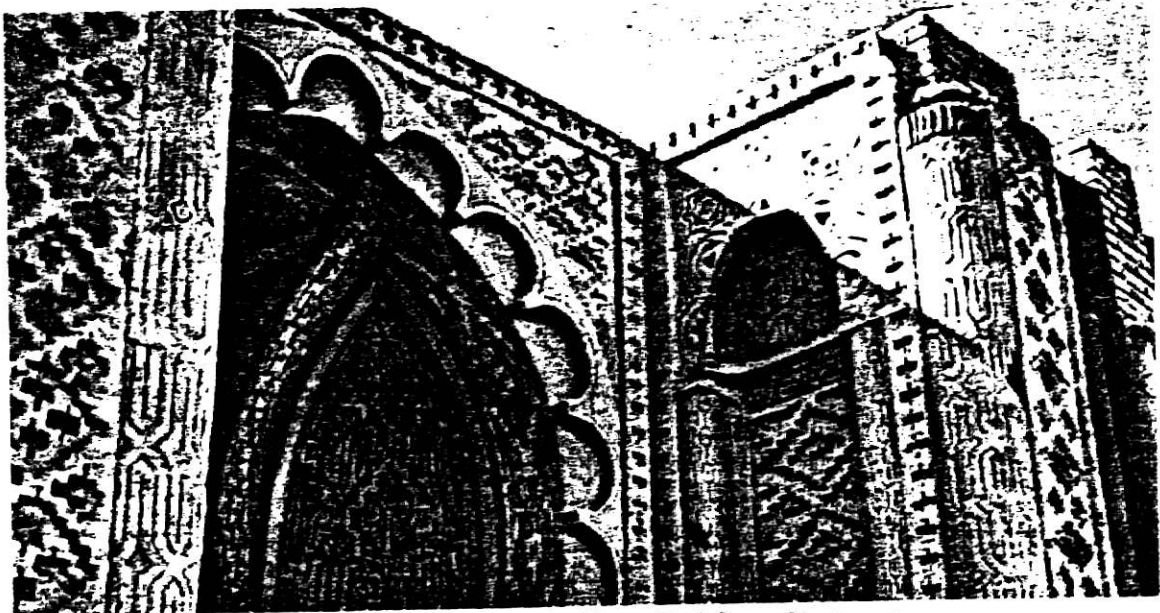
The Shahrestan bridge

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<sup>3</sup> Mafarrukhi Mufadal, b. Sa'ad, Kitab Mahasin Isfahan, (ed.) J. Al-Hussaini (Tehran, 1312/1933), p. 19.

<sup>4</sup> Blunt and Swaan, Isfahan, Pearl of Persia, (New York: Paule Elek Productions Limited, 1966), p. 28.

In 643 A.D., Isfahan fell to invading muslim armies and became part of the vast Empire created by Islam within the span of a century. During this period the Arabs built their first Friday Mosque at Jayy in 773 A.D. This is a magnificent mosque which was erected in different periods and under various dynasties and feudal lords. The most important part of this building is the brick dome. "The material used in the dome is a signal of economy: hard small bricks of mousy grey, which swallow up the ornament of Kufic texts and stucco, inlay in their puritan singleness of purpose."<sup>5</sup> The dome is also a miracle of construction. "The problem of setting a circular dome on a square base is one that has challenged generations of architects. Before Newton's work on the calculus, engineers in the West were unable to design a light dome of plain masonry; but the engineers of the Seljug Dynasty solved the difficulties by courageous experiment and the intelligent observation of failure, not because they knew anything of the calculus; their knowledge was empirical."<sup>6</sup>



(figure 2)

A Portal of the Friday Mosque

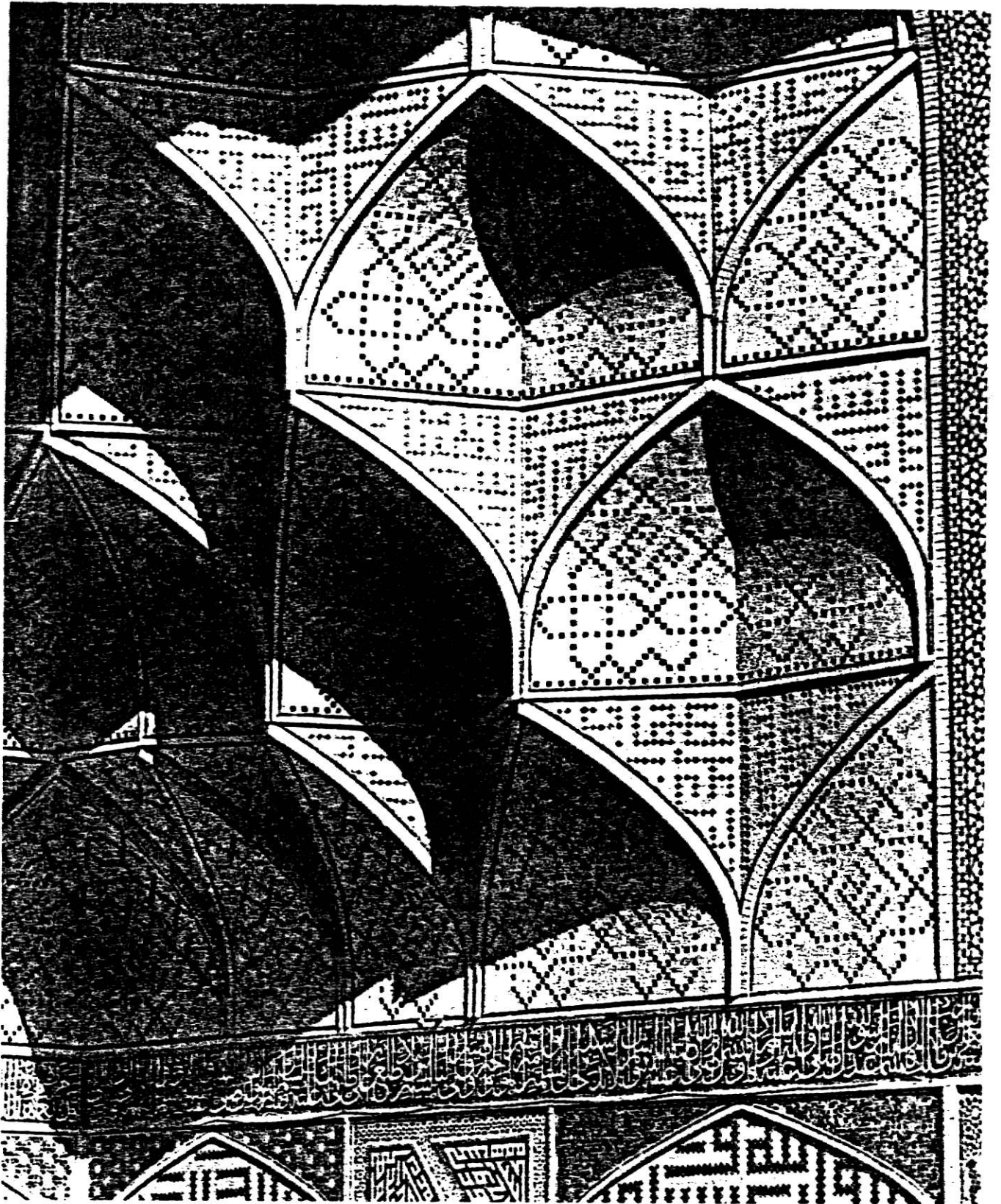
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<sup>5</sup>Robert Byron, "The Roads to Oxiana," (London: 1950): 177-8.

<sup>6</sup>A. U. Pope, Persian Architecture, (New York: the Dryden Press, 1965), p. 1008.



(figure 3)



Detail of the tile mosaic of the Friday Mosque

The "Shaking Minarets", the Mausoleum of Baba Qasim ,The Sa-reban Minaret, and scores of the other magnificent masterpieces of architecture belonging to the periods prior to the rise of the Sa-favid Dynasty are among the other historic buildings which stand beautifully within the historic areas of Isfahan.

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Chapter two  
History of planning in Isfahan  
(1598-1942)

"In a real sense Safavid architecture and planning began in the reign of Shah Abbas."<sup>7</sup>

In the winter of 1598, Shah Abbas the Great of the Safavid Dynasty decided to transfer his Capital from Qazvin to Isfahan-a Capital of Intercontinental importance where envoys and merchants from Europe met those from the Far East. This decision made it easier for him to conduct operations against the Ozbegs and Ottomans as well as to exert greater control over diplomatic and commercial affairs in the Persian Gulf.

Isfahan, lying at an altitude of 1585 meters, is a semi-oasis of intense cultivation. Here, a basin of the central Iranian mountain chain, settlement and agriculture were possible only at a few spots favored by nature.

In a very short time, Shah Abbas and his master planner Shai-kh Baha'i; eminent theologian, philosopher, Quran-commentator, jurist, and engineer, provided a sound agricultural basis for the new Capital city by laying out comprehensive systems of irrigation and communication and initiated one of the world's grandest experiments in city planning.

Abbas did not radically alter the structure of the old city designed by previous periods. Instead, he chose to build somewhat apart from the center of the old city. As a result, the "new" Isfahan which he began in 1598 is largely his own creation. He and his ad-

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<sup>7</sup>A.U.Pope, (ed.), A Survey of Persian Art, Oxford, Vol. III, P. 1180.

visors had laid out their basic concepts of how to rebuild and enlarge the city. Their plan directed the development of Isfahan along new paths and are comparable in their extent only with the foundation of the early Islamic city of Isfahan in the eighth century.

### The Royal Square

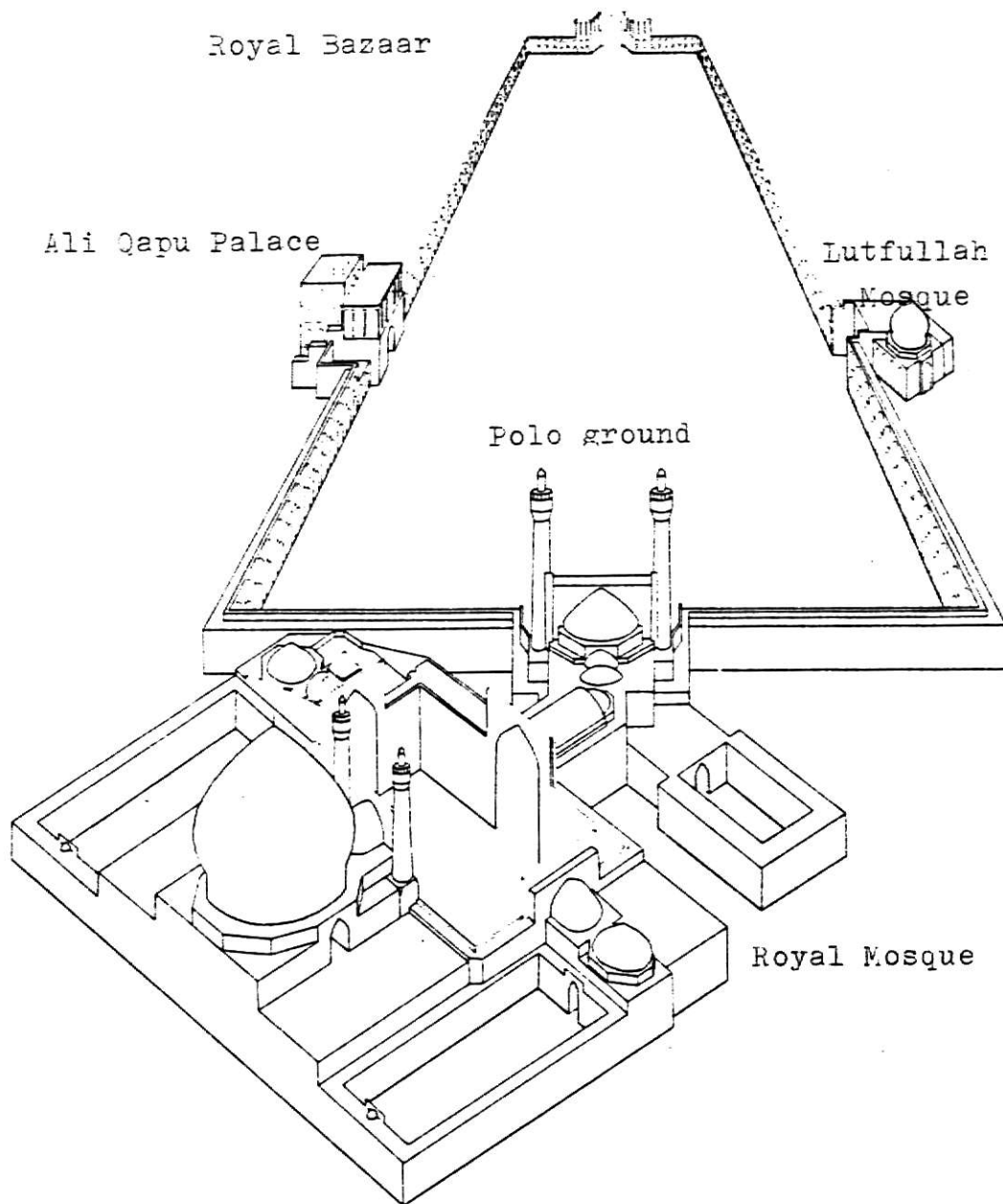
The nucleus of Shah Abbas's planning was a huge Square, since this was the ideal layout to unify the most important functions of a city as the administrative, religious, economic, and intellectual center.

This is a rectangle measuring 1664 by 517 feet. Blunt and Swaan mention that the Square is seven times the size of the Piazza Di San Marco of Venice and more than twice as large as Moscow's Red Square. In the central part of the Royal Square there was no permanent structure except two tall Polo goalposts, which still survive. Round the perimeter of the Square, water flowed in the stone-edged canal which was lined with a row of plane trees whose filigree of stems pattern is so dazzling in winter and early spring against the blue Persian sky.

The Royal Square was also a commercial area. It achieved such prominence that it became the sole urban center of Isfahan. The theme of commerce was carried into the great square by a two storey row of shops which surrounded the entire Square, the row being only broken by four jewels of architecture adorned each side of the Royal Square symbolizing the political, religious, and economic spheres of the Safavid Persia.

### The Royal Mosque

"Benefiting from the techniques developed by the Sassanians and the spirit breathed into it by Islamic spirituality, the Safavid architecture evolved into a perfect statement of intelligibility



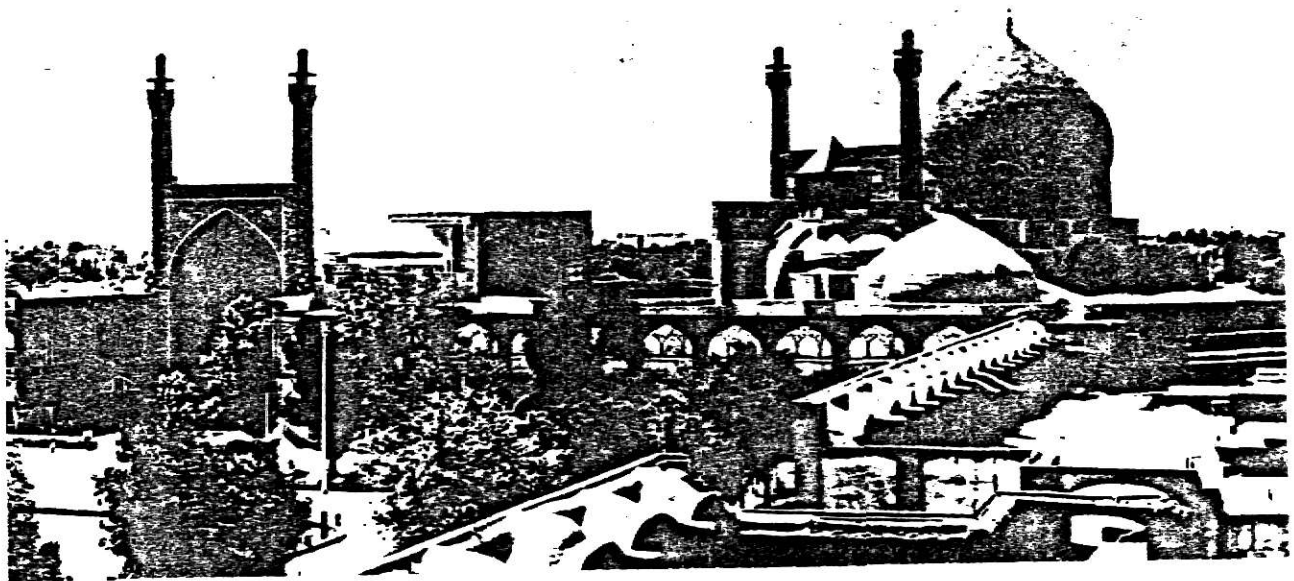
(figure 4) The Royal Square of Isfahan

and nobility, of order and harmony, of the wedding of unity and beauty, science and art, from this tradition have flowed such masterpieces as the Royal Mosque of Isfahan."<sup>8</sup>

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<sup>8</sup>Beny Roloff, Persia, Bridge of Turquoise, (Boston: New York Graphic Society, 1975), p. 40.

The Royal Mosque is the largest and the most spectacular monument of Shah Abbas's reign. With its four minarets, each 110 feet high, its polychrome tile-work which covers every square inch of the interior and exterior, softness of tone, texture and its spiritual charm, it holds 18 million bricks and a half million tiles. The arches are formed by a triple cable ornament, rich turquoise in color, and the superb calligraphy, rising from large marble vases. Pope considered this mosque; "One of the most beautiful and imposing ever erected in Persia, indeed one of the most dramatic and satisfying anywhere."



