

**CULTURE, SYMBOL AND TIME:
THE REVITALIZATION OF SAMARKAND**

by
Clare Ellen Shea
B.S.A.D., Massachusetts Institute of Technology
Cambridge, Massachusetts
June 1989

SUBMITTED TO THE DEPARTMENT OF ARCHITECTURE
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE
MASTER OF ARCHITECTURE
AT THE
MASSACHUSETTS INSTITUTE OF TECHNOLOGY
FEBRUARY 1995

© Clare Ellen Shea 1994. All rights reserved

The author hereby grants to M.I.T. permission
to reproduce and to distribute publicly paper and
electronic copies of this thesis document in whole or in part.

Signature of the author

Clare Ellen Shea, Department of Architecture
January 14, 1994 5

Certified by

William Lyman Porter
Muriel and Norman Leventhal Professor of Architecture and Planning
Thesis Supervisor

Accepted by

Ellen Dunham Jones
Chairman, Departmental Committee of Graduate Students

Noted

MASSACHUSETTS INSTITUTE
OF TECHNOLOGY

MAR 21 1995

Culture, Symbol, and Time:
the Revitalization of Samarkand

by
Clare Ellen Shea

Submitted to the Department of Architecture on January 14, 1994
in partial fulfillment of the requirements for the Degree of
Master of Architecture

Abstract

This thesis examines the dilemma of the historic city in confrontation with modernity. Citing the case of Samarkand, the investigation seeks an architectural response to the trauma of physical and cultural discontinuities provoked by the onslaught of colonialism, communism, and rapid industrialization within a traditional society. With one world view placed in the stead of another, the issue of regional identity was brought into question, and with the recent collapse of the USSR, the issue has even greater significance for the present and the future. What will be the architectural expression of tomorrow as Samarkand, more than 2,500 years old, enters the twenty-first century?

This thesis develops and discusses a critical attitude towards the design of contemporary buildings within a historic and cultural context. The investigation proposes a theoretical approach towards culturally specific design by identifying and analyzing the latent concepts that generated Samarkand's paradigmatic forms throughout its history. These findings are used to guide and temper design responses to the city as a whole, to its center, the Registan Square, and to the proposed buildings immediately adjacent to the historic core. At various design scales, the discussion focuses on achieving a physical manifestation of culture, symbolism and time in architectural form.

The thesis concludes with a discussion of possible applications of this inquiry to add to the body of thought on the subject of culturally specific design.

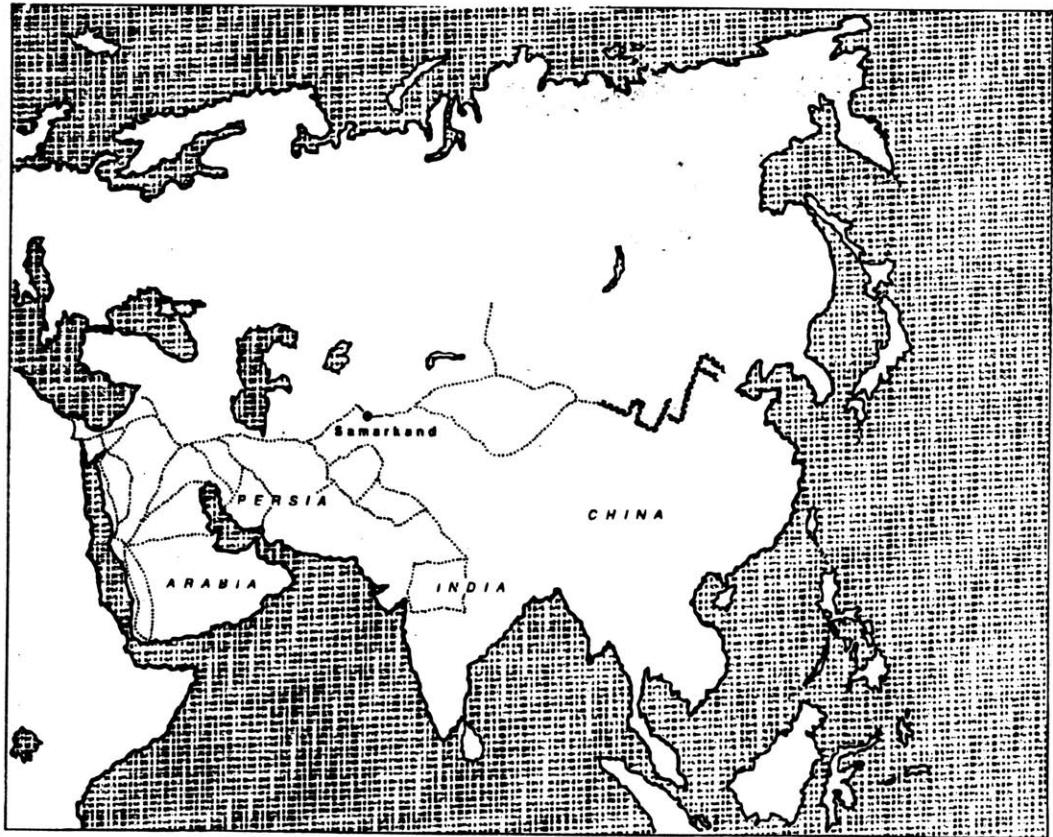
Thesis Supervisor: William Lyman Porter
Title: Muriel and Norman Leventhal Professor of Architecture and
Planning

Acknowledgments

This thesis was made possible with the generous contributions of several people. In particular, I would like to thank my advisor, Bill Porter, for the inspiration and for the abundance of lucid criticism he offered, and Charles Correa, for contributing his support and offering direction for the investigation. To my readers, Julian Beinart, Francesco Passanti, and Masood Khan, many thanks for their helpful criticism. To my parents and family, I express my gratitude for their support over the years, and to Tarek, with whom anything is possible.

Table of Contents

| | |
|--|-----|
| Abstract | 3 |
| Acknowledgments | 5 |
| Introduction | 9 |
| | |
| Part I. In Search of Samarkand | 11 |
| | |
| Chapter I. The Islamic City in Crisis | 15 |
| Chapter II. Samarkand: Mirror of the World | 23 |
| Chapter III. Concepts of the Paradigm | 43 |
| Chapter IV. Contemporary Samarkand | 65 |
| | |
| Part II. The Physical Manifestation of Culture, Symbol, and Time | 73 |
| | |
| Chapter V. The Revitalized City | 75 |
| Chapter VI. Registan: the Shining Point | 91 |
| Chapter VII. The Museum of Samarkand | 107 |
| Chapter VIII. Beyond Samarkand | 115 |
| | |
| Appendix I | 119 |
| Appendix II | 121 |
| Appendix III | 123 |
| Appendix IV | 125 |
| Illustration Credits | 129 |
| Bibliography | 133 |



Samarkand, Uzbekistan lies on the ancient Silk Route extending from the Arabian peninsula to China.

Introduction

In 1990 the City of Samarkand launched an international competition for ideas for the Ulugh Beg Cultural Center. The competition, sponsored by the USSR Union of Architects, the Aga Khan Trust for Culture, and the Uzbek SSR Union of Architects, called out for ideas for the revitalization of the historical core of Samarkand. The aim of the competition was to resolve two critical problems facing Samarkand:

- "To provide a contemporary Cultural Center that will become not only the focus of the city, but also an important catalyst for the emerging cultural identity of the inhabitants in the coming century", and
- "To integrate a complex of contemporary buildings in the midst of a historical city and in the immediate proximity of some of the world's most beautiful and significant historical monuments."¹

The competition was the catalyst of this investigation and the critical issues stated by the promoters set the tone and direction of the inquiry. In seeking sensitive responses to the issues proposed, the investigation became a search for a method of designing culturally specific architecture in a regional context. In particular, the search focused on the issue of cultural identity within a global context.

This thesis records the ongoing search for the identity of Samarkand and its implications in

terms of urban and architectural forms. The work is intended to present a body of research, demonstrate the implications of the findings, and propose urbanistic and architectural ideas generated through a theoretical method of inquiry. As a case study, this thesis demonstrates concepts specific to Samarkand, but the investigation concludes by provoking questions about the possible applications of this case study to other instances.

The intention is to add to the body of thought developing around these issues, yet to attempt to go beyond theoretical discussion by exploring the ideas in physical forms. The inherent difficulty in such an architectural investigation is that there is no way to test the success of the inquiry other than to build the projects and observe the truth. Furthermore, steps within the methodology depend on esoteric means during the translation of ideas into physical forms.

The quantity of issues confronting the designer is daunting, and they extend beyond the scope of one thesis or even one individual. This thesis focuses on three primary and related issues: the manifestation of cultural identity, of symbolic content, and of temporal continuity in the built environment. The focus on these issues makes no statement about their importance with respect to other architectural issues; they reflect the topics most of interest to the author.

¹ Samarkand Revitalization Competition

Part I

In Search of Samarkand



Uzbeks (by Brynn Bruijn)

*We are the flute,
Our music is Thine*
Rumi

Chapter I

The Islamic City in Crisis

At the end of the twentieth century, the crisis of cultural identity is manifest in varying degrees in every human settlement. Nowhere is the crisis more evident and elevated as it is in much of the "Third World" and developing countries. The death of colonialism and the rise of Islamic fundamentalism bear witness to the condition of our times, in which traditional cultures respond to the threat of modernity within the inevitability of global modernization. Civil wars, nationalistic fervor, ethnic strife, ancient racial rivalries, and militant fundamentalism agitate these times of rapid, global industrialization and modernization. It is in this climate that reactionary politics breed amongst civic chaos and tumult. Modernity's rejection of tradition threatens further cultural discontinuity and human anxiety. It is not only for the peoples who feel most threatened by the onslaught of modern times, it is for the cultural stability of all of mankind that questions regarding the fate of traditional cultures must be addressed. For the preservation of the living heritage of man, for stability through change, and for a more harmonious balance between the demands of modernization, the environment, and human settlements, these question must also be addressed.