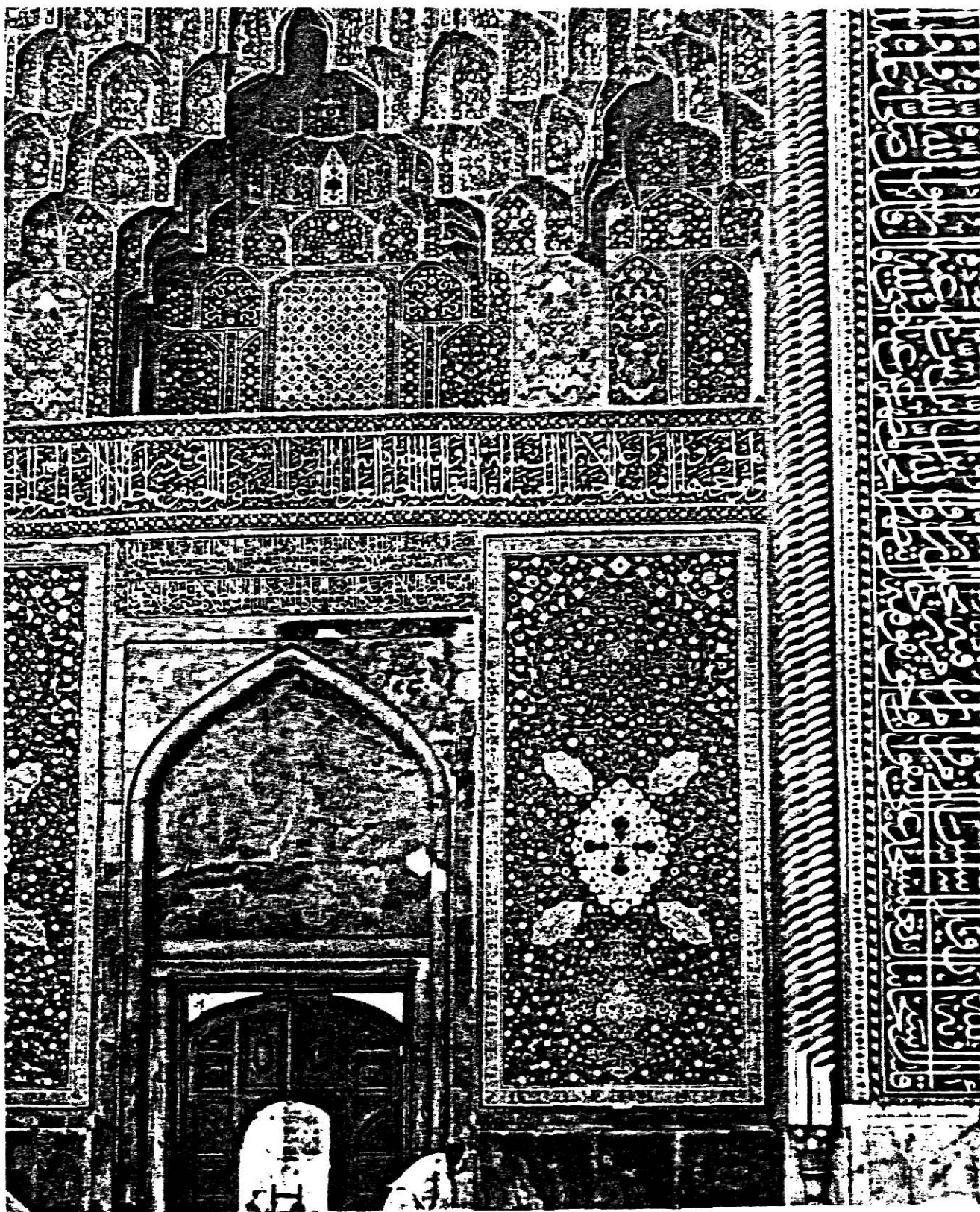
(figure.6)

The Royal Mosque

#### The Shaikh Lutfullah Mosque

This mosque, in spite of the other Islamic mosques, has no minarets. It was particularly designed for the Shah's private worship. Its design is simple; "The dome is inset with a network of lemon-shaped compartments, which increase in size as they descend from a formalised peacock at the apex and are surrounded by plain bricks. The colors of all this inlay are dark blue, light greenish-blue, and a t-



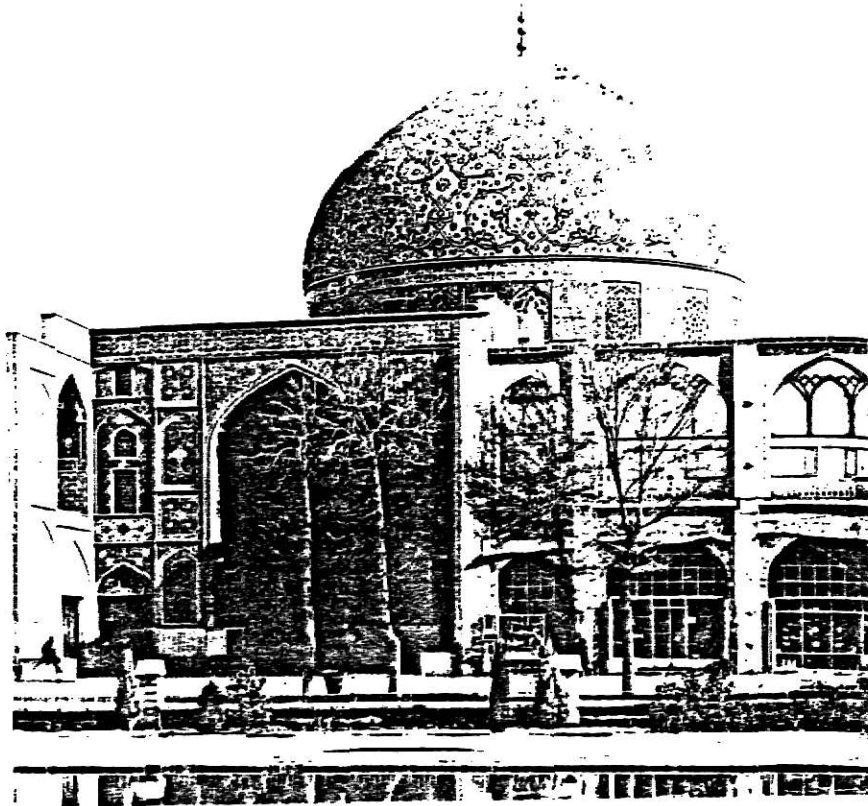


Entrance Portal of the Royal Mosque

(figure 5)

int of indefinite wealth like wine."<sup>9</sup>

The beauty of the whole mosque comes as one moves. The highlights are broken by the play of glazed and unglazed surfaces; so that with every step they rearrange themselves in countless shining patterns.



(figure 7) The Shaikh Lutfollah Mosque

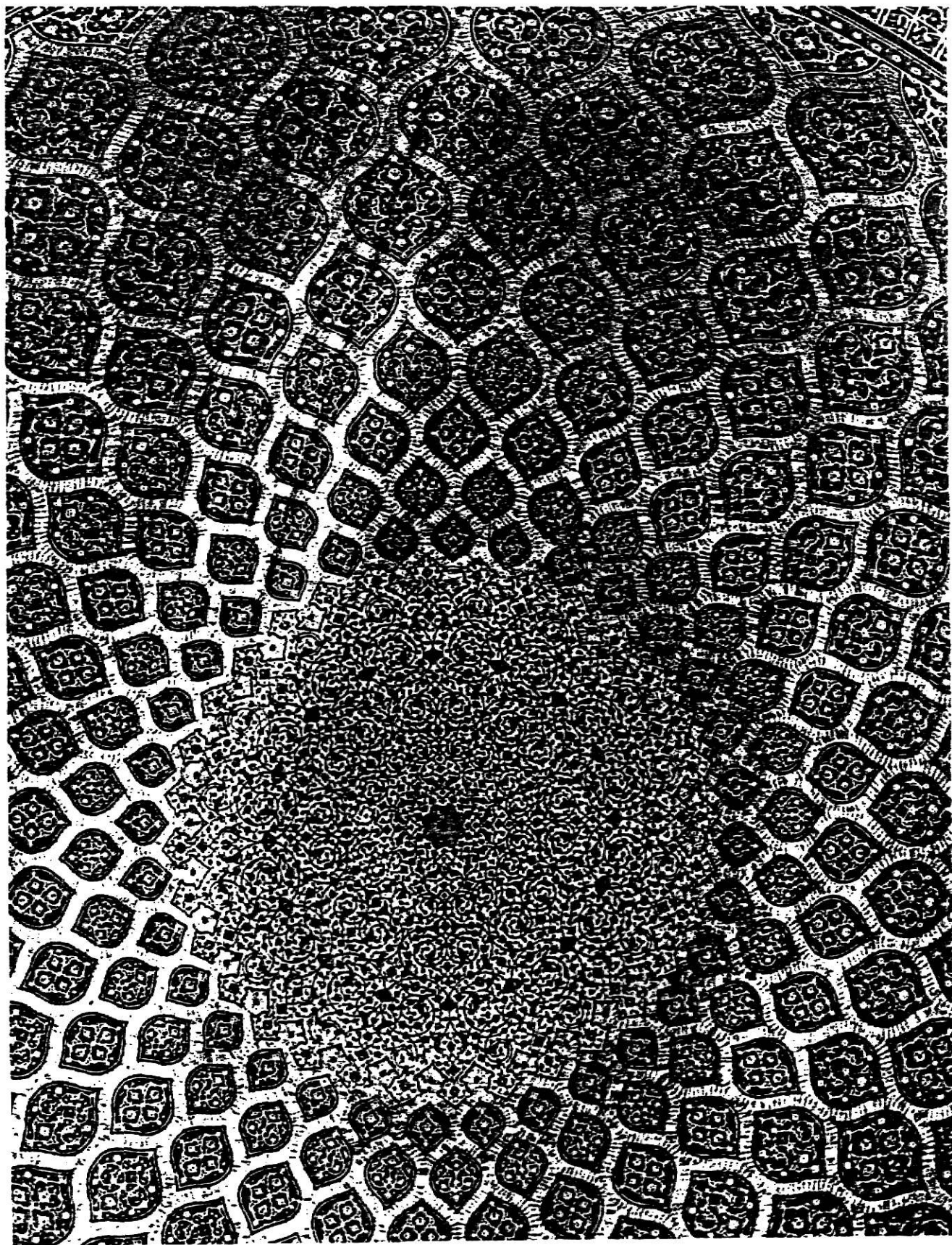
#### The Ali Qapu Palace

The third of the principal buildings fronting on the Royal Square is the Ali Qapu Palace, or sublime porte. It is a three storey palace which provides the great covered balcony commanding a view of the Royal Square. The ground floor was made over to the officers

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<sup>9</sup>R. Byron!The Road to Oxiana(London:1950)pp.177-8.





Interior Dome of the Lutfullah Mosque

(figure 8)

of the guard, the upper floors being reserved for the Shah's private use. Certainly, the interior is enchanting. There are many small rooms in the exquisite design and in blue, white, red, and gold with frescoes etched in the stucco walls and ceilings. The effect of light and shade created by the delicate tracery of the windows is appealing.

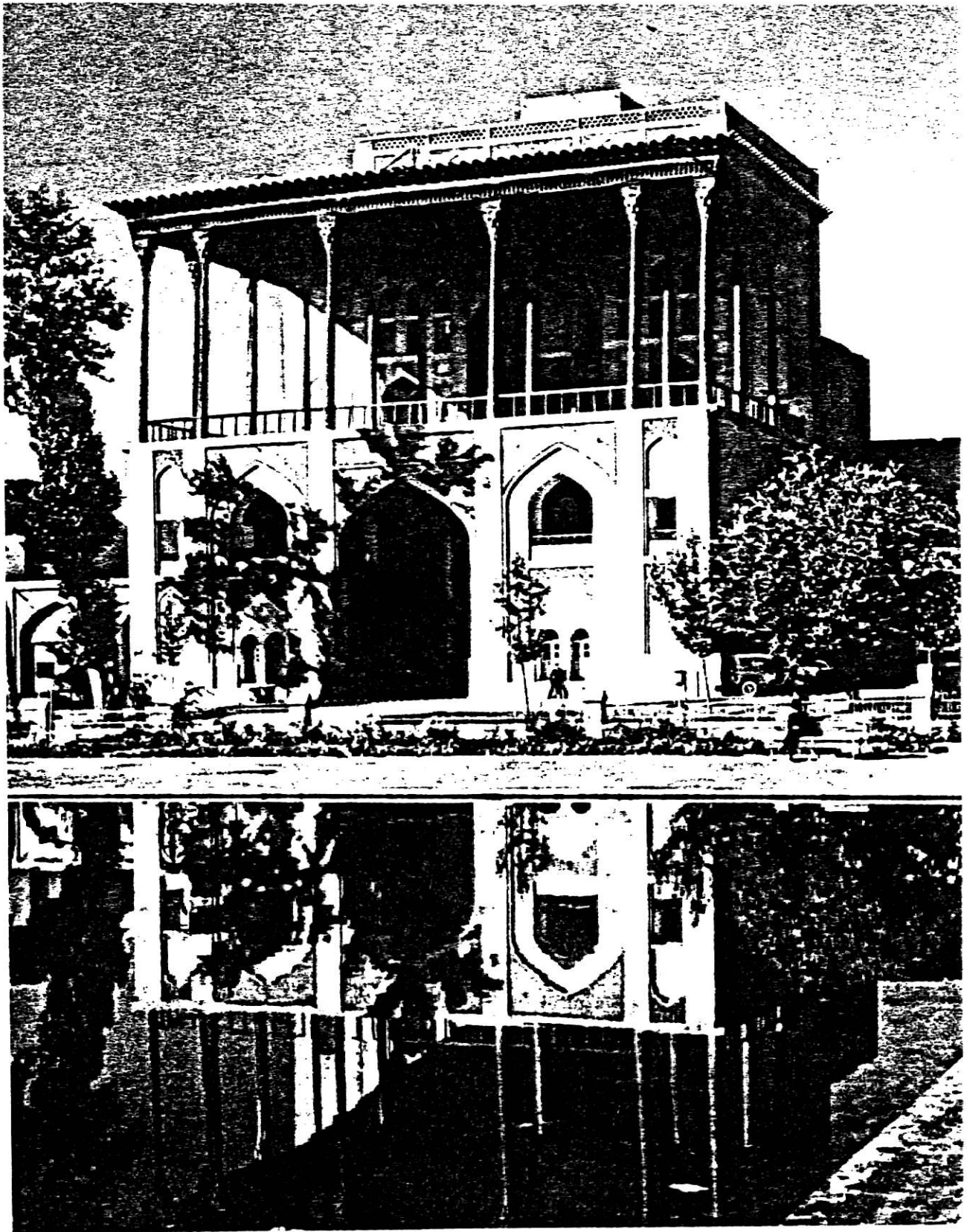
The second floor consists of the delightfully decorated throne-room, and the balcony with its slender wooden columns, russet-colored roofs, and a rectangular copper pool used to be raised by means of hydraulic machines worked by oxen, but today it stands empty. The view of the Royal Mosque from the upper storeys is magnificent. The Shah used to watch the games of Polo from the balcony.

#### The Royal bazaar

This is the largest marketplace in Isfahan. Over the main entrance of this bazaar is located the musician's gallery, where music was played at sunrise and sunset. The bazaar itself consists of endlessly repeated groupings of public baths, theological seminaries, and caravanserais. There are many bazaars separated from the Royal bazaar, each devoted to a single trade, and each section is virtually self-contained. "The Royal bazaar covers a total of about eleven and half square miles."<sup>10</sup> This bazaar, along with the adjoining bazaars, is truly imposing and architecturally sophisticated, with arcaded sides and pools of water in the central courtyards to keep the air cool. Some have sub-basement chambers aerated by handsome tall towers with open vents on each side to catch dry, cooling breaths of air and carrying down to the recesses of the bazaars. Others are aerated by different techniques; "Gardens were created behind the bazaars, having effectively trapped a 'store' of cool air from these gardens.

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<sup>10</sup>Ali Bakhtiar, "The Royal Bazaar of Isfahan", Iranian Studies, VII(1974):Studies of Isfahan, Part 1 p.320.



(figure 9)

The Ali Qapu Palace



Merchants then sought to make use of it in their buildings and developed a natural cooling system. The use of ventilation or wind towers provided a means by which warm air could escape from enclosed spaces; therefore, during the circulation of cool air from the gardens into the internal spaces of the buildings, aromatic herbs were used in conjunction with these elements to freshen and scent the air."<sup>11</sup>

#### The Chahar Bagh Boulevard

The other key feature of Shah Abbas's master plan for Isfahan was the Chahar Bagh boulevard. This Champs Elysées of Isfahan was designed to provide the grand approach to the Shah's new Capital. The name 'four gardens' is derived from the four vineyards that originally occupied the site. "Down the center of the boulevard flowed a canal, with water dropping in little cascades from terrace to terrace and now and again arrested in big rectangle or octagonal basis edged with onyx. Then on either side of the canal, came a row of plane trees, a promenade filled with shrubs and flowers, and finally a further row of plane trees."<sup>12</sup> No doubt Olearius was justified in calling this boulevard 'one of the most beautiful and charming spots in the world.'