Modern technology and mass communication exert an undeniable pressure towards homogenization. With a preoccu-

pation with economic development, the industrial factor is consistently emphasized. Modern man is beginning to realize that the taming of industry, under the current ideology to let it roam at will, is proving itself to be more formidable than the taming of nature.² And yet, language, religious attitude, the geographical environment, race and the inertia of cultural behavior have an amazing intrinsic staying power within the human situation. It may be that over time, the homogenizing effects of industrial civilization may prove to be superficial and temporary.

Currently, however, rapid industrialization and modernization, especially in the Third World and developing countries, appear to magnify the crisis cultural identity found all over the world. One of the major challenges facing the Third World is finding reconciliation between the traditional city and modernity. Within Muslim societies in particular, acute examples of the complex issues confronting societies and environments abound. Muslim societies, although multinational and multicultural, globally ingest modernization performed elsewhere that is poorly adapted to modern Islamic problems and needs. Many Islamic nations espoused industrialization as a political weapon, but with the rapidity of change, there came new environments responding poorly to the complex structures of society and the needs of its population. External influences were hastily imported without

modification or adaptation, and they imposed themselves on a population without sensitivity to their religion, cultures and traditional values. The consequence can only be more abrasive to the crisis of self identification within a global context.

Colonialism and modernism are two formidable forces that are stamped on Muslim memory. Modernity, in replacing tradition, has dissolved models which no longer correspond to man's way of life in the twentieth century and has replaced tradition with a new world view. Most often not indigenous to the region and sometimes imposed by foreign pressure, modern world views overrun traditional societies at speeds unknown in history. Whether welcomed in the name of modernity and progress, imposed by colonial force or by political or economic pressures, the rampant nature of large-scale development and sprawling industry poorly adapted to the requirements of the receiving countries, causes significant instability and change that challenges the cultural identity of the population. With the withdrawal of the alien body, a gap between past and present is left behind. Discontinuity in time and the rapidity of change increases the psychological need for permanence.

Responding to the Crisis

There is a recognized need for a body of thought on the nature of the built environment that is culturally and economically responsive to present and future societies of the Islamic world. Some fundamental issues to take into consideration are:

- the influence of the post-industrial western world and the aspirations of the receiving country,
- the conservation of the built environment and new infrastructural needs, and
- the migration of the population to towns and the depletion of the countryside.³

This body of thought must be concerned with man's deeds and man's way of life as determined by his world views, human soul, and civic order, and furthermore, it must also serve the architectural needs of today.

The abstract issues for consideration are issues of cultural identity, memory, denotative memorable associations, image preservation, cultural distinction within a uniform modern civilization, and the maintenance of cultural symbols. Austerity, simplicity and equality are taught in Islam and are characteristics that should be reflected in the modern built environment, not only for the sake of creating harmony between the beliefs of the people and the characteristics of their built environment, but also to respond to the practical issues

confronting large, growing populations with limited resources. More than two thirds of the people of Islam live in absolute poverty; many of them are malnourished, illiterate and living within a feudalistic environment. Contemporary Islamic architecture must respond to the needs of the poor, to the needs and values of Muslim societies, in which equality, accessibility, mass participation, cost effectiveness are embraced.

When addressing the complex issues facing traditional societies and the modern urban environment, one must first identify the pertinent questions to ask. For example:

- What is the architecture we are recognizing?
- Is it the planning and design of master architects?
- Is it the architecture of craftsmen, artisans and specialists who put a building together?
- Is it an architecture of the users?
- Is it an architecture of certain lands, with their peculiar physical characteristics?
- Is it an architecture of faith that transcends national, geographic, social or technical limits?
- Is it the interaction of architect, patrons and users?⁴

What are the appropriate responses to:

- high technology building and methods for the use of modern construction materials?
- the conservation of old Islamic cities?
- institutional building, specifically schools and hospitals?
- low-cost housing?
- industrial building?
- architectural education?

Developing an attitude, an approach, and an intent is a collective effort.

The Responses in Recent Years

To respond to the complex issues facing contemporary Islamic developments, specifically in the attempt to define the characteristics and form of contemporary Islamic architecture, several efforts have been made to exemplify a response. The trends of today tend to encompass the following five categories:

- the *traditional/vernacular*, occurring in isolated, unmodernized regions constructed in local material by local masons
- the *conservative/conventional*, consisting of some modern structure and facilities but with stereotyped forms
- the *new classic Islamic*, essentially modern but with an attempt to fit in locally with traditional vocabulary and symbolism
- the *contemporary/modern*, with abstracted geometry in an international style with no local architectural identity
- and the *eclectic/Arabian nights*, approaching the whimsical and the bizarre. ⁵

The *traditional/vernacular* and the *contemporary/modern* are often considered antithetical, and the *conservative/conventional*, the *new classic Islamic* and the *eclectic/Arabian nights* are responses to their apparent incongruity.

Regionalism in architecture expresses a response to rampant homogeneity of contemporary

form. The forms created in this mode of thought are in some instances called "progressive," but the construct of thought in which they were formed is reactionary, as is postmodern thought. The phenomenon of cultural and temporal discontinuities in modern built environments is global. The increased study of the exaggerated cases in some "Third World" societies could benefit every nation, modern or developing.

Self-identification in a global context is a problem, in part, of preservation and conservation. Its meaning, however, extends far beyond the physical, even though self-identification is evident in the physical. For Muslim societies, it is a preservation of the Islamic image within the physical environment. It is through the act of preserving the Islamic image that a continuity of cultural identity is guaranteed. Through memory one is heir to tradition.⁶

Culture

The condition of modern architecture and the crisis of cultural identity mirrors the processes described in Thomas S. Kuhn's book *The Structure of Scientific Revolutions*. In his book Kuhn describes the correlation of crisis and emerging scientific theory, which surface together at critical moments in history, when the construct of a given paradigm is undermined by a revolution of thought. The referential platform, from which all ideas in that construct arise, is dissolved, and a world view is changed.

The cultural crisis that is reflected in the built environment in Muslim countries and elsewhere is analogous to Kuhn's scientific revolutions. Two conflicting world views are at odds in achieving reconciliation between the discrepancies dividing the two. The disequilibrium felt by the population is aggravated by the speed at which the two world views are being forced to merge. Like in times of scientific revolution, new structures of thought must be investigated to define the direction of the future.

What is the phenomenon of culture?

Culture is defined as the accumulation of human events through time, directly experienced by members of a specific social group, from which the living members derive assumptions and create principles to guide their thinking and behavior. Culture, then, is an ever-moving phenomenon with a high degree of constancy that, while uninterrupted, may continue to move and to build upon its own components and dynamics. As the members of a society procreate and new generations move through time (history), they cannot escape confrontation with events. These cause the testing and reevaluation of the principles formulated earlier that underlie culture... The stage (ecology), the actors (people) and the action (activities) represent the overall features of a basic social setting that can be observed in the present, cannot be divorced from the roots of its past, and has the potential of surviving in the future.

Reina, 1973, XVIII, XIX

From Alfredo Gastal, *Towards a Model of Cultural Analysis for the Designing Process*. MIT thesis.

In his book *The Denial of Death*, Ernest Becker discusses culture as a means to health and stability. He writes, "...we...know the human animal is characterized by two great fears that other animals are protected from: the fear of life and the fear of death." He goes on to argue that "man seeks to separate himself from nature by his creation, and that man's creation of an order or power is a response to man's desire to transcend the given - nature, fate, animal destiny, or life and death. The whole idea of culture," he says, "is that man-made forms of things prevail over

the natural order and tame it, transform it, and make it safe."⁷ Culture, then, is considered "noble" or "lofty" because of its transcendent abilities. Whether "conquering" nature or seeking "oneness" to transcend nature, both Western and Eastern constructs attempt to transcend the given by his creation.

When a culture is living tightly within and harmoniously with the archetypal construct that created it, the culture is in a prime state and able and willing to absorb the influences of foreign origin and able to incorporate them into the living culture:

*Each creature that goes before you has a soul,
And from that soul is bound a cord to you.
Therefore are they all subject to our dominion,
For that the soul of each one is hidden in you.
You are the kernel of the world in the midst
thereof.
Know yourself that you are the world's soul.*

From Mahmud Shabistari, *Gulshan-i-raz*, p. 27.

Echoing the teachings of Plato, the poet describes the unifying power of traditional culture in which collective knowledge informs and empowers the individual in every aspect of life through a process of introversion and self knowledge. When a culture is distanced from the archetypal construct that created it, the incursion of foreign influences becomes a threat to that society, and the cultural construct is put into question for reevaluation and transformation.

Culture and identity lie within man, but the built environment is the symbol of and image of that identity. The built environment extends beyond living generations, evokes memo-

ries of the past, and fills the space of time between the past and the present in a perceived temporal continuity. Threatened institutions seek to celebrate their antiquity, and look backwards when a discontinuity in time occurs. The past does have the capacity to inform the future and help man to decide of the future environment that will be his. An environment that reflects cultural stability empowers man and offers a sense of strength that can inspire action.

Symbol

We shall show them our signs upon the horizons and within themselves until it will be manifest unto them that it is the Truth.

From the Quran, XLI, 53.

In his book *What Time is this Place?*, Kevin Lynch states that a symbolic environment is used to create a sense of stability. Today, an entire system of signs has disappeared, and there is expressed a need to revise Islamic language to adapt to new realities.⁸ Traditionally, the meaning of symbol was communicated to the receptive mind of the viewer, who, stimulated by sensory perceptions, internalized the forms and completed the circle of communication through the outside world upon which the artist projected his inner spirit.⁹ Traditional Islamic culture identified itself through means other than memories of men and events. Islam is manifested in a way of life and that life is reflected in the way architecture is used. If the architecture is sympathetic to that way of life, then it will become Islamic.

Time

Given the symptoms of anxiety modern society and our urban environments express, modern man needs to sense self-recognition and the presence of time in his environment to respond to his spiritual and psychological needs. The spatial and temporal environment can be used to shape the attitudes towards the future that are themselves the keys to changing the world. As a catalyst for development, a message about an attitude and a need for sensitive responses to the built environment needs to set examples and a direction for future development. When there occurs a discontinuity in time, one seeks from the past to decide on the environment that will be ours; choosing a past helps us construct a future.