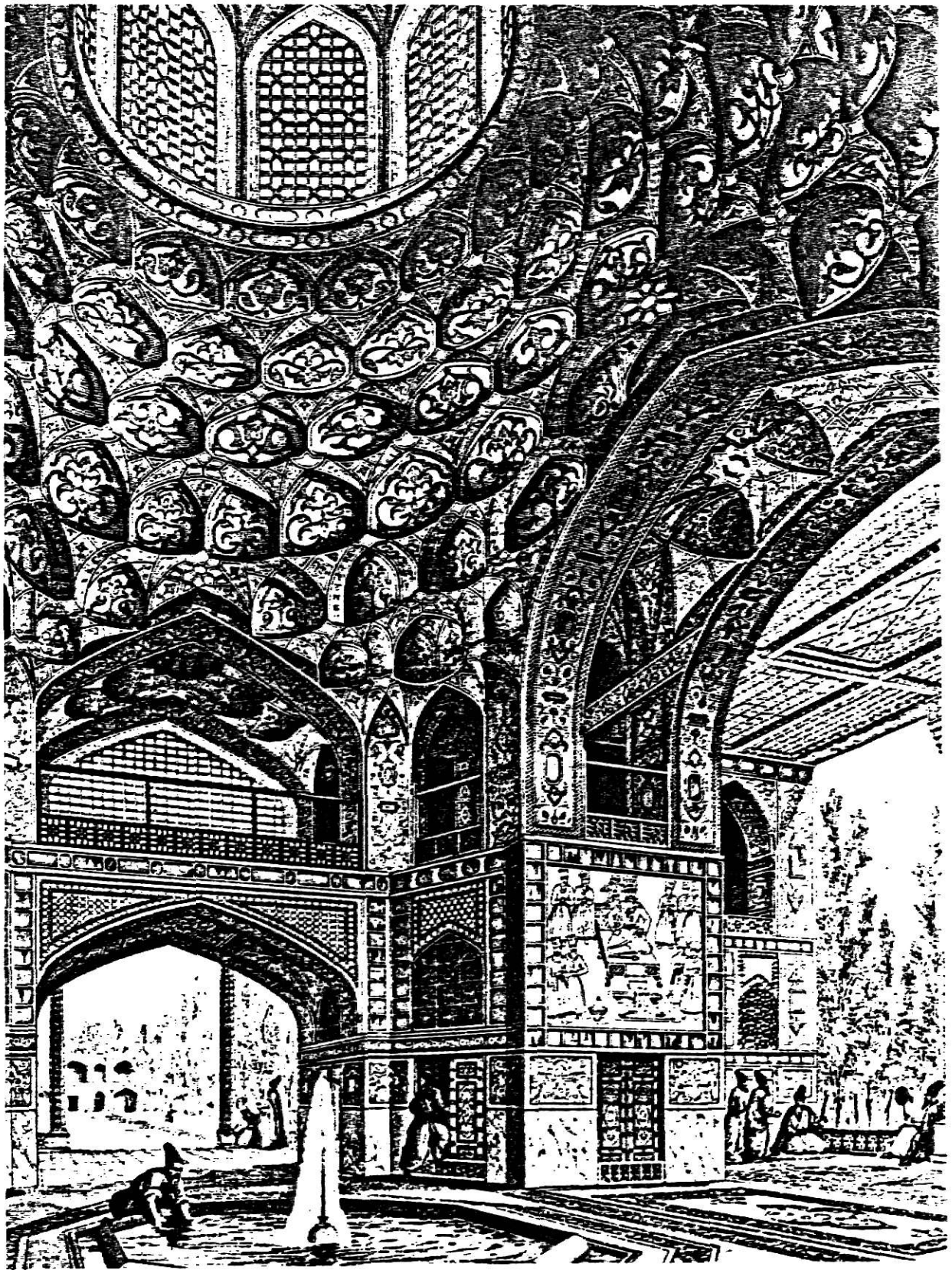
Linking the Royal Square and the Chahar Bagh boulevard there are the 'forty columns' palace, a pavilion where the king gave formal audience to ambassadors, held levees and gave State banquets. Also, a theological seminary and the magnificent 'Eight Heavens' palace (which presently all exist).

Over the Zayandeh river, there still stands the Allahverdi

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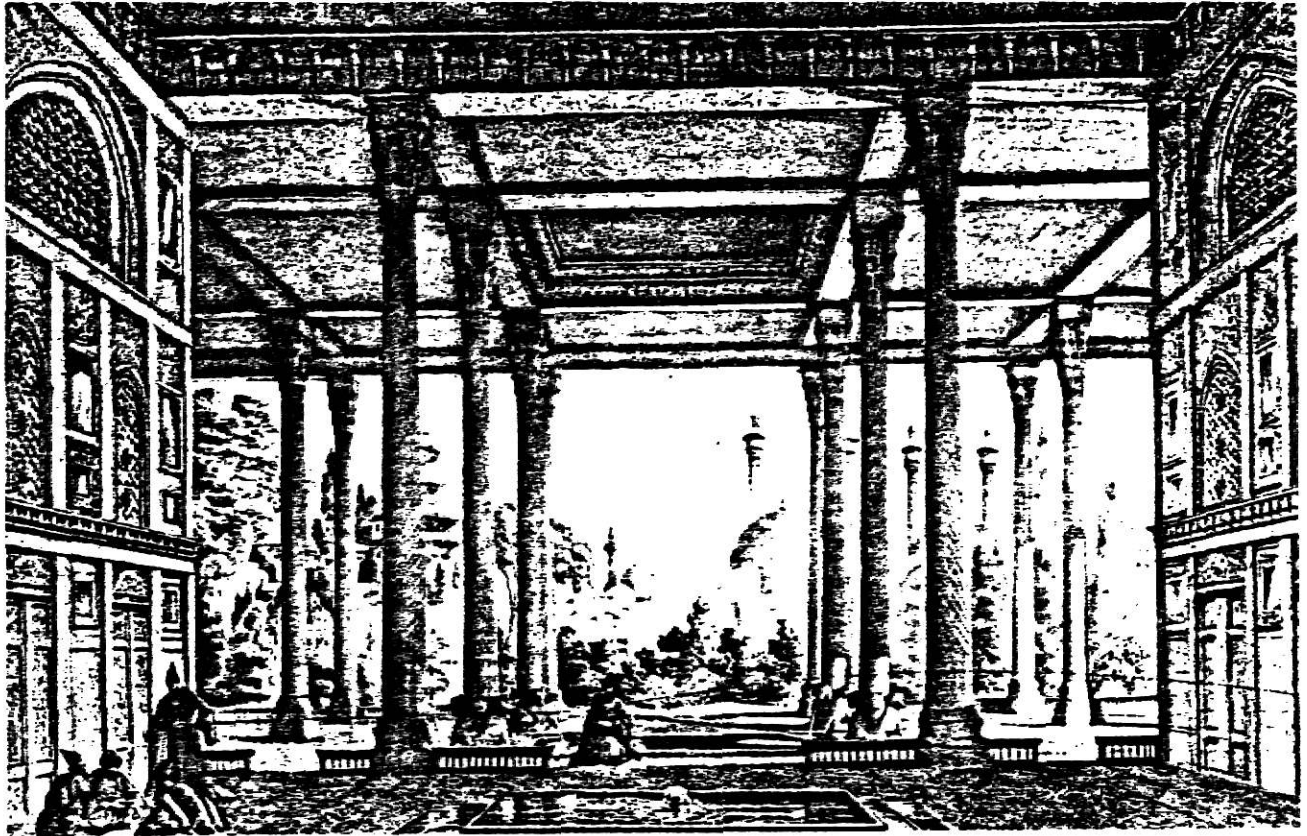
<sup>11</sup>S. Lesuik, "Landscaping Planning for Energy Conservation in the Middle East," Ekistics .(April 1980):271.

<sup>12</sup>George Curzon, Persia and the Persian Question, Vol. II. (London:1892), :34.



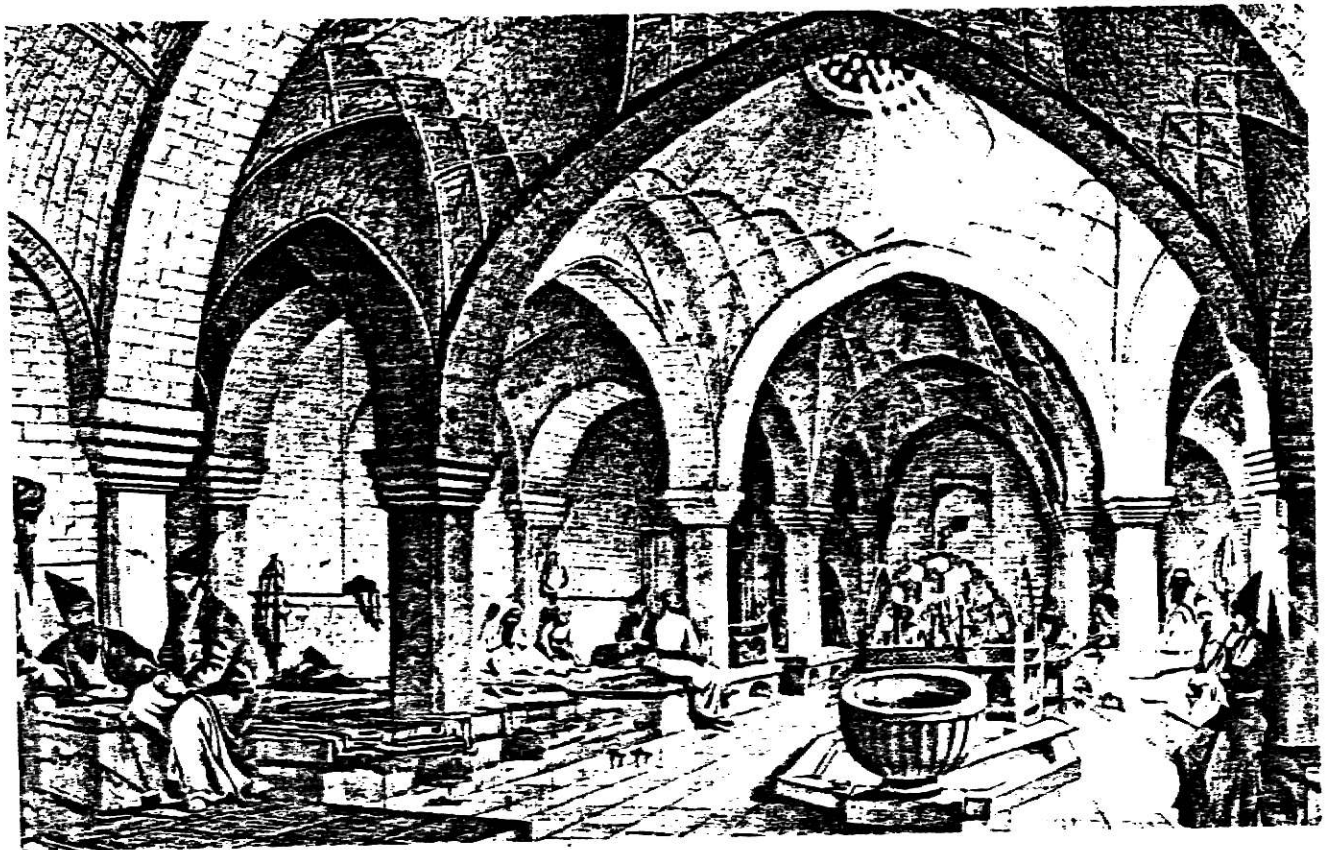
The Eight Heavens Pavilion

(figure 10)



(figure 11)

The Forty Pillars Palace

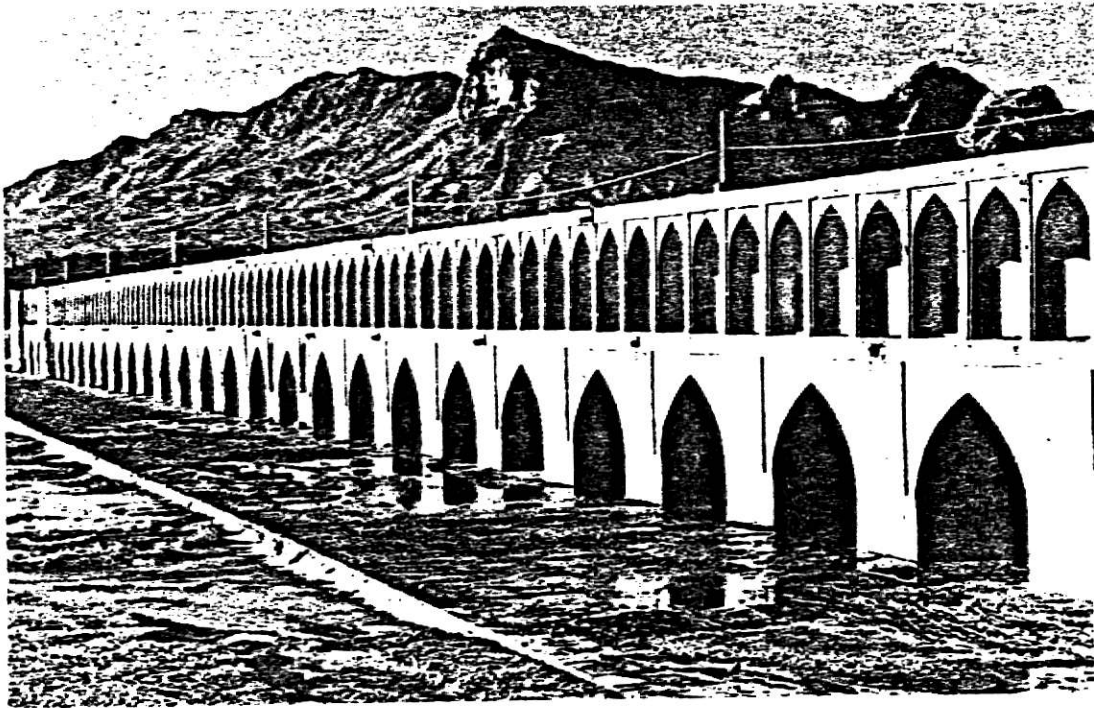


(figure 12)

A Public Bath in Isfahan



Khan bridge with 9 meters wide and a length of almost a quarter of a mile. On either side of the bridge there is a covered arcade. The inner wall of this arcade is pierced by frequent arches giving access to the roadway, while the outer wall has some ninety arches which give views to the river. 'One would hardly expect,' says Curzon, 'to have to travel to Persia to see what may, in all probability, be termed the stateliest bridge in the world.'



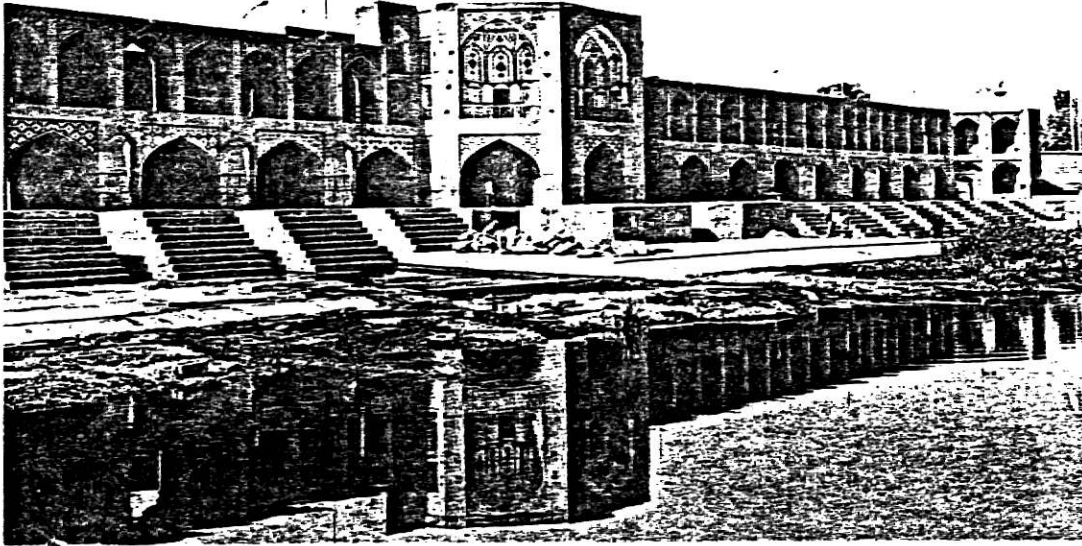
(figure 13)

The Allahverdi Khan Bridge

#### The Khadju bridge

The Khadju bridge is another masterpiece of the bridge-building skill over the river. Being 140 meters long, it is built on a dam of stone blocks. Its peculiar charm depends upon the six semi-octagonal pavilions. These pavilions were originally decorated with uplifting texts in prose and verses, and later with erotic paintings. The bridge has also an upper and a lower promenade; the upper is reached by staircases in the round towers at the corners of the bridge; the lower by other staircases in the basements of the towers and in

the main piers.



(figure 14)

The Khadju bridge

It is no easy task to try and form an accurate picture of the size of the Safavid Isfahan or to estimate its population. Chardin, on the whole the most judicious observer, states that the circumference of all the city was 60 miles. He says that the city had 162 mosques, 48 theological seminaries, 1802 caravanserais, 273 public baths, and 12 cemeteries. He estimates the population to have been between 600,000 and 1,100,000.

Today, Isfahan is a collection of monuments and buildings with some or no restorations. But various physical obstructions such as the surrounding slums, blighting, abused modern technology and, chaos resulting from weak zoning laws, have dwarfed these masterpieces.

There is no better time than this to consider the most important factors that have shaped this ancient city.

#### The Islamic planning



Islam has had the strongest influence on the planning of Isfahan. The most positive and practical approach to Islamic planning is to concentrate on the ultimate purposes or objectives of Islam. A city's plan must be in accordance with the inhabitants' and other users' desires which might be seen as the revelations of the Divine Will, provided that they do not violate the revealed laws. "The revelations of Allah's orders are found in the Holy book of Quran, in the environment, and within the souls."<sup>13</sup> Design, planning, and management may thus be an enforcement of Divinely ordained natural processes rather than resisting them.

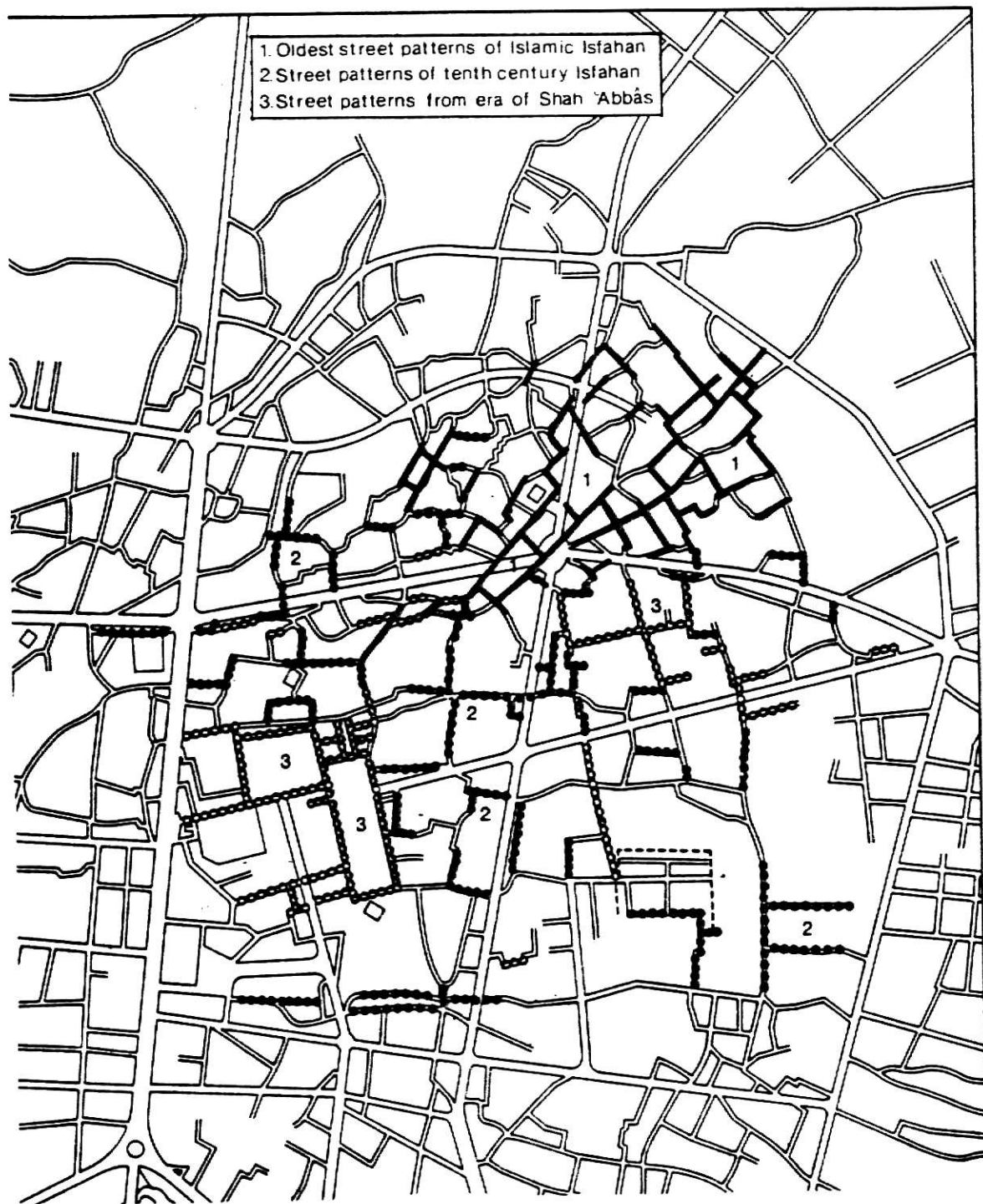
Because of the importance of the Friday Mosque, it was the first building to construct. City planning began after the Friday Mosque and with the roads. Three types of roadways were usually created. The major processional/ceremonial axes, the less important thoroughfares, and the smaller grids giving exterior access to dwellings. These three types of roads were distinguished by their different principles of design.

#### Circulation networks

The network of paths and the pedestrian movement system was formed by buildings and the walls enclosing houses. Paths were planned in a way that they were in shadows most of the day. An Islamic circulation design was defined by narrow streets and open spaces. These arrangements restricted heavy traffic inside the clustered dwelling areas, also, created shady spaces for neighborhood interaction and where children could play close to their houses. The function of cut-de-sac was to decrease the amount of traffic and to insure security and safety of the residential zones.

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<sup>13</sup> Hussaini, "On the Expression of the Divine Will in the Traditional Commands," Quran, 2:163-164, 3:190-191, India, 1871.

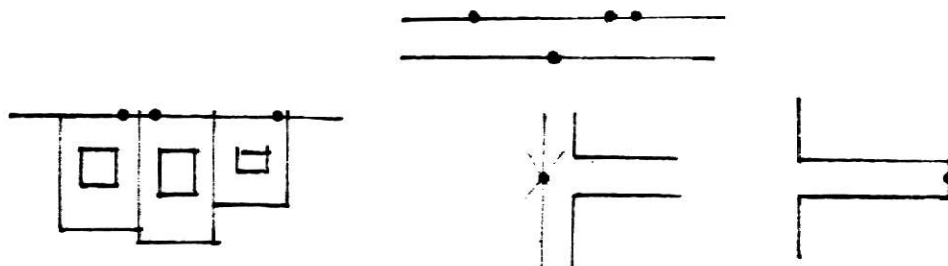


The three ground patterns of the streets in Isfahan

(figure 16)

## privacy considerations

All the buildings in an Islamic city are walled. "They are also planned in groups so as to minimize exposure of wall surfaces. The concept of walls around the houses is the prime structuring element in defining private and public uses."<sup>14</sup> Such an introverted physical evidence can have significant psychological and religious reasons and implications. Walls are built to create privacy, and to protect people against the piercing and unfriendly social and physical "antagonists". Socially, it is probably needed to protect women from the eager gaze of the stranger. Physical protection maybe needed against harsh wind and dust and the like. The maximum degree of privacy also imposes that windows and roofs should be constructed in such a way as to prevent anyone intruding unseen into the intimacy of his neighbor's life. For this reason, house doors on opposite sides of the streets, generally, must not face each other. (figure 15)



Residential zones

(figure 15) privacy considerations

Residential zones, where most of the urbanites reside, were located next to the business district (bazaar). These zones were characterized by segregation of various population groups, each group occupying its own quarter. Different quarters, therefore, were inhabited by homogeneous groups. The number of quarters in the city depended on the extent of the social heterogeneity of its population. Generally, population was differentiated on the basis of any one, or

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<sup>14</sup>Hussani, p. 156, "Qadri".

any combination of the following factors:tribal affiliation,indigenous status,religious affiliation,social class and occupation.As a result,an Islamic city was a mosaic of various quarters."Moslem cities are specially separated so that they could more easily maintain their identity.The separation into such areas was very strong in most Islamic cities which have quarters within which people bound together by ties of language,religion,occupation,family,or common origin live together."<sup>15</sup>

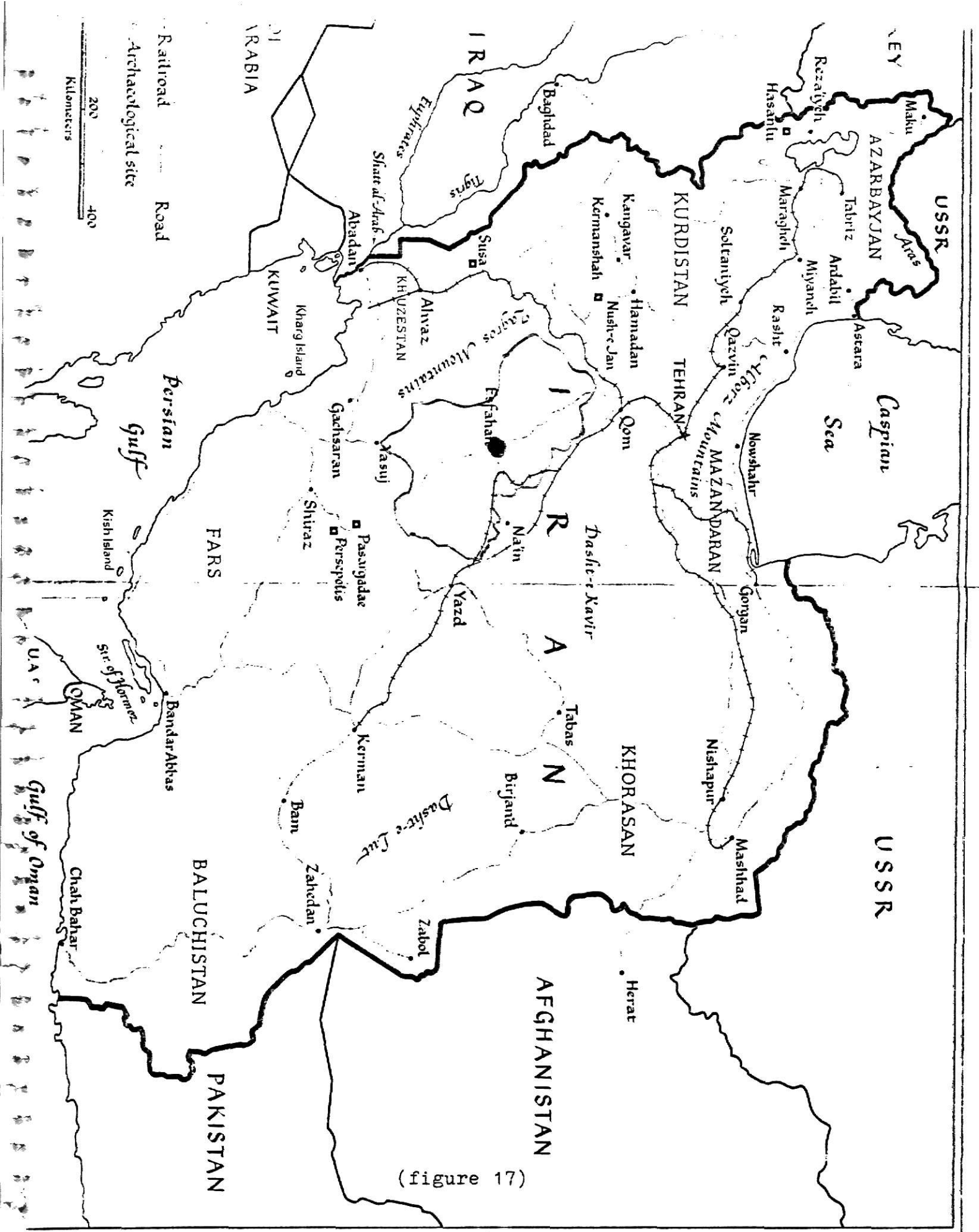
### Orientation

A simple response to local climate is found in the orientation of dwellings to minimize the effects of the cool breeze.To achieve such effects,houses have cubic volumes with the openings oriented principally in a north-westerly direction for two purposes which could be both,social and religious.First,to gain maximum solar energy from the sun and,secondly,to face Mecca for daily prayers.Courtyards were open to the north to receive the cool prevailing breeze of the evening and to encourage maximum circulation of air.

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<sup>15</sup>Amos Rappoport,Human Aspects of Urban Form, (Great Britain: Wheaton and LTD., Exeter, 1980) p.252.



(figure 17)

Chapter three  
Planning in Iran under the Shah  
(1942-1979)

With the rise of the Pahlavi Dynasty, the country of Iran began its period of modernization, where the influence of the British architecture and planning is shown in more contemporary structures in different Iranian cities including Isfahan. Of course, most of the planning, design, and construction of appropriate facilities for modernization was dominated by the Shah whose purposes were capitalistic and more sensitive to British taste.

The Shah based his development plans on the utilization of vast oil revenues. These revenues enabled him to envisage a utopian dream for a new generation of Iranians, and to strive to turn the country back to its glorious past.

The dramatic increase in Iran's investment capacity made possible by the higher oil prices put Iran in the enviable position of being able to have a wide range of discretion in terms of a series of radical changes in the structure of the economy and planning. "Viewing the past thirty or forty years as a whole, five factors do stand out as prime causes of the country's growth: (1) The existence and growth of the oil revenues; (2) The emergence of a surprisingly vigorous class of industrial entrepreneurs; (3) The development of a modern banking system; (4) The interaction of Iranians with Westerners and Western civilization, and; (5) The initiatives launched by government which have contributed some powerful stimuli."<sup>16</sup>

City planning in Iran actually began in 1947. From this time

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<sup>16</sup> George B. Baldwin, Planning and Development in Iran, (Maryland: The John Hopkins Press, 1967) p. 195.

Iran has pursued a consistent development strategy, that is, to modernize the country as rapidly as its resources would permit. The country's reputation for financial prudence was greatly enhanced in the early 1960s when the government instituted a successful stabilization program.

In theory, planning in Iran has come to stand for the determination by the government mainly through the Plan Organization, created in 1947 to implement the First Plan, of the degree and manner in which the economy will make use of its oil revenue (the exclusive source of funds) for public development projects. Therefore, planning and development were implemented within the framework of five several-year Plan Programs.

#### The First Plan

The First Plan (1949-1955) was a blueprint for government's development expenditure for a seven-year period. It was neither a comprehensive one for the allocation of the country's resources nor even a plan for all government investment. Rather it was a list of projects that had been investigated at the prefeasibility level and endorsed by an engineering firm with little consultation with ministries and other official agencies. In fact, until the late 1960s very little planning was undertaken either within the federal ministries and agencies or in the provinces.

#### The Second Plan

The First Plan was abandoned in favor of the Second Plan, which was to cover the period 1955-1962. The Second Plan marks the point which planning in Iran became a reality. At this stage, the rapid growth of urban population of the country was 5.9 million in 1956 (Table 1).

This Plan, like the First, was not a comprehensive Plan, nor



did it have a unified approach. Moreover, it was arranged in a series of unconnected chapters, with no clarity, and defining objectives. "In practice, therefore, the Second Plan was simply a list of projects to be undertaken by the Plan Organization, and on which funds expected to be available from oil revenues were to be used."<sup>17</sup> The list of projects that made up the Second Plan did not fit into any systematically defined set of targets or general goals for the economy.

### The Third Plan

The Third Plan, covering the period 1962-1968, was Iran's first effort at comprehensive planning. Its basic components were: "An investment program for the public sector and some forecasts for the private sector, with primary emphasis on achieving a rate of growth of 6 percent per annum. (1) To enlarge employment possibilities, (2) To achieve a more equal distribution of income, and (3) To maintain relative price stability and equilibrium in the balance of payments."<sup>18</sup> During this period, however, the rate of urban population from 5.9 million in 1956 reached 9.7 million in 1966 (Table 1).

As in the Second Plan, the machinery of planning did not consider the joint effects on growth and social justice nor did it provide even a simple integration between public sector programs and private sector activities. Technically, the Plan had a number of deficiencies and the basic method of planning resembled a stage method of planning, that is, a trial-and-error process. Because the planners lacked reliable data, however, they could not set specific quantifiable goals. Therefore, in the case of national goals, all the secto-

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<sup>17</sup> Reports on the Operations of the Second Seven-year Plan, (Tehran: Plan Organization, 1964), Appendix 5.

<sup>18</sup> Division of Economic Affairs, The Third Plan Frame, 1341-1346 (Tehran: Plan Organization, 1961).



ral allocations had to be determined on the basis of trial-and-error procedures. In practice, this meant heavily on the subjective judgment of the planners.

The conclusion from the Third Plan experiment was that Iran should concentrate on the distinction between short-run and long-run effects of the various actions. Also, tradeoffs among the objectives and different policy instruments in both the short-run and the long-run would have to be determined before a well-thought-out consistent, efficient, and feasible policy could be formulated.

#### The Fourth Plan

The Fourth Plan (1968-1972), began to incorporate some of the innovations to planning recommended by the technocrats, and in this sense it was an improvement over the previous Plans in terms of both formulation and implementation. This was evidenced by a great degree of comprehensiveness, however, despite increased economic sophistication and comprehension of the subtleties involved in planning, the method of formulating the Fourth Plan was still based on trial and error. The summary of revenues of the Fourth Plan indicates that the urban population emerged from 9.7 million in 1966 to 13.2 million in 1972.

Five broad sectors were considered for planning: (1) agriculture, (2) industry, (3) oil and gas, (4) water and power, and, (5) services. The main problems in drawing up the plan were lack of statistics, no basis for consistency, a shortage of concrete projects, and uncertainty concerning the availability of funds for the Plan budget.

#### The Fifth Plan

Beginning with the Fifth Plan (1973-1978), the administrative structure of the government underwent a considerable change. First, "The name of Plan Organization was changed into Plan and Budget Or-

ganization, and secondly, planning came under the Council of Ministers and Economic Council, PBO, Ministry of Economic Affairs, and the State Organization for Administration and Employment."<sup>19</sup>

Now the highest decision-making Body in the government sector was the Council of Ministers. The Council made final decisions regarding planning, development, budgeting, and implementation.

The basic objectives of the original Fifth Plan, dictated by the Shah's philosophy, were established in the following order of priority:

"1-To raise as much as possible the level of knowledge, health, and welfare of the society.

2-To attain a more equitable distribution of national income, with special attention to the rapidly increasing rise in the living standard and welfare of the underprivileged groups.

3-To maintain the rapid and sustained rate of economic growth parallel with relative price stability and balance of payments.

4-To provide productive employment in all regions of the country at a level that would absorb all the new workforce joining the labor market and substantially reduce concealed or seasonal unemployment.

5-To operate fully the established production capacities, built under the previous Development Plans, and to raise productivity and efficiency in the supply of goods and services in the public and private sectors.