Kevin Lynch speaks of saving symbols and fragments and looking at a setting not as a facsimile of the past, but a temporal collage that "seems to open out in time, creating a crevice to venture through into the past and the future."¹⁰ In the passage of time there is rhythmic repetition and progressive, irreversible change. We select our images of the past, which are made in the present, as are our images of the future. The creation of a temporal collage, with imprints as selective and impermanent as memory itself, stimulates the perceptions or inner and outer time, makes one feel the fullness of life, and stills the anxiety of death.

Hypothesis and Procedure of the Investigation

The design of contemporary buildings can respond to the problems of today's built environments and incorporate cultural and regional specificity. Through an application of the latent concepts which generated the region's archetypal forms, a morphology of concepts can be developed and used to guide and temper design decisions and to contribute to the cultural, symbolic and temporal environment.

The procedure requires:

- an in-depth understanding of the origins and meanings of cultural archetypes specific to the region of the inquiry,
- the development of a morphology which can be translated into a useful architectural language,
- the application of these concepts to guide and temper the design of contemporary buildings, while using modern methods and materials, and responding to current conditions, requirements, and aspirations of the population.

The search for Samarkand's identity requires an investigation of the past. The history of art and architecture, archeology and written documents are the sources available to determine the paradigmatic construct which formed Samarkand's character over time.

² See Dogan Kuban, "Conservation of the Historic Environment for Cultural Survival," *Architecture and Community*, (New York, 1983), pp. 32-37.

³ *Architecture and Community*, (New York, 1983), pp. 32-37.

⁴ Preface, *Architecture and Community*, (New York, 1983), pp. 11-13.

⁵ See *Architecture in Continuity*, (Millerton, NY, 1985).

⁶ See Dogan Kuban, "Conservation of the Historic Environment for Cultural Survival," *Architecture and Community*, (New York, 1983), pp. 32-37.

⁷ Ernest Becker, *The Denial of Death*. (New York, 1973) pp. 237-38.

⁸ See Mohammed Arkoun, "Islam, Urbanism, and the Human Experience Today," *Architecture and Community*, (New York, 1983), pp. 38-39.

⁹ Nader Ardalan, *The Sense of Unity*, (Millerton, NY).

¹⁰ Kevin Lynch, *What Time is This Place?* (Cambridge, 1972).

Chapter II. Samarkand: Mirror of the World

Throughout its history, the city of Samarkand reflected a cultural world view in its form, its architecture and its art. Evidence drawn from archeology, architectural history and historic texts suggest that Samarkand belonged to the tradition of "cosmic" cities. The traditional cities of China, India, Afghanistan, Persia and Mesopotamia expressed their specific cultural beliefs about man's position in the universe and his existence within the order of the cosmos. In the form of a collective settlement, the "cosmic" city sought to express an idea about positioning man and his created environment in a greater realm, including nature, the heavens and the cosmos. Although stylistic and symbolic expression differed from one culture to another, it shared a fundamental unifying motive: to

*Whatever is seen in this visible world,
Is as a reflection from the sun of that
world.
The world is a curl, down, mole and brow
For everything in its own place is
beautiful...
The spiritual world is infinite,
How can the finite eyes attain to it.
How can the mysteries behold in ecstatic
vision
Be interpreted by spoken words?
When mystic treat of these mysteries,
They interpret them by symbols
For objects of sense are as shadows of that
world.*

From Mahmud Shabistari, *Gulshan-i-raz*,
p.71.

and its position within universal order. Samarkand was formed and reshaped in that tradition, and through its simple vocabulary of forms, it bears witness to an ancient ancestry of cultural symbolism describing man's position in the universe.

Samarkand's turbulent history is typical for the cities of Central Asia. Over centuries the three well defined cultural entities of China, India and Persia crossed each other in this regional melting pot of nations and cultures. Trade between isolated oases, nomadic tribes and giant empires has brought these different races and tribes together in exchange and in conflict. Like many Central Asian cities, Samarkand passed from cataclysm to cataclysm, from tabula rasa to tabula rasa. One race effaced another, and power in the region transferred between one empire and another. Over time,

the memory of one culture was embroidered into the next, and the city's fabric revealed strains of continuity with its predecessors.

In this way, fundamental concept of the city can extend beyond tribal boundaries and time. At a primary level Samarkand shares a particular city form and city ideology with the Indo-Iranian cities. The shared concepts were:

- The identification of the world with the city
- The treatment of kings as world rulers
- The identification of the ruler's palace with the center of the world
- The symbolic equivalence of the palace, the tomb, the world center, and the sacred mountain.¹¹

These ideas found their expression in the round city, the square city, the domed hall, and the combination of these elements. In geometric forms, squares, circles, domes and four-iwan courts comprised the basic formal vocabulary. Also common was an expression of man's relationship to nature and animals. Afrasiab, the pre-Islamic city of Samarkand, displayed an abundance of pictorial motifs presenting animal contests, the animal as a throne piece and as a door guardian. With Islam, representational imagery was abolished. Replacing earlier symbolic representations, the paradise garden brought from Persia a new idiom of cultural symbolism stating a similar idea about man's relationship to nature and the greater universe.



fig. 1 The Empire of Timur

The Samarkand of Timur

Timur's Samarkand was founded approximately 1 to 2 miles southwest of the ancient city site that in 1220 was burned and brought to complete ruin by the hand of Ghengis Khan. By this time Samarkand had absorbed the influences of Greece, Persia, India and China. However, nearly 6 centuries of contact with the Islamic religion and a near complete conversion of the population to Islam defined Timurid Samarkand as an Islamic city. A descendant of Ghengis Khan, Timur conquered a vast empire extending from Kashmir to the Black Sea, engulfing all of what was Persia and Mesopotamia



fig. 2 Timurid Samarkand

and claiming India as far as Delhi. Timur named Samarkand the "Eye and Star of (his) Empire" and the "Mirror of the World." From his campaigns he collected artisans, architects and slaves as booty and set them to work to construct his ideal of city.

Samarkand was planned according to a scheme typical of cities built at that time. Encircled by a wall constructed in the military art of that era, the citadel

housed the palace of the feudal lord, an armory and a mint. Relatives, slaves and members of the court lived in the inner city composed of bazaars, streets, squares, markets as well as religious, cultural and commercial public buildings. Within the outer city, merchants and craftsmen lived in neighborhood quarters defined by their trades. Each quarter, or "mohalla," had a small mosque for daily prayer, in the

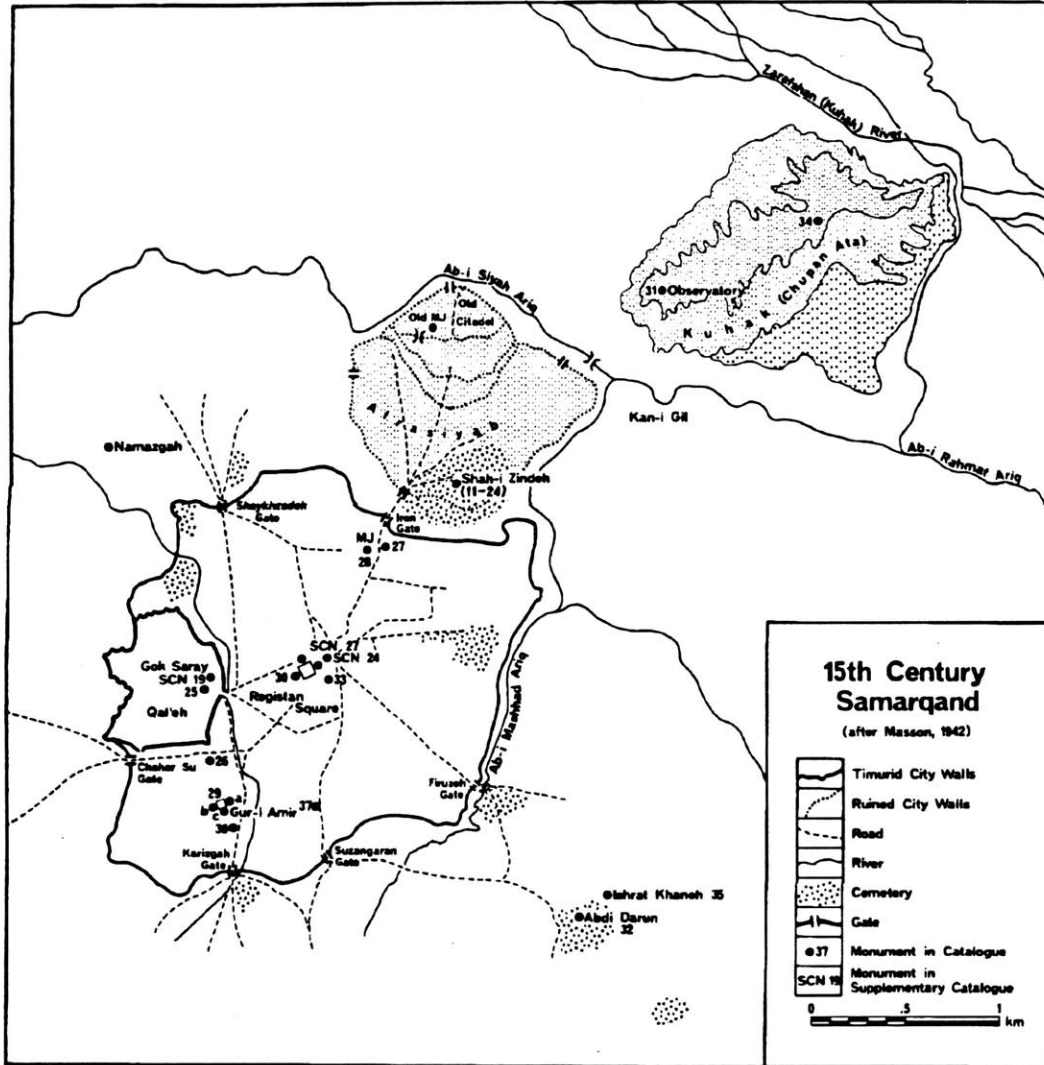


fig. 3 Timurid Samarkand

same way that the city as a whole had the congregational (Friday) mosque, Bibi Khanum, which was the largest Islamic monument of its time. The entire city was fortified by a wall marked by six gates from which six radial streets led to the center. Covering their point of intersection was the domed pavilion, Tschar-Su, a building associated with commercial activity. An 18th century version still stands today

at that point of intersection. Timur envisioned the commercial center to grow into a great forum. Adjacent to the Tschar-Su, the Registan Square, eventually defined by the iwan portals of three madrasas, was the central square and marketplace of the city. Outside the city walls on the road linking Timurid Samarkand to the ancient city ruins of Arfasiab, lay the cemetery and complex Shah-i-Zindeh, or

"living King," a street of royal mausolea. Also lying beyond the city walls were several fortified residences, palaces of the ruler and magnificent orchards and gardens.