6-To improve the administrative order, in keeping with the lofty national aims and objectives, and to strengthen the country's defense capacity.

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<sup>19</sup>Iran's Fifth Development Plans, 1973-1978, Revised Summary,  
(Tehran: Plan and Budget Organization, May 1975).

7-To protect,improve,and revitalize the living environment.

8-To increase Iran's share in international trade,particularly in manufactured goods."<sup>20</sup>

The sharp increase in oil prices and general revenues in 1973 and 1974 radically altered the financial projections of the Fifth Plan.The revised Plan,which had several important objectives,emphasized:

"Preserving,rehabilitating,and improving,especially in overpopulated areas.Preserving the country's cultural heritage and enhance the quality of life."<sup>21</sup>

Since there have been little restraints on funds or industrial development,little emphasis has been placed on the preparation of a detailed sectoral plan for each sector.As a matter of fact,because of the abundant revenues from oil,Iranian planners did not worry about priorities and thus avoided tough choices.

### Municipalities

Under the Shah's reign,the general planning and decision-making took place in Tehran and the traditional functions of the Provincial,local,and rural governments were solely implementing the already designated projects and plans,as well as enacting the adopted laws and regulations concerning the towns and the cities. The responsibility for implementing urban development was on the municipalities."Such municipalities actually did not exist in Iran until 1947 when the law of independence of municipalities was approved and enacted.This law provided the present day legislative basis for Iranian municipalities.In organization,the central government(Ministry

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<sup>20</sup> The Fifth Plan,Tehran:An Echo,"Iran Trade and Industry Publication,"Supplement N.200,March 1973,pp.3-4.

<sup>21</sup> Ibid. 3.

of Interior) was given charge of all municipalities."<sup>22</sup>

These institutions, generally speaking, were poorly organized and they could not preserve the functional unity of the integrated urban structure through the adopted zoning, building codes, and subdivision regulations. In practice, they were places where smaller contractors and land developers met and not institutions where city planners, technicians, and expertise in urbanization existed. Moreover, municipalities could not positively manage the implementation of the development plans and have control over the actions of the different sectors involved in urban development projects.

#### Citizen participation

Citizen participation was never regarded seriously until the last decade of the Pahlavi Dynasty when city commissions were organized within the legislative organization of the provincial municipalities, consisting of influential residents, apparently to show that decisions were made in a democratic way and open to the general public. However, it seems logical that these city commissions did not have any authority themselves to be able to make any decisions. The result is that adequate attention was never paid to the lower-income class citizens and to their blighting areas.

#### Conclusion

Most of the Shah's goals seemed somewhat beyond the nation's capabilities and, generally speaking, beyond a long-run rationality. "The vagueness surrounding the nation's and the Shah's long-run goals has resulted in poor project selection, that is, projects are chosen not for their contribution to a set of long-run objectives, but

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<sup>22</sup>M. Mozayani, "City Planning in Iran: Evolution and Problems," Ekistics, (July-December 1974):267.

more often on the basis of their impact, the vindication principle,<sup>23</sup> and available funds." It is justified to indicate that the Shah's strategy was to pursue many unrelated measures simultaneously, one presumably gaining support from and benefiting from the others. Problems concerning planning started from him and from his government, because they could not develop a strong management as well as a well-defined set of national priorities for development, both economically and scientifically.

It was not until the Third National Development Plan that the necessary steps for preparation of town master plans were taken in Iran. "Most important of all, a High Council for city planning, consisted of eleven members, including the seven Ministers of Iran's Cabinet most concerned with urban affairs, was established with the secretariat of the High Council in the newly created Ministry of Development. The main functions of the High Council were to guide the preparation of town master plans, set up standards and regulations for their implementation, and to give final approval to the plans. The Council prepared the master plans for seventeen cities including Isfahan."<sup>24</sup>

One of the major problems that caused stagnation in planning was the fact that "Master plans were not prepared in direct relation to the towns concerned. Lack of enough experienced town planning consulting firms, lack of proper and sufficient statistics and data, mismanagement in implementing the project, and above all, absence of concrete regional development policies helped the situation to be-

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<sup>23</sup> Norman Jacobs, The Sociology of Development, Iran as a Case Study (New York: Praeger Publishers, 1966), Chapter 3.

<sup>24</sup> M. Mozayani, "City Planning in Iran: Evolution and Problems," Ekistics, (July-December 1974): 267.

Table 1  
Urban and rural population, Iran

Year	Total population	Urban population	% of total	Rural population	% of total
1966	25,781,000	9,774,389	38	15,960,168	62
1977	35,669,484	16,783,484	47	18,885,000	53
2000	57,961,125	39,381,125	68	18,580,000	32

Source: Iran Five-year National Development Program for Housing.

Table 2  
Iran, population and forecast: cities of 100,000 population and over.

	census 1966	forecast 1977
Tehran	2,719,730	4,739,000
Tabriz	403,413	547,596
Isfahan	424,045	870,770
Mashhad	409,616	748,513
Abadan	272,962	417,707
Shiraz	269,865	464,978
Kermanshah	187,930	305,193
Ahvaz	206,375	399,830
Rasht	143,557	206,932

Data for Iran Five-year National Development Program for Housing and related facilities.



come more critical."<sup>25</sup> Most master plans were formulated without sufficient regard to the capacity, both financial and technical, of the municipalities concerned. Therefore, the majority of the consulting firms instead of confronting themselves with the problems, postponed them for the executive projects, which have not been prepared for any city except Tehran.

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<sup>25</sup> Plan Organization and Budget of Iran, Summary of the Fifth National Development Plan, Iran, 1973.

## Chapter four

### Urban visual analysis of Isfahan

Isfahan has a very modern as well as historic image, having seen vicissitudes of urban gestation, change and development throughout its illustrious history, it retains quality of space, urban form, atmosphere and an art quality hard to find in any other place.

To describe the comprehensive view of Isfahan, one should be at the outskirts of Sofeh mountain in the south of the city. From there, the most favorite places of Isfahan can be visible. These places belong to several different eras and, thus, visually they are clearly noticeable from each other. The closer portion of the city is modern, the middle part is the Safavid Isfahan, whereas, the oldest belongs to pre- and post-Islamic civilizations, being seen in the misty horizon.

The panorama of Isfahan boasts that it reigns amidst the splendour of a million sycamore, elm and plane trees. Amidst these trees, the most striking elements are bluish turquoise domes and minarets of the historic mosques. They constitute noticeable differences and perceptually they are important. Such domes and minarets, depending on the orientation and reflection of the sun on their glazed tiles, also create noticeable differences which catch the eye of the beholder at the first sight.

Further, far from the Safavid monuments, brick domes and minarets of the periods prior to the Safavid dynasty are apparent. Visually, the color and shape of such architectural elements become noticeable in the horizon and against the blue sky as background. "Noticeable differences are seen in terms of the background, in effect as figure-ground relations, or as a change of state or borders

of the stimulus(Gibson 1968)." <sup>26</sup>

Moving down the Sofeh mountain towards the north, the modern parts of Isfahan catch the eye. Well planted boulevards of different widths, clean and exciting buildings applying a great deal of architectural proportionality and values. There are several recreational parks which count for another pleasant sight because of their waterfront location.

The Zayandeh river with its wide historic and modern bridges creates a strong clear edge in the city to which several boulevards with rows of sycamore and pine trees are paralleled.

Besides the modern parts, the city of Isfahan has two distinctive areas. These include those transitional districts located between the old and the modern as well as the old itself.

The transitional districts are more crowded than the modern parts. They belong to different eras and are constituted by the old and modern architecture, street pattern and planned environment. These are usually formless and architecturally incompatible. The urban physical setting is consisted of confusing physical arrangements and heterogeneity of structures.

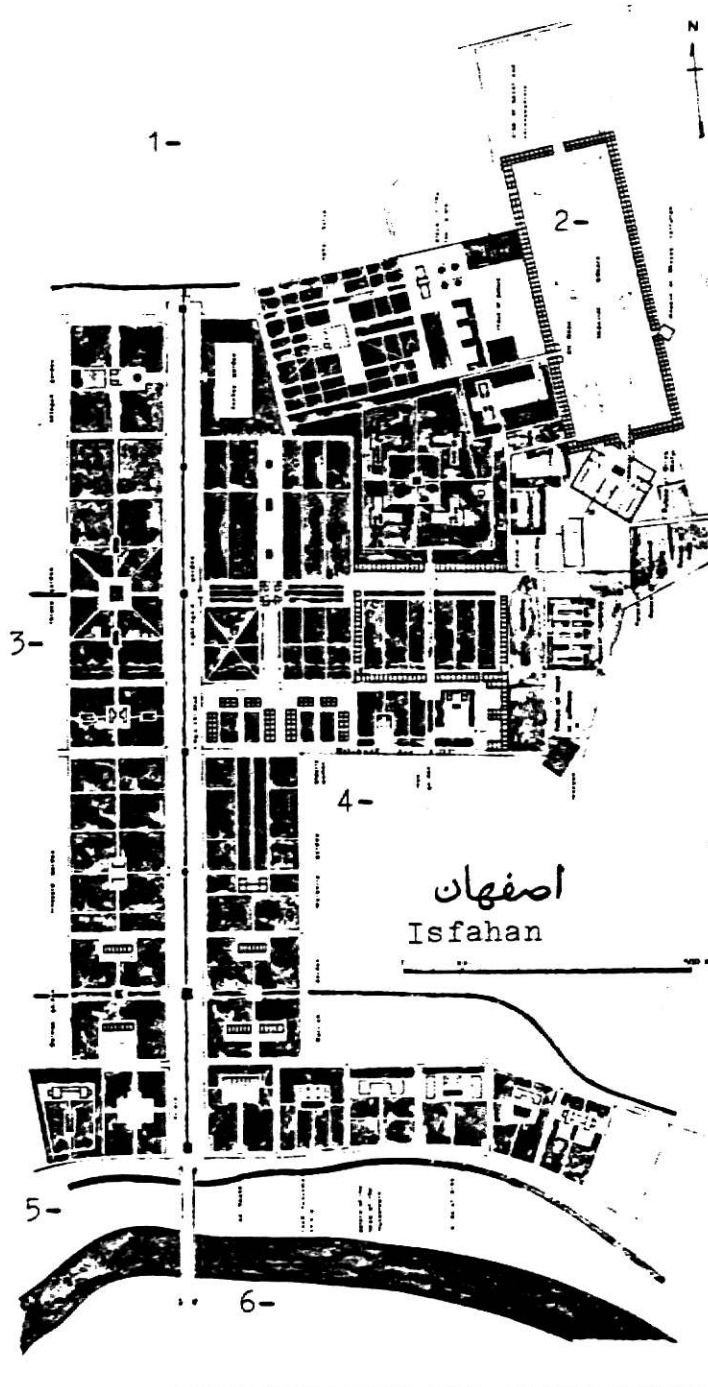
The old quarters have large areas of mixed use, creating a quality which reminds one of the Middle Eastern stories of the Arabian nights. These quarters are crowded and packed with historic monuments and structures. Their narrow streets and alleys are congested with people and cars. They lack much vegetation and trees or recreational open spaces of any sort. The historic areas display, to a marked degree, a quality of urban "atmosphere". The bazaars of various profess-

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<sup>26</sup> Amos Rappoport, Human Aspects of Urban Form, (New York: Wheaton and LTD., Exeter, Pergamon Press, 1980), p.225.

ions, the squares, as well as the crowded-up, old residential quarters of this city possess far more charm, more "soul", more atmosphere than the brand-new, engineer-contractor feats of city agglomeration one may witness today.

- 1-Historic quarters
- 2-The Royal Square
- 3-The Chahar Bagh boulevard
- 4-transitional districts
- 5-The Zayandeh river
- 6-Modern parts of Isfahan



*Isfahan, the suburb of Shah Abbas I, begun 1598, plan*

(figure 20)

In Isfahan the most charming parts are still the disturbed and historic sections. These have visual and sensuous impacts that can be found in space, in proximity, in closeness, in scale, and the pedestrian scale of things.

In a general view, the historic quarters look like sculpture with many jewels consisting of the wondrous mosques, other intricately covered arcades, domes and minarets, the Royal Square-perhaps the greatest composition of urban space in the world-and also the jabbed bazaars around the Square.

These old quarters hum an unusual tone of hushed music in its varied and truly human quality: the noise of hammering copper-and silversmiths, of artisans' chisels and work and the hissing noise of many a bellows. The Cryer's call to prayer from a thousand mosque entrances and minarets, mixing with the bazaar's cacophony of sound, light effects and architectural forms, is something unique and collaborating to make old Isfahan a masterpiece in city planning among cities.

Amazingly, the beholder will accept the reality that a million fingers worked dexterously, artistically and painstakingly to make of these quarters a dream city that abruptly transports one in time and space back to the days of unity in urban life. They are so rich in space, architecture, tile and mosaic work, they are so rich in color and nature which create an environment of powerful character.

The Royal Square still remains the focal point of the historic areas. It is strong because of its historic surroundings-symbols of religious, administrative and commercial activities. Creating with the old areas a kind of micro-city full of subtle variations and architectural surprises, the Royal Square is bright, elegant, do-

mestic in scale, gay in pastel tones, and relieved by strong framing.

All the historic structures in the Royal Square create a great deal of imageability. They are well-structured, original, and tremendously balanced landmarks. But in almost every case their effectiveness is muted. The westernized landscape design in the middle of the Square is confusing and disrupting. Congestion and parked cars all over the Square decrease their visual consciousness. These landmarks, at far range, are more distinctive than from near. The Royal Square seems to have been more conspicuous before replanning it. This approach is also apparent around the bazaars and the residential zones which are packed with cars and being replanned by the new architecture.

The bazaars in which Morier loved to wander in the early seventeenth century, are experienced now by Blunt and Swaan as the following:

"Oriental Isfahan is of course most easily sampled by the tourists in the bazaars, which are possibly the finest in all Asia. Though European dress is unfortunately becoming increasingly common, the atmosphere remains Oriental; the spirit of Hajji Baba, the hero of Morier's brilliant picturesque novel, still haunts the city, there are still plenty of chaddors and turbans of several different colours to be seen. The ever beguiling feature of the bazaars is of course their endlessly varied kaleidoscope of sights and sounds and smells. Here are piles of pomegranates, of glittering pink candy, of sticky sweets, of curious spices. From one side of the alley comes the glimpse of a dye vat, with length of the



printed fabrics hung up to dry. In a courtyard, beside a blue-tiled pool, the shade of a pink-flowering almond tree falls upon the sleeping guardian of huge bales of improbable merchandise. There are the typical sounds: the strident hammering of coppersmiths- so deafening- the muffled hammering of the textile printers, and the cries of the vendors."<sup>27</sup>

The path system by itself in the bazaars is vivid but tricycles for delivery, automobiles, and set-backs in the narrow alleys and formless modern buildings, here and there, make it to be visually confusing and physically uncomfortable. There are signs of any kind on the shops. The alleys are narrow, pot-holed and stinking; they wind impossibly and defy the markers of street plans. Fortunately, materials contribute to a sense of place and cohesiveness in these structures create a strong compatibility.

Concentrated in the bazaars of Isfahan are all activities of an economic, handicraft-industrial, and commercial nature; these are divided into sectors according to various occupations. The bazaars are a legacy of the classical and oriental worlds which, closely bound up with the economic activities, are of two types of structures. One is set aside for the storing of goods to be sold later, the other is for merchandise in transit, and it is usually translated into the Caravanserais.

Passing around two miles through the Safavid bazaars to the northeast, the oldest portions of Isfahan will appear. The old Maidan is the center of the medieval Isfahan. This Maidan which was built

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<sup>27</sup> Blunt and Swaan, Isfahan, Pearl of Persia, (New York: Paule Elek Productions Limited, 1966), p. 197.

in 226 A.D., today has no homogeneity or cohesiveness with its surroundings. Like the Royal Square, it is transformed into a westernized garden. Heinz Gaube who has visited this area says that:

"The old maidan is the most important element in the layout of medieval Isfahan. Today, this Square is built over with simple workshops and warehouses. In the north it is used as a fruit and vegetable market. The bazaar in the northeast is a part of the bazaar main axis between the Royal Square in the southwest and the Friday Mosque in the northwest. It is roughly aligned with the Saljuqid southeast wall of the Friday Mosque. Thus some may suppose that it follows the alignment of the bazaar which already existed in the twelfth century."<sup>28</sup>

The Friday Mosque is probably the strongest landmark in the area with its khaki minarets and dome higher than any other building in the surrounding environment. This mosque par excellence, of course, is the congregational mosque, where particularly in the early stage the community met to fulfill the legal percept of prayer in common but also to participate in all the important decisions regarding society.

Today in this area (622-1598), like the Safavid quarters of Isfahan, there is not much vegetation or open spaces. Lack of sanitation is seen almost everywhere. It is dense, packed with cars and people. However, functionally and structurally it is still efficient. The Street Widening Act of 1933 has done the most damage to this area.

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<sup>28</sup> Heinz Gaube, Iranian Cities, (New York: University Press, 1979), p. 73.

Several new streets are constructed after demolition of old structures. Consequently, ill-shaped and formless shops and new structures create a tremendous amount of incompatibility between the old and the new. Such are the historic areas of Isfahan, today.

Note: Since the names of most of the streets in the whole country of Iran have been changed after the revolution and the author has not had access to the new names, the urban visual analysis, as a result, has been generalized.

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## Chapter five

### Planning and urban design problems

The social, physical and ecological environment of Isfahan's historic quarters is in a state of crisis and confusion resulting from decades of piecemeal and even rapacious exploitation of resources and short sighted 'incremental and non-comprehensive' planning.

Actually, most of the streets of today's old quarters of Isfahan are those designed under Shah Abbas the Great in 1598. The quarters have been planned as self-contained human communities, in the heart of which every activity took place through pedestrian-scale narrow streets and alleys.

With the arrival of automobile, the street pattern was found to be inefficient and sometimes totally unsuitable. Therefore, during the Reza Shah's reign (1925-1941) Isfahan along with other Iranian cities underwent a drastic physical change primarily for transportation on the legal basis of "Street Widening Act of 1933 which authorized municipalities to widen the traditional narrow paths of the Persian cities to small scale but Hausmann-like streets. The backbone of street networks was provided by the superimposition of a grid iron pattern on the old pattern of paths. What generally characterizes the physical town improvements to this period is a vast and forceful movement towards modernization, but without sufficient attention to the historical context of Iranian cities such as Isfahan." <sup>29</sup>

In addition to 'Street Widening Act', many new streets after demolition of hundreds of historic houses were constructed for the

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<sup>29</sup> H. Mozayani, "City Planning in Iran: Evolution and Problems," Ekistics, (July-December 1974): p.268.

purpose of transportation (figure 21 and 22).



Figure 21 : Sample of a new street after demolition of old structures.

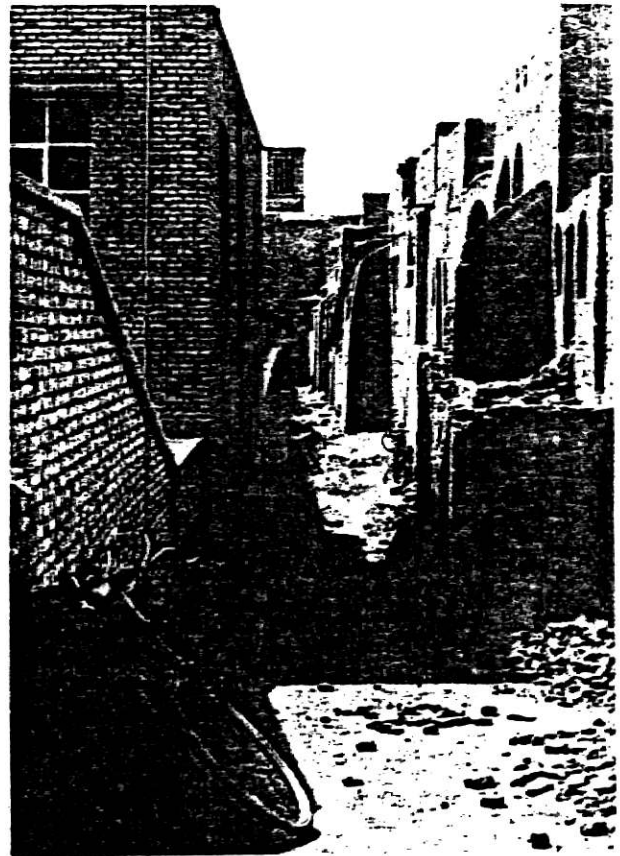


Figure 22 : Sample of modern design penetrating the old structure of the historic quarters.

These new streets along with the widened streets and alleys had several negative impacts on the urban design fabric of the old Isfahan and caused severe problems both for the people and the government itself which included:

1-Street Widening concept generated a great deal of congesti-

ion . This kind of approach was not scientifically and aesthetically demonstrated aiming at a more useful transport route for present and future travel demands. It is true that as soon as the demolition of houses and other buildings to create a new road facility ended, both sides of the new road were transformed into shops of all sorts, some noisy whereas others incompatible with the poor zoning regulations of the city. Such shops were virtually built on the irregular left-over land of the previous houses, each being built with different materials, color, texture and even height. Worst of all, municipalities were too powerless to enforce their so-called legislative authorities.

2- There was no comprehensive zoning plan to create harmony and rationality to dictate use with respect to use, built-up space with respect to open space, height with respect to length and, in short, balancing all the essential supporting facilities of such new environments. There existed no rationale to preserve the human-scale for the benefit of man. There were no thoughts for the expansion of all present, and future, mechanical scales; however, this should not happen at the expense of the human scale. What was needed was a system allowing for the coexistence and cooperation of all scales.

3- Engineering and architecture did not mediate and dictate the overall land use, climatic, topographic, as well as the laws of engineering and architectural economics. As a result, in a short time, streets became parking lots and neighborhoods lost their natural human scale and started to suffer from the intrusion of the machine and the conflict of this natural traditional scale with the new mechanical ones. The situation got worse with every day that passed.

4- With the increasing number of automobiles, traffic became a considerable problems especially during the rush hours which para-



lyzed all the streets of the historic areas. It seems that widening of streets, here and there, was obviously not a satisfactory way to improve transportation evenly, and completely. At the time, the problem appeared to be solved with a mass transportation system owned by government. It was only an overnight solution to congestion. The failure stemmed from the fact that, scientifically, trips were not correctly defined in magnitude and directions at the different periods of the days. In addition to that, the forecasting of future urban development, in terms of sufficient routes, and future travel demands were not measured and calculated correctly.

5-The quarters which were not designed for motor traffic, had to adapt, modifying the old street pattern by providing new areas with adequately designed streets, and by rearranging human activities and land uses so that modern travel methods can be exploited to the best advantage.

6-To provide parking spaces for the new mode of transportation, the Royal Square- focal point of Isfahan and the diamond of the world, lost its function as recreation and commercial center. It lost its homogeneity and continuity with its complementary elements. Because of the space it covers, the municipal authorities transformed it into a great parking garage. At the center of the Royal Square, there is a gigantic westernized pool with trash baskets noticeable everywhere. Fluorescent standards higher than some of the historic elements offend the eye. Transformation of the Polo ground into a parking garage is insensitive and deliberately destructive to the historic and cultural significance of the grandeur and technical skills in the surrounding ancient edifices.

7-Today, the Chahar Bagh Boulevard is filled with shops of different structures and colors, far from a pleasing urban aesthetic.

Like the Royal Square, it is the main drag of the city. Ill-repaired, with a lot of unorganized signs and billboards, mosaic pavements of various designs from one shop to the next, and narrow sidewalks for the shoppers. This boulevard seems to be more at the service of automobile than human needs.

In addition to the problems created by the Street Widening Act of 1933, several other inadequacies for a sound urban planning for the historic quarters resulted from the following:

1-A large bureaucracy of unseasoned and knowledgeable employees, the constant change of local government heads, mayors and executives, and the absence of a professionalized staff concerned with planning militated strongly against the application of sound city planning and historic preservation. Under the Shah, most of the mayors of Isfahan were either retired Generals or poets and doctors appointed to the job. Needless to say, they were neither sympathetic to urban affairs nor had they ability to enforce the projects. Moreover, the undue influence of the local political groups often hindered the progress of works.

2-Absence of science and rational comprehensiveness, accurate population data, base map, demographic information, and necessary surveys in the planning process of the historic quarters created social injustices. Only rough estimates existed that could not be depended on for serious analysis to introduce and implement a sound planning. Moreover, municipalities were confronted with absence of administrative, executive, and technical personnel and the role of planners and architects was limited in the large-scale programs.

3-The residential clusters in the historic quarters have unequal access to the existing insufficient educational, health, and recreational facilities. Hospitals and schools are excluded. To get

such services, residents have to make trips somewhere else in the city. Differences in accessibility are mainly the result of the difference in physical distance, the difference in time consumed to travel, and the costs incurred in reaching these services, indicating a positive correlation between distance, time, and cost. The other resource assimilation factor is the effort that is necessary to negotiate the barriers. This draws upon the tolerance of the household in overcoming these barriers.

All the historic quarters, for example, do not have one swimming pool or open spaces. Residential recreation and leisure-time facilities have not been provided for the low-income groups and within their own dwelling spaces, whereas such leisure facilities are needed to recreate equilibrium of life at the social, the physical, and the psychological level.

At the provincial level, building codes and zoning regulations were not performed seriously and strictly. The development cases of Isfahan are replete with examples when a non-comprehensive approach has been allowed to dictate decision-making process in their planning. Still noisy occupations such as welding workshops or carpenteries have activities at the neighboring dwelling units; or a junkyard is located next to a pharmacy. Planning aims at producing a clean, quiet, and safe living environment: what is the use of zoning regulations if the city dweller is pestered from morning to evening with noise, danger, crowded conditions, and disorder?

After the rapid boom in Iran's economy, planning and development began in spurts and speed. Speed and efficiency, speed and economy, however, are not synonymous. Speed did not solve any urban problem, nor did it bring in its train an orderly, sound development,

particularly in the vast historic areas of Isfahan. Speed and short-run projects did not build enough hospitals to cope with the medical demands. It did not create sufficient recreational and educational facilities for the citizens. It did not either respond to the general needs and desires of Iranians. What it has done, is not only a great chaos on the urban and regional scenes, but great wastages in material, time, studies, and a great deal of duplication and delay in vital projects.

Although much damage has been done to these historic areas, still the opportunities exist to salvage what remains. This requires the immediate stepping in of a democratic government to evaluate the present situation, and call on experts to draw a new policy of redevelopment for such areas.

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## Chapter six

### Planning and urban design guidelines

Now that some of the urban design problems of the old Isfahan are discussed, it is a good opportunity to indicate that the administration of Isfahan must be, both science and art. It must be science because it should require technical knowledge. It is art because it should require the delicate capacity to deal with people and situations.

The following guidelines are based on the application of art in urban formation and the scientific rationale:

#### Comprehensive plan

Comprehensiveness means that all the aspects of a city must be studied and carefully considered. It means the proper, wise and studied relationship of different issues. Comprehensiveness means application of balance and unity, of priority programming and flexibility. Community's various collective goals can somehow be measured at least roughly as to the importance and welded into a single hierarchy of community objectives for future evolution of all important economic and social patterns.

For a comprehensive plan, all the environmental assets and liabilities, both physical and social, should be surveyed, analyzed and evaluated. Similar efforts should survey and evaluate all of the cultural and material resources, in terms of their relevance to the solution of environmental problems. In addition to that, local processes for planning and designing environmental preservation, change and management, should make use of existing professional, scientific, cultural and technical personnel by organizing a new and more prod-

active relationship.

If the planner is truly to think comprehensively, in this view, he must consider not only the goals of society, but also the framework within which these goals can be pursued. The important functions of any comprehensive plan are: (1) "To fit into a master plan (2) To evaluate proposals in the light of the master plan and, (3) To coordinate all the proposals to reinforce each other to further the public interests. Each of these functions requires for ideal performance that the comprehensive planners (a) understand the overall public interest, at least in connection with the subject matter of their plans, and (b) that they possess casual knowledge which enables them to gauge the approximate net effect of proposed actions on the public interest.<sup>30</sup>

Certainly all the problems can not be solved easily, the important thing is that all new improvements in the historic areas add up to a comprehensive whole with meaning. Once a comprehensive plan is evolved, it is necessary to work out a schedule of priorities.

The four principles of Ekistics give good clues to a comprehensive whole; they are as following:

a. Unity of purpose. In order for our environments to be successful, they have to satisfy us economically, socially, politically, technically, culturally, and aesthetically.

b. Hierarchy of functions. We shall achieve the best type of organization through a hierarchical distribution of functions and their expression.

c. Respect for four dimensions. We need to develop programs

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<sup>30</sup> Alan Altshuler, The City Planning Process, (New York: Cornell University Press, 1965), p. 299.



that will include the fourth dimension of time(change and growth) and that will respect it as much as the other dimensions-and sometimes even more.

d. Different scales for different masters. Man should remain the main master of the city. Instead of permitting machines to become masters that control the whole city, as the car does at present, we must make machines the masters only with their appropriate spheres: the car on the highways, the airplane in airlines, the rocket in space. All have to be incorporated in a rational way into the overall plan of Ecumenopolis."<sup>31</sup>

Essentially, the basic aim of planning is to produce a functional, pleasant and beautiful environment for human habitation. If any opportunity is given to the old quarters of Isfahan to remedy the situation, it should deal comprehensively with the growth, rehabilitation and redevelopment.

#### Citizen participation

Ideally the process of a democratic decision-making should take into account the views of all those who have a legislative interest in the matter at issue. Of course, most issues are "routine" and can be left to responsible officials for implementation. A few are "strategic", and these tend to capture the attention of existing interest groups who feel threatened.

Members of the public involved in planning need to feel that they are participating in something that is likely to have tangible results. Public participation must be an integral part of the planning procedures being adopted in Isfahan. "Absolute necessities of a

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<sup>31</sup> C.A. Doxialis, "Urban Renewal and the Future of the American Cities," Vol. III, (Chicago: Public Administration Service, 1966), p. 101.

Moslem community must be determined through anthropological and sociological considerations and by open meetings or consultation. It is essential that people of all social and ethnic groups be consulted equally, and, in accordance with the Quran."<sup>32</sup>

The public should be entitled to be 'informed' of planning proposals and they must be given an opportunity to make representations on such matters.

#### Integration of old and new architecture and planning

Among the most controversial issues of the urban design and the historic preservation movement is the design of new buildings in the old quarters. The basic aspect of this is the issue of modern architectural and historic integrity. There is also much greater problem in relating new design of construction which has a direct impact on neighboring historic elements. Efforts should be applied to achieve harmony between the old and the new structures as well as historic conformity.

The designer must not be heedless to the responsibility to the past and make no compromise with it. Texture, materials, scale, and other considerations for harmonizing with the old must not be ignored to the detriment of both the old and the new. There is no excuse for this indifference to historic values.

The contemporary architect or planner should saturate himself with the personality of an area and become truly involved with the architectural qualities which make the area worth preserving. These qualities would involve the component parts of the street scene—the appearance of the historic area from every vantage point,

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<sup>32</sup> Abdul La, "Basis of Islamic Culture," (Hyderabad, India: 1959), Institute of Indo-Middle East Cultural Studies, p. 177.

inside as well outside the area. This requires moving from place to place in order to understand its structural form, its topography, its skyline. Evaluations must be made to determine those architectural features that create the special character of the place and which features have no competition from a new element which would diminish their importance.

Within the historic quarters of Isfahan, the new structure to be considered should embody architectural elements which are sympathetic to the street scene and to the immediately surrounding buildings. In doing that, building scale and heights, surface materials, textures, color and apertures must be considered in detail.

In a meeting in 1967 in Braunschweig the Standing Committee on Historic Urban Affairs passed the following resolution:

"Wherever old structures are visible elements in the present city picture-particularly where buildings and groups are of architectural merit or lend historic significance to the structure of the city and present the unique, individual image- efforts should be made to preserve the structural inheritance and to adapt it meaningfully to the needs of our time.

"To this end, one should, above all, preserve the old scale and proportion in height, width and structural detail in new building and alternations in historically significant districts.

"To the same end, new additions that disrupt the old city pattern should be avoided as far as possible. Original street and building lines should not be changed. The narrow streets of the old quarters can often contribute as pedestrian malls to a meaningful traffic system. Public and private parking spaces and parking garages should be installed outside the historic areas to the greatest extent possible. Much effort should be done to gain the spirit of the era which such structures and buildings were erected to serve spe-

cific functions."<sup>33</sup>

These issues are also critical to the UNESCO where it reads:

"Historic quarters in urban centers and groups of traditional structures should be zoned and appropriate regulations adopted to preserve their ambiance and character, such as the imposition of controls on the degree to which historically or artistically important structures can be renovated and the type of design of new structures which can be introduced. Similar regulations should cover the area surrounding a scheduled monument or site to preserve its association and ambiance. Due allowance should be made for the modification of ordinary regulations applicable to new construction, which should be placed in abeyance when new structures are introduced into a historical zone. Ordinary types of commercial advertising by means of posters and illuminated announcements should be forbidden, but commercial establishments could be allowed to indicate their presence by means of judiciously presented signs."<sup>34</sup>

Good new architectural design and planning can feasibly be harmonized with those of old without damaging the historical values or disrupt their 'soul'. Integrity of old and new elements can be done through sensitive considerations and a great deal of professional knowledge.

#### Planning for pedestrians

It is tragic to observe that at a time when western countries are introducing pedestrian zones, especially in their historic districts, the Islamic city of Isfahan with its incomparably rich and

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<sup>33</sup> Reprint from Historic Preservation, Vol. 20, No. 2, April-June 1968, pp. 50-58. Published by the National Trust for Historic Pres.

<sup>34</sup> Architecture and Urban Design Staff Writer for the Washington Post, Washington, D.C.

pedestrian-oriented fabric, is subject to congestion and dissection by automobile routes.

Pedestrian in the historic fabric of routes in old Isfahan could easily create comfortable access to the shops, public baths, mosques and schools. More importantly, separation of pedestrian from vehicles had created a safe, pleasant and efficient environment in residential and commercial areas for people to use.

Today, the transition from the pedestrian mode to the automobile-based way of life in the old quarters has caused serious strains on the personality of the citizens. This change has brought with it the worst possible traffic conditions, environmental decline, and injuries and death of pedestrians.

Arrangements for pedestrian access in Isfahan must be rediscovered in order to continue to save useful purposes and pedestrianization measure is to be considered necessary for the survival of the ancient areas. As a conservation measure, traffic-free zoning, especially for its historic core must be introduced to restore the unity and homogeneity of the historic urban fabric. The cores of Isfahan must experience a revival in pedestrian modes that are affecting not only their appearance, but their functions and relations to the historical monuments and other physical urban settings.