The origins of the Timurid city and its symbolic content

What are the origins of Timurid Samarkand, and do they reflect a common symbolic expression shared among Indo-Iranian settlements, as the hypothesis suggests? Does a complex and definite architectural form and artistic motive in Indo-Iranian traditions draw upon their respective world views and represent them in ornamental decoration and building acts? Did the formal expression in Timurid Samarkand derive from these principles? Because there are no written sources, archeological evidence, architectural history, and later accounts must suffice as a body of evidence to build a hypothesis in response to these questions. In order to identify the source of the settlements of the Iranian, Turkish, Mongolian and Eurasian nomadic peoples, one must track through China and India for the interpretation of the quartered, circular and mandala buildings.¹²

Texts in East Asia state that the quartered squares represent the Earth, that circles are the heavens, and the mandala is a diagram of the universe. At the holy center, the circle of heaven meets the quartered earth by a vertical axis mundi joining that which is manifest to that which is

hidden. In India, central, sacred columns bear inscriptions that the column stands as a symbol of the ruler's power and at the same time as a symbol of the axis in the

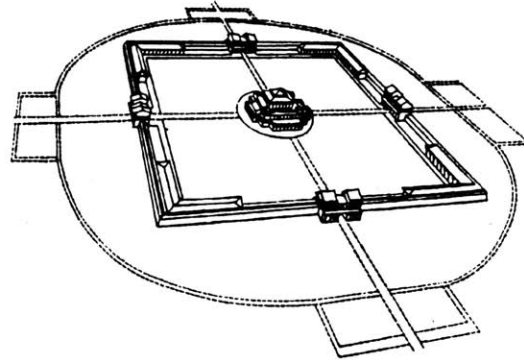


fig. 4 The Ming-T'ang from Xian (Han Dynasty)
Reconstruction

cosmic sense. The cosmic axis is culturally represented in many forms in the city: in the form of a single building, and in the symbolic artifact. The formal expression varies, but consists of a vocabulary of basic elements: the round city, the square city, the domed hall and the combination of these elements, as well as in squares, circles, domes and four-iwan courts.

The earliest examples of circular cities in the region date back to 2000 BC, when Indo-Iranian tribes migrated into the Iranian and Afghan highlands, changing a particular city formation and city ideology. Daschly-3, an Afghan cult center, is a composition of concentric rings and a square. At its sacred center lies the fire temple. The concentric composition of two perfect forms, the square and the circle, reappears repeatedly over the next 4,000 years.

The Arshan-Kurgan grave dating to 800 BC. was built of wood in a monumental scale. The diameter of the king's grave site reaches 120 meters, and at its center, a square within a square, is where the king was buried in eight sarcophagi along with 138 horses $[(30 \times 3) + (15 \times 3) + 3]$ within the site.¹³ The symbolic presence of animals with the "world ruler" resonates with the later animal motifs, throne pieces, and door guardians as symbols of man's mastery over animal and of those in the "park" of the imaginary world.

In 1000 BC. the forms reoccur with the first domed graves composed of concentric walls and radiating dividing walls on a quartered socle. This type appeared more abundantly and in greater variety during the second half of the first millennium BC. In these examples the quadrant form at the center and the rectangular grave sunken in the floor are under the dome. The mausoleum Babisch-Mulla, which was probably domed, is the first evidence of a greatly influential form composed of the dome and the quartered socle. The entrances of the corridors formed iwan halls. The Parthians, who inhabited Samarkand in the first century BC., made this type well known and influential.¹⁴ The mausolea of Shah-i- Zindeh 13 centuries later are formally and symbolically in their essence very similar. These symbolic forms associated the world ruler, the grave and the sacred center. Noteworthy is the fact that graves were the most

developed architectural forms of the nomadic peoples before the establishment of their agricultural settlements. The predecessor of this form is not known, but could be from the king's tent.¹⁵

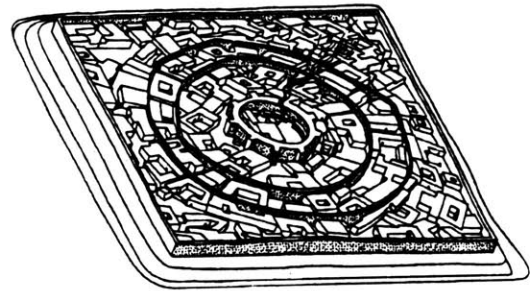


fig. 5 Afghan cult center, Daschly-3, Fire temple in circular dwelling complex, approximately 2000 BC

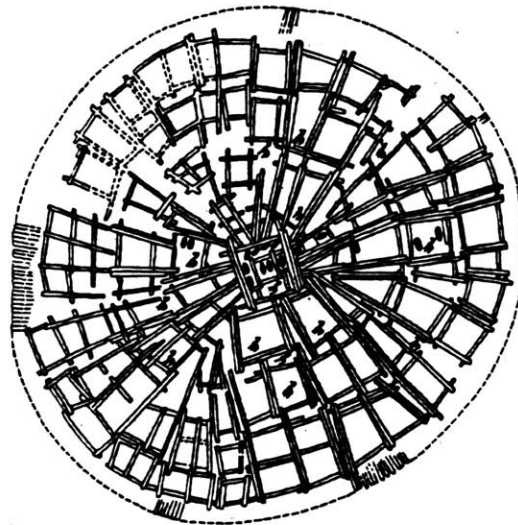


fig. 6 Arshan-Kurgan, Tuva, 800 BC

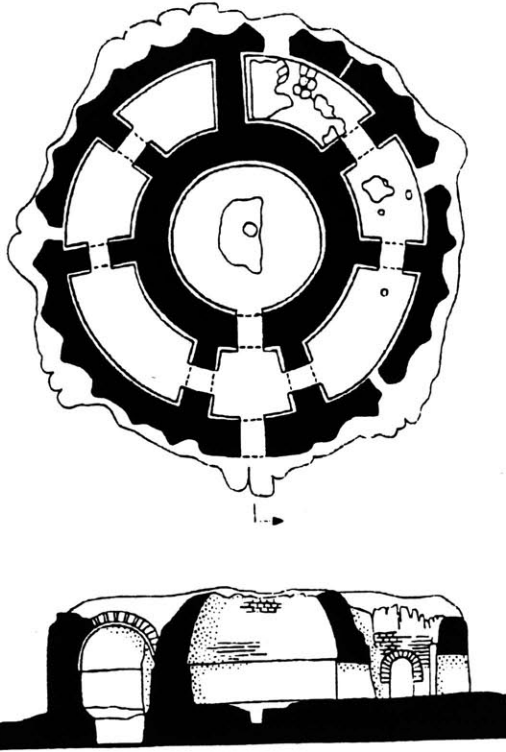


fig. 7 The tomb Balandy-II,
3rd-2nd century BC

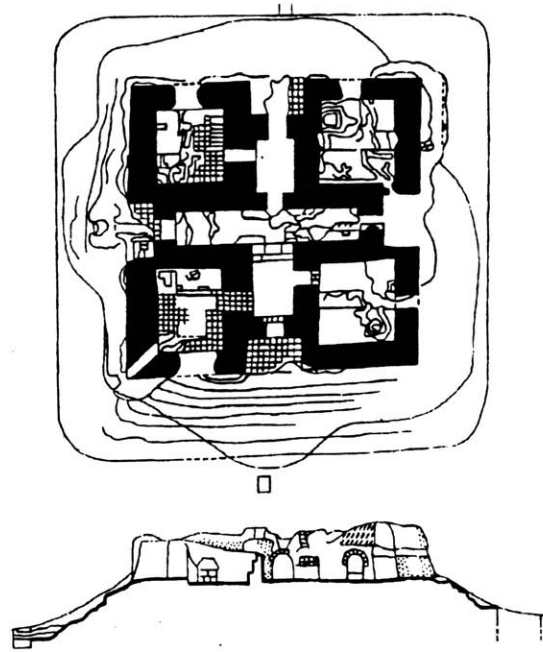


fig. 9 The mausoleum Babisch-Mulla-II
3rd - 2nd century BC

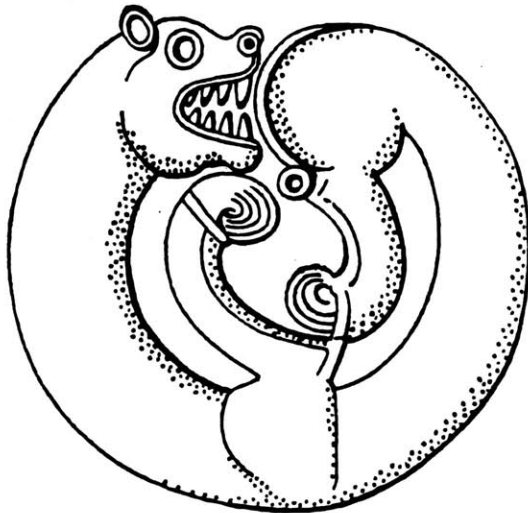


fig. 8 Curled Animal from Arshan-
Kurgan,
800 BC

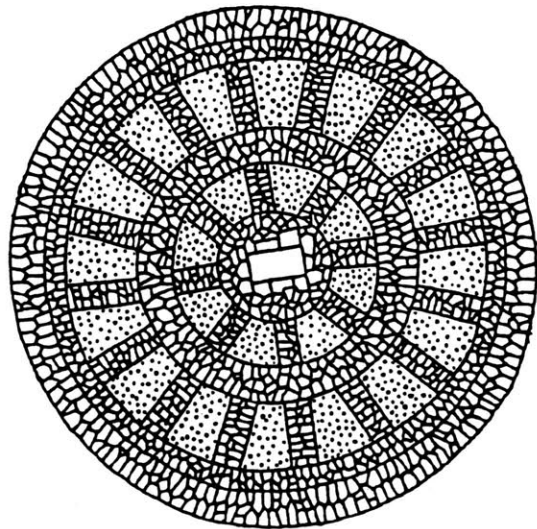


fig. 10 The "Tantalus" grave, Turkey

In the ancient cosmic cities, the ruler's figure was represented; his State comprised the inhabited world. His seat was at the world's center and his worldly power was acknowledged in ritualistic functions. Laid out as a quartered enclosure in which the ruler of the inhabited world resided, the hill constructions, such as the palace of Toprak-Kala, associated the ruler with gods and the light of the sun. Between 600-400 BC. god dances and fires were laid out on elevated platforms, thus the world center atop the sacred mountain symbolized an ideal binding between fire, the sun and the kingdom.¹⁶