"The rapid acceptance of traffic-free zoning is based, primarily, on its capacity to achieve four major goals in the process of urban revitalization: reducing traffic congestion, halting environmental deterioration, improving retail conditions, and strengthening the role of the core as a focus for community activities."<sup>35</sup>

Besides the effectiveness of pedestrian zoning in controlling

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<sup>35</sup> Robert Branulla and Gianni Laugo, The Rediscovery of the Pedestrian, Washington D.C.: H.U.D., Inst. for Envi. Action, 1976, p.1.

traffic; "Many cities have undertaken additional measures to discourage traffic from reaching their central cores. These include reducing the number of parking spaces, creating traffic diversion routes, and improving public transportation through a peripheral parking.<sup>36</sup>" The rationale behind parking spaces inside or close to the historic relics is that providing parking facilities will attract more cars. On the other hand, banning vehicular traffic has proved more effective in reducing noise and air pollution levels, and in reducing the damage caused to historic buildings by continuous vibrations and emissions from traffic.

The social needs of pedestrians are also of primary importance. These needs should be emphasized in the schools, hospitals, bazaars, mosques and other social institutions. Pedestrians are also important to avoid traffic accident. In the populated historic centers, there always is a chance of conflict between people and cars. Pedestrians allow the interaction of people without the pressure of automobile traffic.

Tourism, both, internal and foreign, will benefit enormously by combining shopping and sightseeing in historic traffic-free areas. It is sad to see that today the Royal Square which still remains the focal point of the Safavid Isfahan is the main drag of the city. It is changed into a gigantic out-of-doors super garage. This magnificent Square which over a generation ago was a wide open space of the Polo ground, is landscaped in westernized garden design, and is decorated with the giant modernistic light standards which have been erected about twenty years ago. These physical settings have ruined the total lucidity, imagability and homogeneity of the Royal Square.

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<sup>36</sup> Robert Branulla and Gianni Laugo, The Rediscovery of the Pedestrian, Washington D.C., H.U.D., Inst. for Envi. Action, 1976, p.1.



To preserve these historic landmarks, it will be, in practice, wise to change the design of the Royal Square to what it was and pedestrianize the existing streets not only for beautification efforts but simply (1) to eliminate conflict between pedestrians and cars (2) to gain unity with the architectural elements of the Square and, (3) to create social interaction for people by walking and appreciating historic values and cultural heritage. Walking from one historic building to another may be considered a recreation and perhaps, more importantly, an educational experience. "Speed influences how often noticeable differences occur, how long they are seen and hence whether they are noticed. Subtle cues need slow pace. Driving is not only fast but it also demands concentration, leaving no time or channel capacity to appreciate the environment. Thus pedestrians have a much better awareness of places and clearer ideas of the significance, measuring and activities in the city than either drivers or users of public transport. Because of the lower speed and lower criticality of their movement, pedestrians can perceive many more differences in form and activity."<sup>37</sup>

The most logical trend is to bring the pedestrian zoning back into residential neighborhoods of the core. This coincides with an awareness on the part of planners, who realize that the problems of old portions of the cities must be approached on the neighborhood scale.

#### Transportation

Transportation is a vital facet of any dynamic city and one knows what an important role this factor plays in the political, economic, and physical fabric of any given city.

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<sup>37</sup> Amos Rappoport, Human Aspects of Urban Form, (Great Britain: Wheaton and LTD., Exeter, Pergamon Press, 1980), p. 240.

Some transportation improvements should start by prohibiting all but bus and bicycle transit in the streets of old quarters. While not totally traffic-free, these streets will route traffic, discouraging all but the most vital service vehicles from entering the historic areas. All these measures may be considered for the survival of the old city for its historic core. The prosperity of central Isfahan is essential to the functioning of the trade industries, to tourism and to the national and international competitive prestige of the city.

Based on the practical capacity of the present street network in the historic Isfahan to accommodate a sufficient number of surface vehicles to handle movements, and in order to decrease the physical and visual confusion produced by motor vehicles, there are several views to deal with the problems of transportation as the following:

1-Motor traffic is possibly the most dangerous factor in the increasing decay of Isfahan especially in the historic areas. There should be restrictions on vehicular traffic inside the bazaars and their narrow alleys in order to stop breaking the continuity and scale of the closely knit, pedestrian-scale quarters along with creating an atmosphere for people to feel secure from automobile dangers.

2-Traffic bans on the Chahar Bagh Boulevard and the Royal Square will cause a number of side streets to become de facto walkways, greatly improving the overall environmental conditions of the old city. It also keeps the pure air of Isfahan to be polluted or the blue tiles of her mosques blackened by car emission. In addition to that, banning cars from the Royal Square will increase tourist appeal or simply preserve traditions of out door living.

3-Isfahan has many suitable conditions highly favorable to a

mass transportation, better and more manageable than the existing one. These include a large and steadily increasing population concentrated in a densely developed urban area; a high level of business activity and employment, and extensive mid-day, night and weekend travel. Working and living places are not separated from each other in historic Isfahan, but are intermingled and it is anticipated that the future concentration of employment will follow the same general pattern as the population.

Here, the issue of parking places for tourism comes up. It is worth applying the views of Pamela Wand where she suggests:

"Every historic city must have a comprehensive and comprehensible parking policy based on the principle that will always be a greater demand for parking space in the heart of the historic fabric than ever can be provided, so the policy must be restrictive and selective, penalizing the long term parker in the sense that he must walk further or change his mode of transport, in favor of the short term shopper, and preferring the tourists' cars to the locals' cars. Open car parks can be acceptable in the urban scene, at the edge and in the backlands of historic cities, provided paths defined with them and they are broken up into small units with local trees."<sup>38</sup>

The traffic volume to which the streets of the historic quarters will be subjected in the future depends on quite a few factors.

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<sup>38</sup> Pamela Wand, Conservation and Development, (New Castle Tyne: Oriel Press Limited, 1968), p. 78.

rs. Some of these are as follows:

- 1-Improvement of regional highways.
- 2-Provision of more and better parking facilities .
- 3-Stronger national policies, controls, restrictions, etc.
- 4-Improvement of traffic controls.
- 5-The alleviation of the traffic situation inside the old city itself.
- 6-The competition between motor vehicles and the means of mass transportation.
- 7-Redesigning of hazardous and complicated intersections.
- 8-Improvement of traffic signal operations.
- 9-Control of hours of commercial delivery in congested districts.

One can not stress too strongly the fact that before any traffic proposals be executed, a comprehensive traffic survey be conducted. The accepted general purpose of the survey is to assist in drawing up plans for the best possible long-range solutions of Isfahan's traffic and transportation problems in harmony with all other features of this city's desirable development under the master city plan.

#### Residential zones

Residential quarter in the old areas of Isfahan is a place where a person can get by without a car. It is where there are shops of all sort, public baths, schools and mosques located equally accessible to the dwellers. It is a place where there exists quality of life rather than quantity of physical improvements. And, consequently, it is a place where family privacy, intensive pedestrian street life, convenience, and a rural heritage are highly prized.

As one major part of a self-contained quarter, a residential

zone has become important to be saved just as it is, because it complement the overall structure of the quarters and they now represent the old soul of the city, and without them, the all-new city will have no connection to its past and will have to live with a new set of problems that are associated with twentieth century industrialized life.

On the other hand, they are homes. They are the products of centuries of agrarian life; their buildings have mastered a powerful understanding and regard for human nature. The most frequently at home and the most need of sunshine. Even taking into account the inadequacies of space and material, the design of these old structures is something that has been perfected over centuries by the people who had to live in them. They were overcrowded but they offered protection. And beyond that, they had a relation with the street. Accessibility to the streets is the one that most clearly distinguishes the old quarters from the new housing blocks which are now being provided as alternatives.

"Once large-scale urban renewal programs proved to be unsuitable and undesirable in American and British cities, the emphasis of the housing authorities is shifted away from clearance and redevelopment to that of the neighborhood conservation." <sup>39</sup> Maybe the more rational reason for that is the familiarity of place, and the sanctity of the residents' dwellings. Moreover, as recent history has attested, the former residents of renewal areas were forced to seek housing of poorer quality in totally unfamiliar areas of their cities.

One of the wisest decisions, economically, scientifically and

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<sup>39</sup> M.W.Earle, "Conservation of Neighborhoods in Traditional Cities," Ekistics 280, (January-February 1980), p.36.

culturally, that can be made concerning the residential areas around the bazaars of Isfahan is to maintain them as they are. People have cultural and emotional ties to their dwellings, generation after generation. On the other hand, these residences, located in the proper placement in relation to place or places of work, are another part of the historic totality that create homogeneity on the basis of a striking similarity of stylistic detail and quality.

The other factor that, here, exists is efficiency of construction material used in the historic houses which best suits the climate of Isfahan:

"Traditional construction is found to demonstrate a folk knowledge of the thermal performance of the walls and roof, which are exposed to maximum solar radiation. Thick heavyweight construction is the norm, combined with small openings usually at high level unless facing into an interior courtyard and /or garden. Flat roofs are common because of the little rainfall, and the fact that for many months of the year it is possible to sleep outside under the clear starlit sky. The flat roof is frequently enclosed with parapet walls to give privacy. The thick heavy wall is used to give a sufficient delay to the heat passing through from the outside to the inside surface. The temperature of the inside surface of the exposed walls and roof should not start to rise until the outside air has cooled after the sunset. If it is too cool outside for comfort then the stored heat in the structure maybe used to maintain a higher and more comfort-



able temperature inside by keeping the windows closed. If, on the other hand, it becomes too warm inside, then the windows can be opened and the cooler outside air used to disperse the heat and reduce the inside temperature to a more comfortable level."<sup>40</sup>

There should be widespread support for the preservation and rehabilitation of the old houses in Isfahan. In doing this, adequate attention must be paid to the upgrading of existing housing through gradual or incremental improvement of the areas which would allow time for the simultaneous improvements in vital infrastructures such as water supply, sewerage, electricity, telephone, sidewalks and streets. "Localized materials such as adobe could be utilized to minimize capitalization cost and to channel problems of future maintenance into the spheres of construction skills already available in the community."<sup>41</sup>

The physical shapelessness, visual blight, and poor sanitary conditions should be stopped through social, economical engineering, and architectural validity by the responsible governmental authorities. Additionally, the remedial actions will include: study, survey, analysis, and proper management, through a comprehensive rehabilitation program.

#### Recreational facilities

Recreation in a socially accepted sense involves constructive activities for either the individual or community. The urban dweller's need for a medium of self-expression in which he can take pride or

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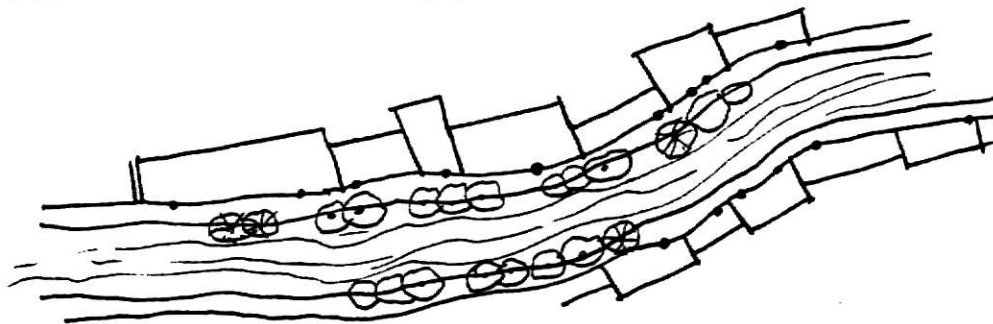
<sup>40</sup> Danly Miles, "The Islamic Architectural Traditions and the House," Ekistics (January-February 1980), p. 46.

<sup>41</sup> Ibid, p. 36.

derive security, exercise his physical self, release pent-up emotions, work off nervous energy, is proportionate to the increasing complexity of urban living. Correct leisure-time habits will have a great impact on the mental health of the population and the productivity of labor force, beside enhancing the quality of life. Spare time activities have become a mass phenomenon, especially in densely populated areas. More leisure time is needed to recreate equilibrium of life at the social, the physical and, the psychological level.

Isfahan at the present time is in serious lack of sufficient recreational facilities but it has a great potential to be fortunate. The potential is the historic waterways (figure '23), originating from the Zayandeh river, running through the city. These waterways were planned by Shah Abbas's master planner in 1598 to provide agricultural and drinking water. Unfortunately, little attention was given to such natural elements as recreational resources by the former regime.

Today most of these waterways are undeveloped and reflect a lack of planning for any sound functions. The effective use of waterfront sites and open spaces for recreational and cultural activities can affect the identity and environmental quality of Isfahan. The waterways are seen as offering major opportunities for renewal, for shedding some of the most conspicuous dilapidation of the past and present.



(figure 23) The general diagram of a waterway, Isfahan .

The importance of the quality of waterway environment, and providing opportunities for the public to use and enjoy them should be a

major concern for recreation development in Isfahan. As leisure time has increased, interest in recreation has mounted and these waterways can create total fulfillment for thousands of residents, having potential to launch major programs to open these elements for public uses.

The suggested plan calls for the creation of promenades and pedestrians along both sides of these waterways as reflection of urban cultural growth and its demands upon the waterfront resources. Success for transforming waterway sites into the new designs is in the fact that they are narrow and suitable for proposed plan.

To formulate strategies for identifying appropriate waterway recreation opportunities, several issues should be considered; (1) what implications revitalization will have for urban waterways, (2) which recreation opportunities are appropriate for the waterway location, (3) what private development should be allowed or encouraged, (4) will all urban residents have relatively equal access to some basic recreational amenities, and (5) do they attain reasonable local development objectives?

These strategies are often useful in a situation where waterways exist in the environment for leisure-time purposes but are blighted or, both, functionally and aesthetically obsolete.

### Retailing

Business in the historic quarters of Isfahan is scattered. These quarters are really shop quarters. Old bazaars are solid string of shops where particularly most of the household heads run a shop of some sort or another. These shop quarters are romantic, packed with "atmosphere" and mystery. Shopkeeping is, undoubtedly, a noble enterprise, without which Isfahan would never have risen to the heights of craftsmanship and artistic fame as well as economic welfare.

The idea of creating supermarkets in old Isfahan was growing under the Shah's regime which would inevitably affect free enterprise basis. For retailing, socioeconomic elements of planning should be effectively considered. Revitalization of local retailing facilities is only required inside the bazaars. Private enterprise on all levels must be encouraged to provide long-term scattered job opportunities for the low-income segments of the neighborhoods and to stop social decay and slum generation.

Tourism shopping also plays an important role in these quarters. Here, local handicrafts, folklore and ethnic peculiarities, are offered by retailers. These are the most fragile resources for tourism and can have a genuine place in lifestyles of an area.

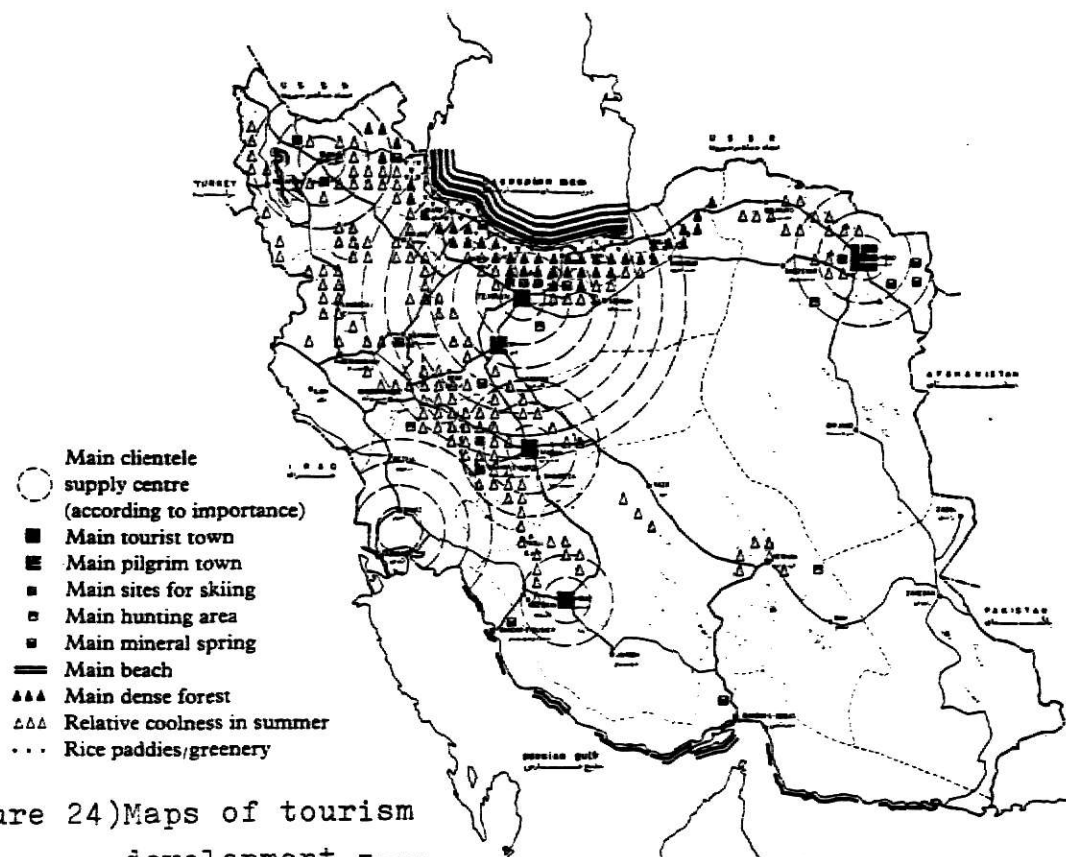
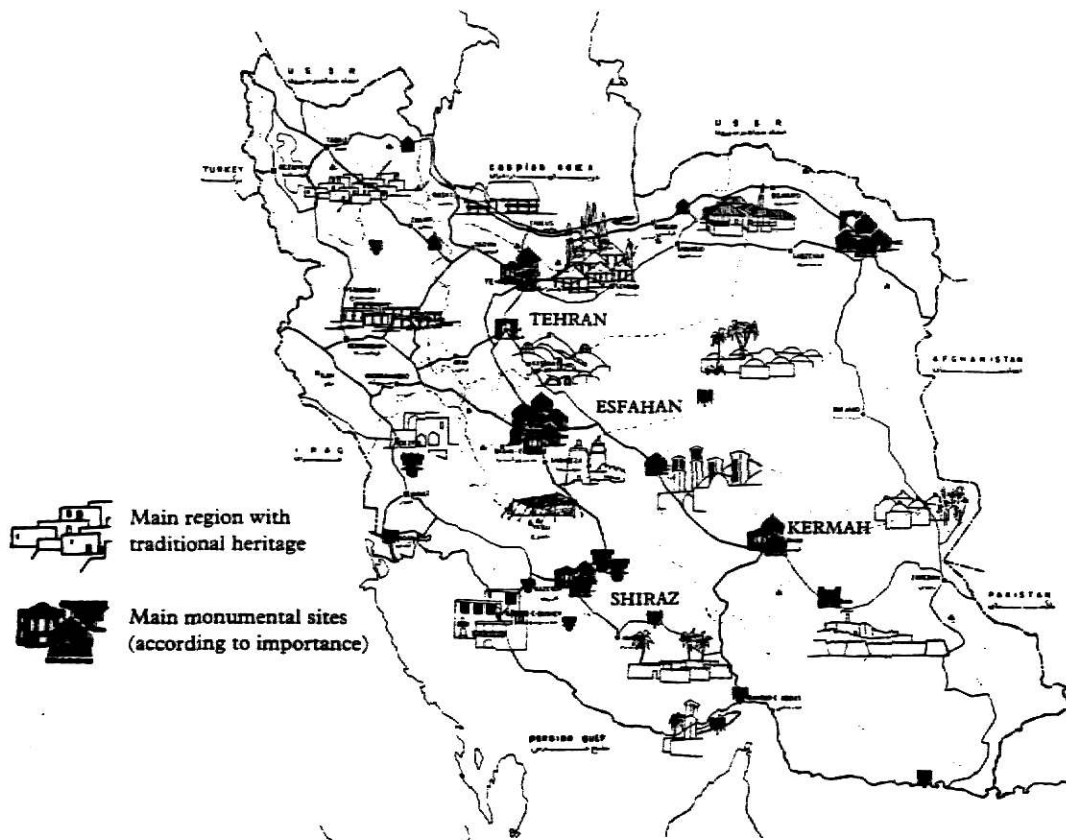
### Tourism