No direct statement about the meaning of the round city planing is transmitted, but we know the Sasanian tradition expressed the seven parts of the Karsvar world, with six heavenly directions and a center. The Karsvar world turned like a wheel, from which the six parts of the earth radiate out from a central navel, like spokes of a wheel. In the folk tales

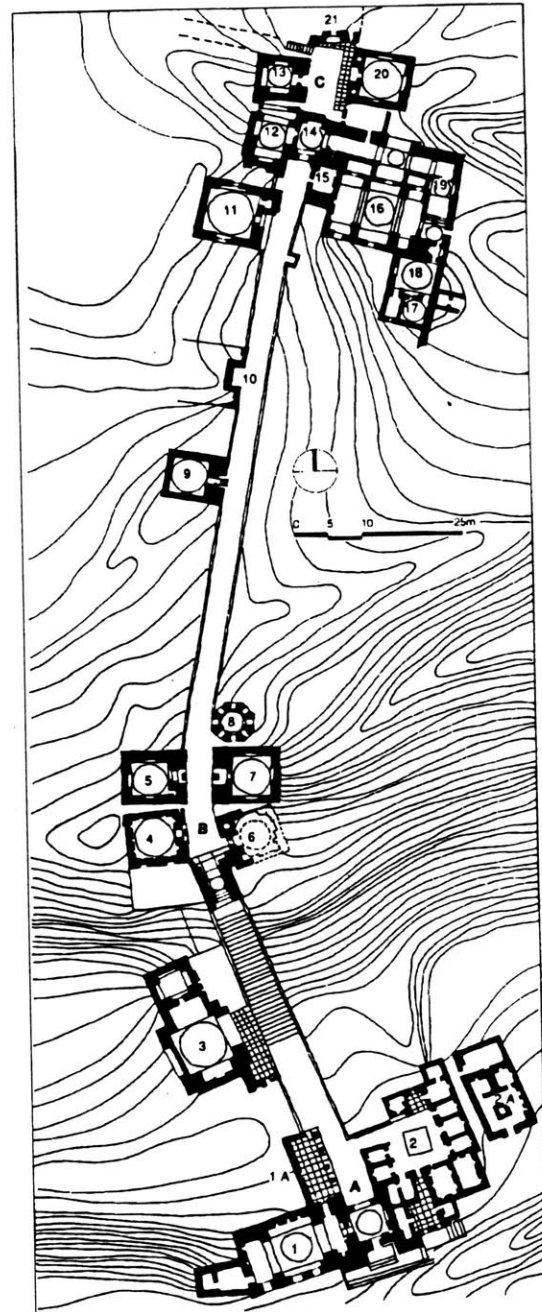


fig. 11 Shah-i-Zindeh Mausoleum Complex, Samarkand

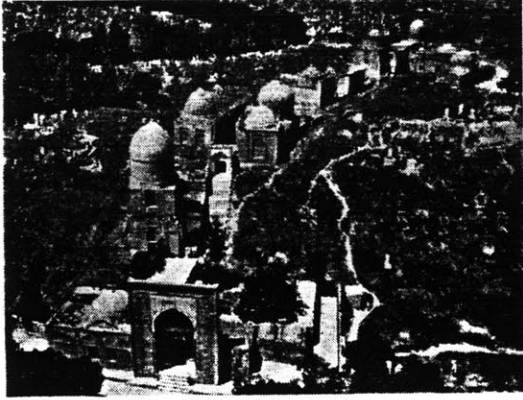


fig. 12 Shah-i-Zindeh, Samarkand

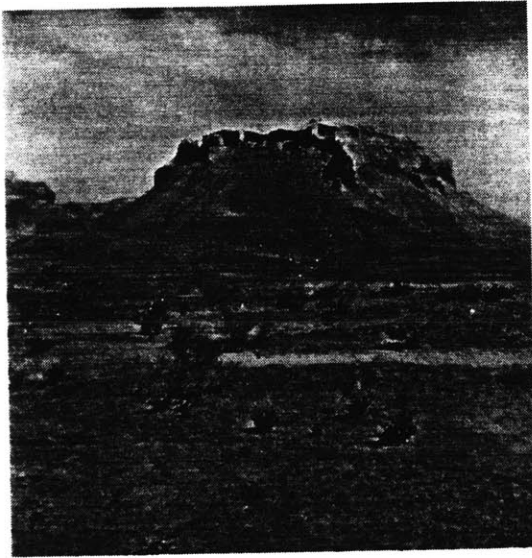


fig. 13 The Palace of Toprak-Kala, seen from the North

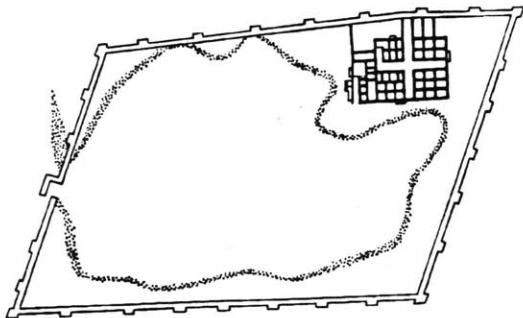


fig. 14 The Palace of Ajaz-Kala, 200 BC

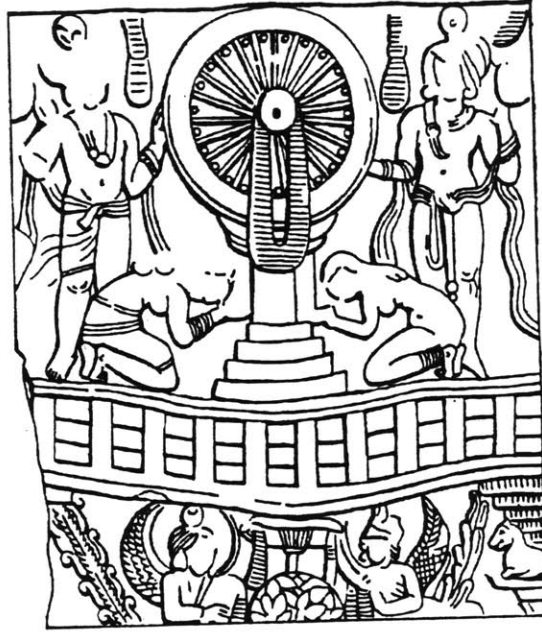


fig. 15 "The Wheel of the Teacher", Sanchi Relief, from Stupa 2

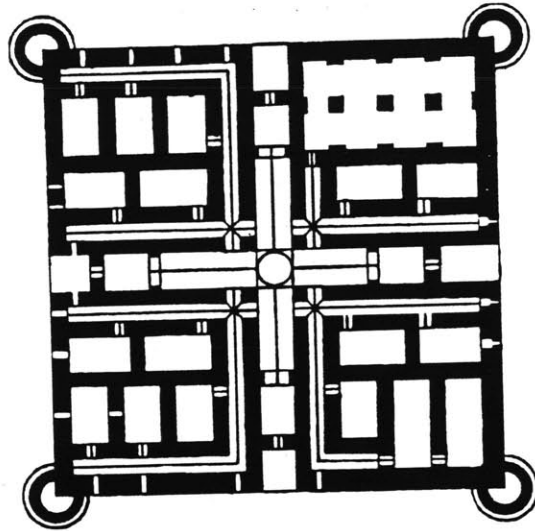


fig. 16 The Palace Kryk-Krz from Termes, 8th - 10th century BC

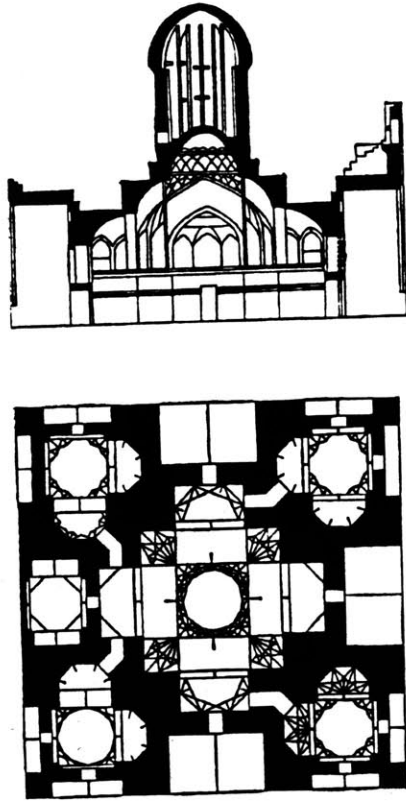


fig. 17 The Dervish hall Qasim-Scheich, Navoi

of Parthian and Sasanid traditions, two earlier traditions that preceded Arab and Turkish civilization in Samarkand, the meaning of the wheel is multifaceted. Time and Fate depended on the spinning of this wheel under the wheel of the starry heavens. Similarly Dervish Sufis spin their bodies in devotional exercises, and in Buddhism it is the circle of the Teacher which embodies the path towards enlightenment.¹⁷

The symbolic content of the Timurid city

Fifteenth century Samarkand had six gates and six radial streets leading to its center. The eighteenth century structure now standing at the center, like its predecessor, was and still is called Tschar-Su, which literally means "four rivers." Similarly, the two gates at either end of the principle commercial route traversing the city through this center point were also called "Tschar-Su."

Samarkand's importance was always due to its prominent position on the East-West Silk Route linking China to the West.

"Tschar-Su" in its more contemporary sense refers to the city's principal market. Yet its name, "four rivers," recalls the quartered plan with a sacred center that was considered a place of veneration for the cult or the kingdom. In the Islamic tradition, "chahar-bagh" is the quartered paradise garden into which flow the four rivers of paradise. Samarkand's central domed market pavilion, with its six small domes and one larger, central one, was a regional type that can be traced back thousands of years in the area, prior to the advent of Islam. Perhaps its geometry recalls the Karsvar world, with its six heavenly directions and a center. From the example of the Tschar-Su, it can be surmised that at the time of its conception, Samarkand's city form represented a composite of world views and cultural idioms that nevertheless expressed an idea about the city as a representa-

tion of the world. Timurid Samarkand, like other fifteenth century cities in the region, was not conceived of in a pure manner; rather, its conception resulted from a synthesis of world views, cultural idioms, and regional building types

In Pendzhikent, a well preserved Soghd city referred to as the "Pompeii of the East," lay only 70 kilometers east of Samarkand. Pendzhikent provides another example of the hybridization of world representations. In the local Soghd tradition there was a significant decentralization of power. Consequently, the citadel containing the rulers palace was displaced from the center to the city's outer walls, and it resembled more a house than a palace. In Bukara, Herat, Merv, Khiva and Samarkand, the citadel is displaced in this way. Instead of the king's palace, the Tschar-Su occupies the center point. Schahr-i-Sabs, 85 kilometers south of Samarkand, had a city plan divided in four by two bisecting roads, and at its center was the domed market pavilion. Yet the quartered city had six gates instead of four. The varied combinations of two world views symbolized by the six-spoked wheel and the quartered rectangle suggests an inter exchangeability between the two cultural idioms. Samarkand's plan is roughly circular. Herat is rectangular. Still these cities and others in the region offer varied examples of how the two cultural vocabularies were both world representations inter exchangeable in meaning.