Tourism represents a large segment of the economy of Iran. Evidence of the economic impact of this industry is so overwhelming that it is no wonder that Iran should seek it more sensitively and wish to protect it. "A total of 690,550 foreign tourists came to Iran during 1977 of which a great proportion visited Isfahan."<sup>42</sup> As part of the eventual goals for preserving historic values, attempts must be made for the enhancement of internal and foreign tourism and maximization of this economic incentive to increase the national income.

Tourism has economic, social, personal and, environmental impacts. The most important functional category from an economic input sense is that of the facilities and services such as sufficient hotels, restaurants, retail sales and other services. Tourist spending on facilities and services provides the major economic input in most

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<sup>42</sup> Iran Air's Public Relations Publication, "Tourist Statistics of Iran," Iran Air, in Flight Magazine, (August 1978, Tehran, Iran):10.



(figure 24) Maps of tourism development, Iran

destination regions. The correct landuse decisions concerning facilities, transportation and historic sites must become important goals for regional planning for tourism. "The bulk of attractions are located

vily dependent upon natural and cultural resource assets and how  
accessible they are to masses of population.<sup>43</sup> Business sites must be  
selected with more considerations of the magnitude, quality, and pot-  
ential of attractions nearby that will require their facilities and  
services.

The tourist should have at his disposal the greatest multitude  
of opportunities to view and experience cultural and physical envi-  
ronments than ever before. The number of developed destination areas  
and attractions must be multiplied greatly. Along with historic bases,  
more parks and recreational facilities, and hotels of local character  
should be designated by government agencies for tourist use.

More and more the environmental modifications made for touri-  
sts are to be done by highly trained, talented and experienced teams  
representing specialists for many fields such as economics, marketing,  
sociology, ecology, archaeology, as well as the more traditional design  
professions of landscape architecture and planning.

In addition to the attractions of antiquity and Islam, planning  
for interesting folklores revitalization of ancient cultural activi-  
ties in the historic areas, ethnic peculiarities, carpet weaving and  
handicrafts seems essential. Cyclical attractions, such as cultural  
and national events, religious ceremonies, large pilgrimage, etc...  
must be open to tourists for better understanding of the designed  
environment with culture and customs.

A physical master plan for tourism seems inevitable to provide  
details of locations and requirements for main areas of tourist in-  
terest, the main facilities to be provided, the basic infrastructures  
to be developed, and the areas and sites to be protected. Preparation

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<sup>43</sup> Clare A. Gunn, Tourism Planning, (New York: Crane, Russak & Co.  
Inc., 1979), p. 190.



of such plans enables the requirements and effects of tourism development to be seen in perspective. It provides a means of readily assessing the overall impact with tourism development may have on Isfahan, the commitments this will entail and the problems which may arise.

### Conservation

Conservation should be studied simultaneously with the other aspects of planning such as traffic, pedestrian circulations, trading, work, housing, recreation, tourism, and the general prosperity and well-being of the historic quarters. The aim must be to keep the atmosphere and character of a place, and to maintain continuity with the past traditions.

Conserving our historic towns and cities is the best way of ensuring the individuality of our urban inheritance; of seeing that our towns are of themselves and different from those of others. This tangible link with the best of the past, through the buildings, streets, spaces, trees, views and landscapes, makes up the total personality of a place.

In the physical sense, the essence of conservation is maintaining the fabric and texture of ancient cities and adapting it to changing needs and demands. But not to the fatal demands like traffic. Most historic cities should be subordinated to the task of reducing the impact of less essential traffic to levels which make a visit to the historic sites attractive and residence tolerable.

Conservation goals imply that it must go beyond saving the constructional materials, it must attempt to give a sense of orientation to our society, using structures and objectives of the past to establish values of time and place. First, conservation and preservation must recognize the importance of architecture, design, and aesth-

etics. Second, preservation must look beyond the individual landmarks and concern itself within the historic and architecturally valued areas which contain a special meaning for the community. A historic quarter, a fine old street of houses, a colorful marketplace, an aesthetic quality of the landscape, all must fall within the concern of the historic conservation and preservation. Third, intensive thought and study must be given to economic conditions which will affect the efforts to conserve such areas as living parts of the community.

Conservation and preservation principles impose that:

"1-The restoration of historic buildings requires the professional knowledge and special skill of architects, historians, archaeologists, landscape architects, museologists, and experienced craftsmen.

2-It is better to preserve than repair, better to repair than restore, better to restore than reconstruct.

3-It is ordinarily better to retain genuine old work of several periods, rather than arbitrarily to "restore" the whole, by new work, to its aspect at a single period. This applies to work of periods later than those now admired, In no case should our own artistic preferences or prejudices lead us to modify, on aesthetic grounds, work of a bygone period representing other artistic tastes."<sup>44</sup>

Conserving resources may benefit property owners and society

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<sup>44</sup> Marius Bryant, Zoning Community Preservation, (Texas: Texas Historical Foundation, February 1976), p. 19-19.

as a whole, in a number of ways. Among these are cheaper operating costs, recycling the materials and lessening reliance on automobile. The bazaars of Isfahan, for example were built with energy conservation as a primary consideration. The physical cooling systems used in these bazaars will conserve energy whereas preservation and reuse of older structures are a form of recycling. One example for this is selection of uses to insert into these buildings. For tourist development, the caravanserais are the most suitable buildings to be improved and to be converted to hotels. Or, the historically important public baths to be transformed into museums of sociology, culture, art or archaeological objects.

The location of such buildings is within walking distance of the residential areas of the ancient quarters of Isfahan. When people do not have to use automobiles for short trips to service establishments, the effect is to conserve energy, reduce air pollution and save money for individuals.

#### Night light-effects

Night light on the historic landmarks and historic structures as well as recreational centers has great aesthetic potentials. Night lighting to the extent that it would not overshadow the landmarks may present great design impact not only through the use of different colors, but through combinations of: clusters (as bunching at intersections), and, intervals (as spreading along historic bridges over the Zayandeh river). These infinite visual dazzling effects can create irradiation, silhouette and artificial modulation across the river.

While enhancing the urban design of Isfahan, special attention is required for the waterfront of the Zayandeh river and must become an organic part of urbanism and historic aesthetics being ide-

ntified and appreciated also at night.

### Zoning

André Gide once wrote, "...See what man has made of the towns! ugliness, discord, smell. Men talk of progress...what nonsense it all is...?"

Every community has certain buildings, with physical, cultural, religious characteristics, open spaces, and marketplaces which traditionally have had special meaning to the local residents. Unique features of the local environment such as these deserve to be protected. These physical elements allow citizens and visitors to orient themselves in time and space.

In the historic quarters or districts of a city, deteriorating neighborhoods have been stabilized through zoning of historic preservation to halt declines in property values and stop residential and commercial flight. Zoning is a process which begins with planning a framework, spelled out in a basic landmarks ordinance, further ordinances designating specific sites and districts for protection, and implementation of various programs to achieve overall police power goals.

Jonathan Barnett believes that, "Zoning is a powerful design control."<sup>45</sup> Every community, regardless of size or location, should have a type of zoning program. Zoning, as generally used, applies not only to zoning in this sense, but also to building permits, subdivision controls, establishment of districts, and other means of controlling land use, location of facilities and definite laws and regulation for new buildings as well as for historic areas to promote the public

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<sup>45</sup> Jonathan Barnett, Urban Design as Public Policy (New York: Architectural Record Books), 1974, p. 32 .

heritage and interest.

Zoning law applied to the historic quarters of Isfahan under the Shah was just a failure originating from the short-run trial and error plans. As a result of this today, the mixture of non-residential uses with residential has exceeded all logical bounds, so that it is hard even to try to solve or restrict uses easily. Among the major problems are the physical and visual confusion ruling the old areas. Neon signs in conjunction to old buildings, freedom in driving or using motorcycles, or trucks for delivery, inside the covered bazaars and the residential zones and irrelevant uses have generated a great deal of chaos in the environment. The historic self-contained sections of the city should be excluded from heavy traffic so that children can walk safely to school and men work next to their houses in bazaar or the housewife does her shopping conveniently.

Here, the question of allowing uses such as carpentry, junkyard, plumbing, etc., comes up. One would assert that the allowance of an excess of such uses should be discouraged. Only the minimum amount, in general, should be allowed in order to meet the light and daily requirements of the people. Grocery stores, small repair shops, hair-dressing salons, a general purpose store, etc., are essentials for a community as they facilitate day-to-day living. Noxious uses should be overly discouraged, and proper restrictions should be enforced to prevent them from becoming nuisance.

The concept of population density equalization, of provision of neighborhood amenities, of the separation of different types of traffic, of providing parking, playgrounds and green strips should be introduced through rational zoning in order to save Isfahan from a gloomy future.

Zoning can bring to Isfahan untold advantages, as it has br-

ought to the western countries. The local government of Isfahan must strictly apply the zoning tool as to support urban design of the old quarters. This can be done through the following considerations and guidelines:

1-Halting the irrational and lunatic onrush or erroneous buildups around and within the historic quarters, which might dwarf the historic values.

2-Restriction of modernistic and high rise buildings inside or in the vicinity of old monuments and structures to create a rich historic effect to the cityscapes.

3-Enacting a rehabilitation law for the older parts of Isfahan to maintain it in its historical condition.

4-Immediate lowering of building density in the over-built areas of the old city.

5-Cutting short or trimming the countless willows growing wildly at every bank of the Zayandeh river next to the Allahverdi Khan bridge. These trees have been planted as an irrational part of a landscaping plan about 15 years ago. They constitute two major disadvantages; (1) they enclave the bridge, as a result the visibility of this bridge is very little, and (2) these trees have created a hiding place for some illegal and immoral actions.

6-Holding all remaining vacant land until adequate areas are safeguarded for parks, public facilities, and needed traffic spaces.

7-Preserving the old planning and architectural remains of any sort, if any redevelopment of the run down sections takes place.

8-Checking the modern eclecticism of the architecture that is making of Isfahan a caricature city.

9-Preserving the unplanned growth around and inside the old areas.



10-Removing clumsy concrete lamp posts,ugly trash baskets and benches inside the historic limits.Especially those high rise fluorescent standards around the Royal Square.

11- Terminating the erection of modern buildings adjacent to the historic elements.

12-preserving trees of any sort from being cut in order to have a better landscaping.

13-Categorizing of occupations.It is of a primary importance to decide which occupations should have activities inside the historic areas,and which should move out.Some existing occupations are dangerous,noisy,dusty,smelly and dirty,and harmful for any prosperous environment.

14-Allocating some old shops or buildings for craftsman's centers in order to encourage the artisans and craftsmen of Isfahan to carry on with their splendid traditions.As a part of tourism, such a plan will reveal local arts.

15-Banning motor vehicles on all the historic bridges,in order to save them from the indiscriminate damage that heavy traffic will have to the foundations of these bridges.

16-Controlling the architecture of the area,to protect it from the onslaughts of modern eclecticism which starts in sharp contrast to the dignified pre-Pahlavi architecture.

17-Decongesting the central business districts,especially the Chahar Bagh boulevard by redevelopment and development of neighborhood centers.

18-Preservation,restoration and rehabilitation of the historic and architecturally significant buildings and areas.

19-Redeveloping the old quarters sensitively.

20-Creating highways outsides the historic areas with an ad-

equate right-of-way for truck traffic, and automobile traffic. A green protective buffer strip can serve the purpose adequately.

21-Utilizing some of the waters impounded by the waterways passing through the city for "greening" the different flanks of the city.

22-Safeguarding the beautiful waterfronts from the jabs of ugly uses and developments by a well studied waterfront master plan.

23-Defining the historic areas clearly by architectural or topographical landmarks. This homogeneity must result not only from the urban grouping in a literal sense but also from the continued existence of old roads, the scale of buildings, as well as the original massing.

24-Introducing strong and effective regulations for shop and billboard signs. Their arrangement whether orderly or disorderly has a strong effect on the townscape.

25-Introducing a sound and rational locational decision making for recreational, educational, commercial and light industries, both inside and outside of the historic districts.

26-Erecting housing for limited-income groups to ease the exceedingly high density of population in the run down sections of the old Isfahan.

27-Banning traffic inside bazaars so that shoppers and tourists feel secure.

28-Applying strategies for retaining a complete urban scene the way it was designed or built as a whole, in order to keep the quality or compatibility of a new building in the historic environment.

29-Decreasing the damage that traffic does to the image and visibility of historic Isfahan.

30-Controlling the siting, size, height, design and external appearance of buildings.

31-Giving due consideration in planning to the historic mosques since they are the essential parts of the social structure of old Isfahan. These historic mosques were originally designed and sited so that they stood as beautiful monuments in the city, but are now obstructed from view. The obstructions should be removed to give the mosques their due importance.

Zoning is the basic tool by which Isfahan's old quarters can be controlled and, when it is bolstered by civic, aesthetic and architectural design, it can be an excellent tool for creating a new spatial and landscape idiom in Isfahan's congested areas.

As long as there is no strong tool as zoning enforced in historic Isfahan, this area will be an ugly, costly, upsetting and unfit place for its inhabitants, and all the glittering surface is nonsense. Only by judicious and just control of land, by an equitable system of municipal administration, scientific concepts, and the principles of comprehensive city and regional planning can it be hoped that Isfahan will be changed from a confusing and dangerous city to a balanced place for work, living, recreation and tourism.

### Conclusion

The historic quarters of the city of Isfahan have been designed as self-contained human communities under various regimes since 622 A.D. It was not until the Pahlavi Era (1925-1979) when the street pattern of these quarters were found insufficient and unsuitable for automobile and other technological phenomenon. Therefore, a new strategy began to change the narrow Islamic route system to automobile streets and highways.

Town improvements to this period started so fast that no rational attention was paid to the historical context of these ancient quarters and their planning and architectural values. The physical change was so great that it created a disequilibrium of urban design in Isfahan .

Unless the many urban problems are approached, at the roots, with a dramatic new and bold approach, and break away from the stop-gap, one can not expect to keep up with the insiduously crawling diseases inherent in the historic quarters. All resources-mental and material-must be mustered and deployed in the gigantic effort to rehabilitate the old Isfahan at the very grassroots. Sound planning should be launched with thoughtfulness and preceded with careful scientific, economic and physical development studies and preparations.

Efforts should be made to regain the architectural integrity of the historical quarters especially those located around the Royal Square in favor of tourism, cultural heritage, and a better living conditions with regards to the residential, recreational and educational needs and desires of the residents.

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Integrated urban design guidelines  
for the historic quarters in Isfahan, Iran

by

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An abstract of a Master's degree

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requirements for the degree

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The historic quarters of Isfahan, Iran have been designed as self-contained human communities in the heart of which every daily activity took place through pedestrian-scale narrow streets and alleys. These quarters contain significant buildings and urban structures which make Isfahan to be the guardian of the greatest collection of national pride in all Persia.

Under the Pahlavi Dynasty (1925-1979), westernization rapidly and adversely influenced the streets and paths of these historic quarters. In this era the street pattern was found to be inefficient and insuitable for automobile and other technological phenomenon. As a result, a vast and forceful movement towards modernization created drastic physical and social changes for the residents without sufficient attention to the historical context of such areas.

The purpose of this report is to scrutinize the urban design problems of the historic quarters of Isfahan and propose guidelines and solutions to deal with the existing urban difficulties. It is hoped that the old Isfahan be transposed from a confusing and dangerous area to a well-balanced place for work, living, recreation, and tourism.