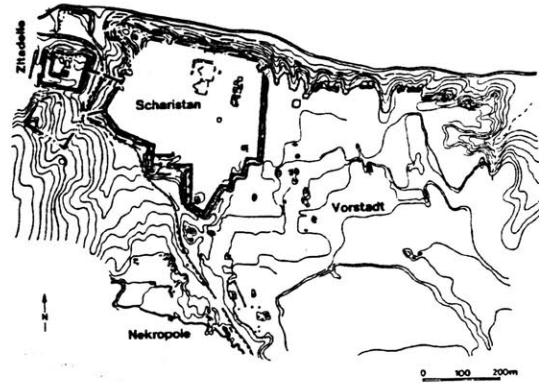


fig. 18 Pendischkent

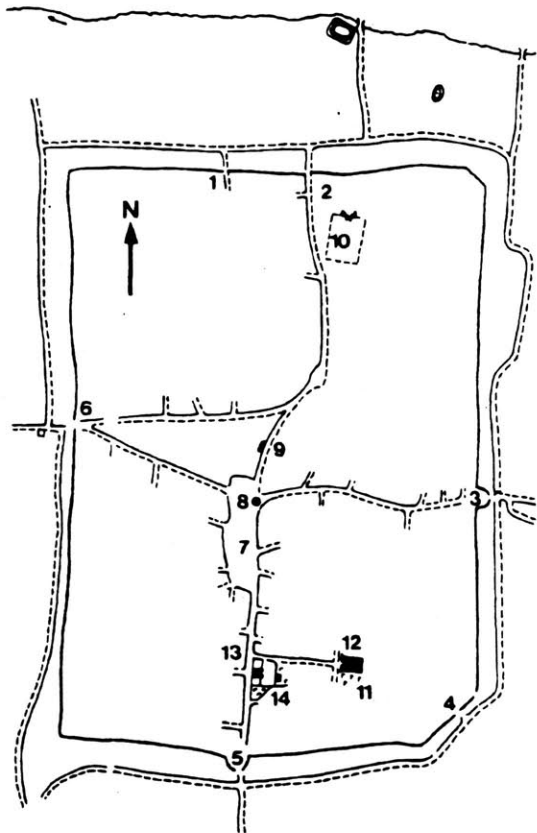


fig. 19 Schahr-i-Sabs

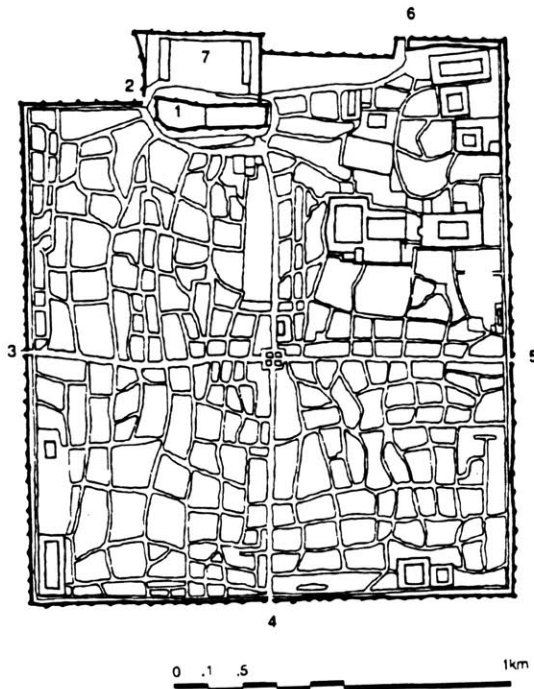


fig. 20 Herat

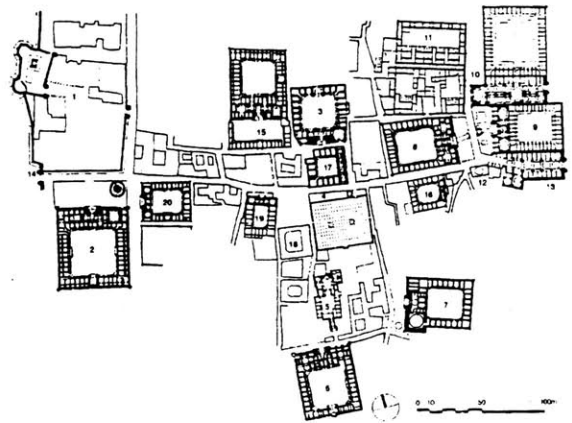


fig. 22 Khiva

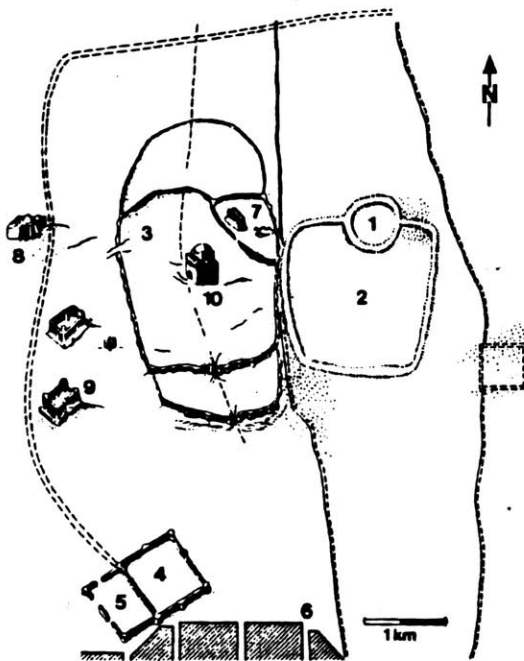


fig. 21 Merv

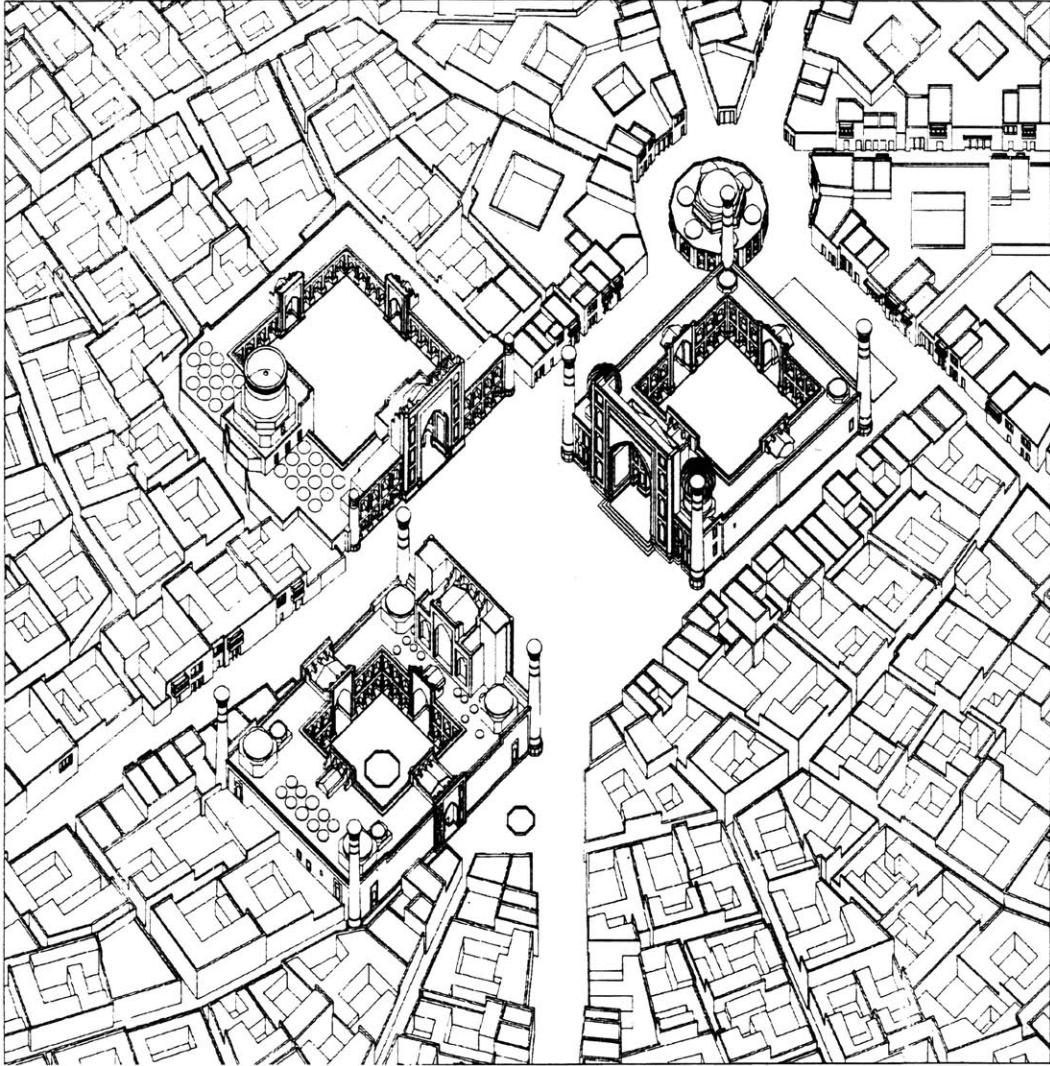


fig. 23 Samarkand

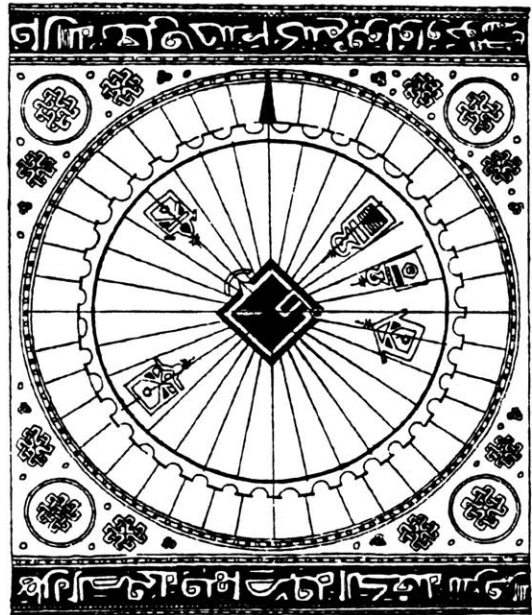


fig. 24 The world of Islam with the Ka'ba as world center, from an atlas of Ahmed Sharfi, from Sfax, 1551

The pure concept of world representation that was manifest in Baghdad in the year 762 was still clearly present in Timurid Samarkand. A drawing of the Ka'ba executed in 1551 depicts the cultic symbol and absolute axis mundi for the Muslim world as a pure square at the center of circle representing the world. The image portrays a world representation in which separate countries are oriented towards the sacred site in Mecca. What is noteworthy is the power of the form that transcended 800 years and still consistently and clearly represented the same diagram of universal order.

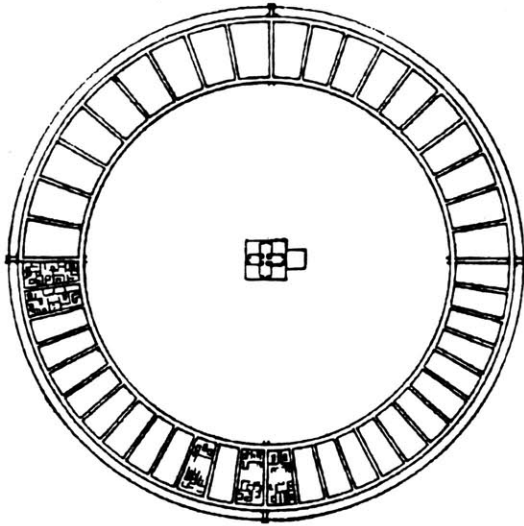


fig. 25 Baghdad, capital of the Abbasid and World Center, 762

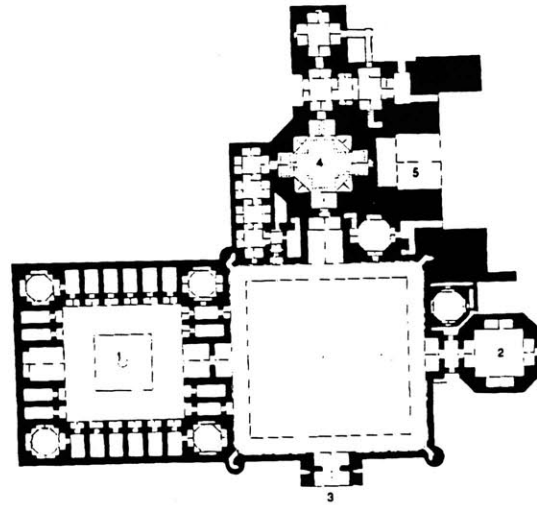


fig. 26 Gur-Emir, Samarkand

The manifestation of cosmic orientation in the architecture of Samarkand

The cities of Khiva, Bukara, Merv and Schar-i-Sabs, which are all "quartered" cities, are oriented to the cardinal directions by the two principal intersecting streets. The mausoleum Gur-Emir, where Timur was buried, follows the same orientation and shares similar cosmic orientation. The courtyard is the four-iwan type onto which open the mausoleum, the madrasa, and the khanka. The city identified its center as an axis mundi, but one can also detect the same attempt to connect significant buildings (mausolea, mosques, madrasa, etc.) with the greater order of the universe. In Samarkand the sacred space is no longer singular, and turquoise domes representing the dome of the sky dot the city in a variety of forms and expressions.

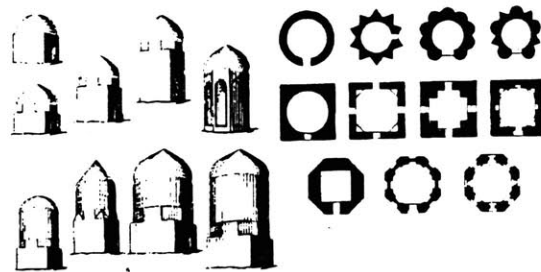


fig. 27 Geometric forms for dome constructions

Timurid Samarkand in its heyday was a center of culture and science. Ulugh Beg brought poets, scientists, mathematicians, and astronomers to his court. He built an observatory and recorded the movements of the heavens in a journal that astronomers found accurate and useful in seventeenth and eighteenth century England. The scholars studied at the madrasa, which was probably not a school in the worldly sense, but a cult building. It is possible that the sky above the four-iwan

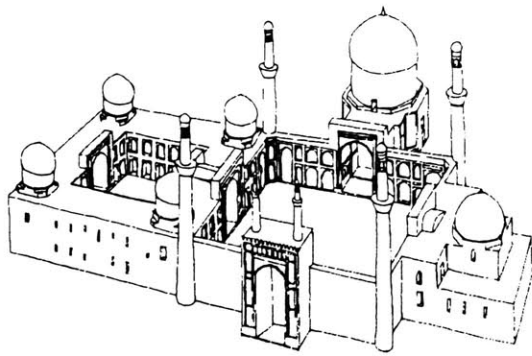


fig. 28 Gur Emir, Samarkand

court was thought of as the dome of heaven, and the madrasa was a microcosm of the universe.¹⁸

A relationship between architectural forms and the cosmos is described in the inscriptions on Samarkand's principal monuments. Bibi Khanum was built as a congregational mosque that was also to be a perfect expression of Timur's imperial power and pride. It was formulated and controlled by Persian genius and experience. Its inscription reads, "Its dome would have been unique had it not been for the heavens, unique would be its portal had it not been for the Milky Way." The mirror image of the Ulugh Beg madrasa, Shir Dor, bears an inscription describing the merits of its form: "The architect has built the arch of this portal with such perfection that the entire heavens gnaws its fingers in astonishment, thinking it sees the rising of some new moon." Another describes its scale as, "two times the height of the skies. From its weight the spine of the Earth shakes." And again describing the madrasa, "such perfection

that the Earth is raised to the height of heaven." Samarkand itself was referred to as, "the face of the Earth," the "mirror of the world," the "garden of souls" and the "fourth paradise." These statements compare to the poems of the Sufi mystics who describe the relationship between the visible world and the cosmos:

The visible world was made to correspond to the world invisible and there is nothing in this world but is a symbol of something in that other world

From Abu Hamid Muhammad al-Ghazzali, *Ihya* (eleventh century), in Margaret Smith, *Al-Ghazzali the Mystic*, p. 111.



fig. 29 The Constellation "Andromeda," Miniature dating from 1437 from Samarkand for Ulugh Beg's catalogue of the heavens

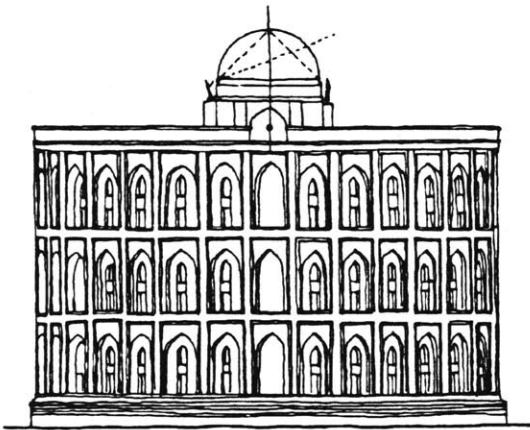
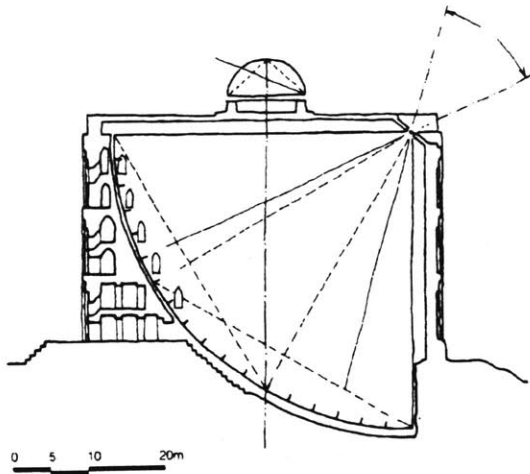


fig. 30 Ulugh Beg Observatory, Samarkand

The position of man with respect to nature

Prior to Islam, the Sasanian and Sogdh civilizations depicted an abundance of pictorial motifs portraying the ruler and their courts in the presence of animals such as dragons, leopards, elephants, lions and camels. Their wall frescos and art described animal contests, animals as throne pieces and door guardians. Yet this phenomenon is scarcely specific to this region or even this

time. One has only to recall the great Mogul tradition of animal parks surrounded by large, right-angled building rows, or the European tradition of royal and papal exotic zoos and hunting grounds, or the stone lions at the feet of the knight's effigy, or again the reference of Arshan-Kurgan. They all symbolically empower man to rule over animals. The widespread Asian cult of seasonally dying and resurgent nature depict in their art a goddess sitting on a lion and holding emblems of the sun and moon. Such an image



fig. 31 Wall painting, Afrasiab (Samarkand), 7th century

suggests influence of ancient and remote worship. "Shir Dor", the madrasa of the Registan complex built in 1619-1693 means literally "lion-bearing." The madrasa was named for the representation of a lion carrying the Sun of Persia on its back. This image is extraordinary because of the direct links to the Asian cults and the lasting tradition of the animal as door guardian way into the

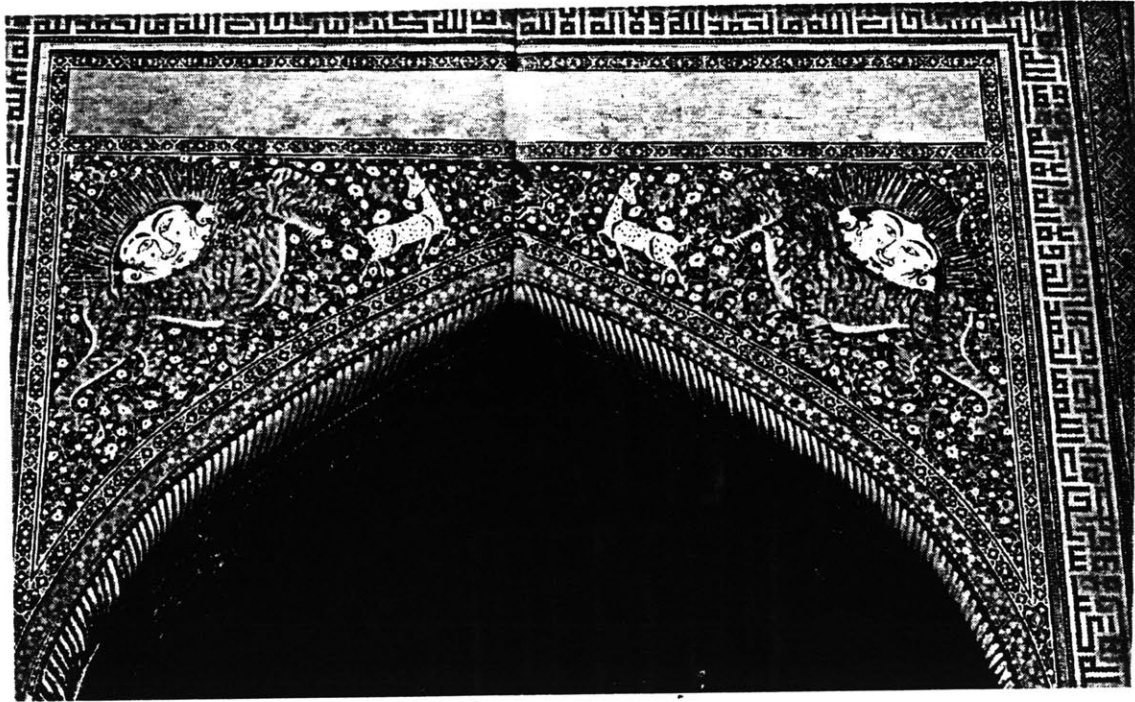


fig. 32 Shir Dor madrasa portal,
Samarkand

seventeenth century, after 900 years of Islam, which forbids pictorial representation of men and animals.

What Persia brought to Central Asia was the paradise garden, an oasis in the desert, or a garden in the city that was a place of sensual pleasures and a microcosm of the bountiful Earth. The garden and the courtyard were symbolically analogous as a total reflection of the cosmos. Pools of water at the center of the gardens reflected the sky. The four rivers of paradise are recalled by the irrigation canals quartering the garden. Samarkand was most noted for its gardens and orchards lying outside the city walls, where Timur built houses for the pleasures of the court. The Persian

rug is a literal representation of the Persian garden and its layered symbolism.

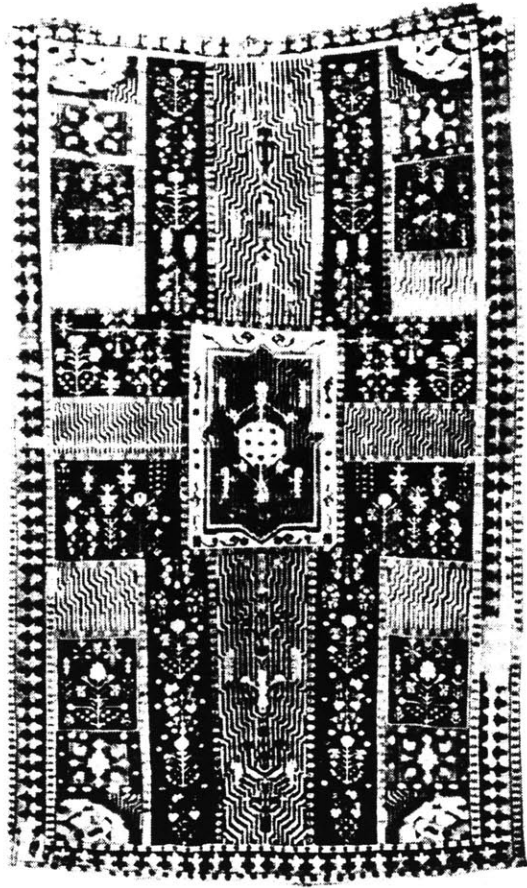


fig. 33 Garden carpet, 18th century,
Metropolitan Museum of Art

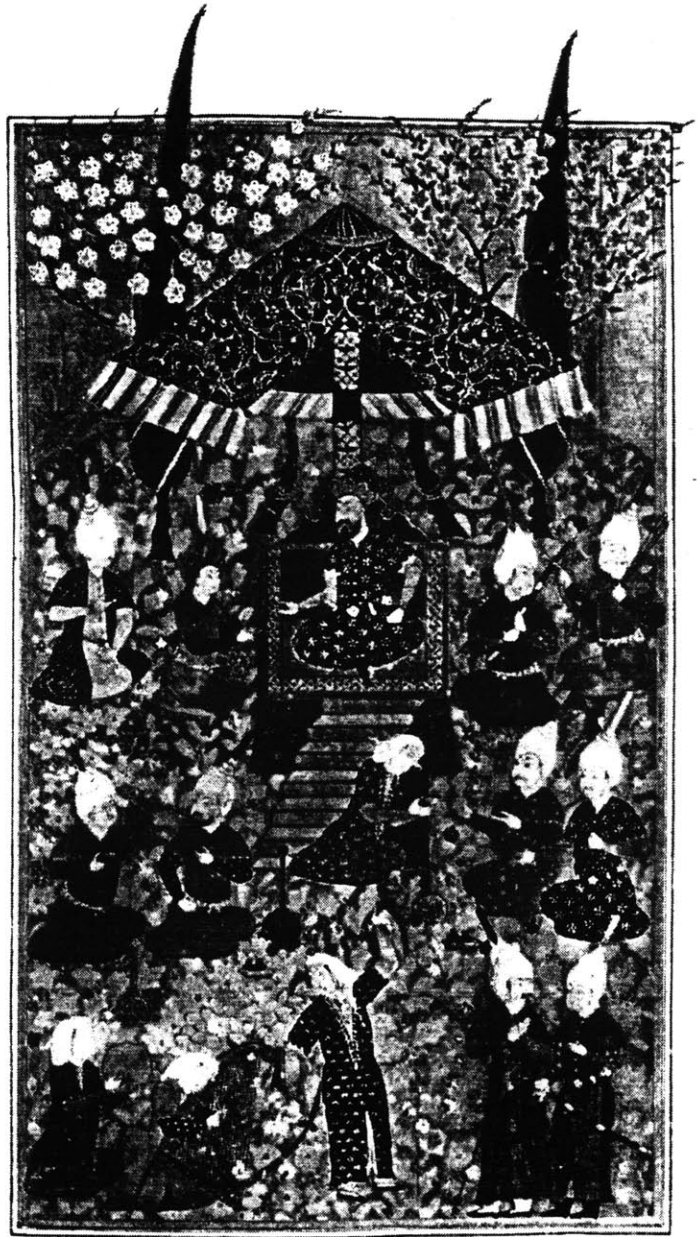


fig. 34 Miniature, Timur and his court in a
garden outside of Samarkand

Samarkand's urban form, architecture and art derive from a composite of multicultural influences over time. Within the tradition of cosmic cities, the ideas behind the creation of man's environment begins with the concept of unity: that man is a natural being and is one with nature and the cosmos. The city was associated with the world and its ruler and was integrated into the understood order of the universe. The concepts of unity and harmony permeated every aspect of architecture and art in the traditional city. It was not until the twentieth century that Samarkand began to physically reflect the rupture of a traditional concept of settlement when the plan of the Soviet city severed two spokes of the wheel upon whose motion time and fate depend.

11 Buchard Brentjes, *Die Stadt des Yima*, (Leipzig, 1981), p.20.

12 See Buchard Brentjes, *Die Stadt des Yima*, (Leipzig, 1981).

13 Ibid.

14 Ibid.

15 Ibid.

16 Ibid.

17 Ibid.

18 Ibid.

Chapter III. Concepts of the Paradigm

*Sensible knowledge of this world,
that is, the world of becoming,
is a symbol of the intelligible
knowledge of that world.
The physical world is
the symbol and image
of the spiritual world.*

From Afday al-Din al Dashani,
Musannafat (fourteenth century), in Nasr,
Science and Civilization in Islam, p. 296.

Samarkand's identity lies in its forms. As symbols they express a view of man's position in the world and his relationship with the environment. What is the emerging identity of Samarkand, and how will it grow from its roots in the past? The new architecture of Samarkand should bear witness to the legacy of the city's history. In identifying and extracting the original concepts behind Samarkand's traditional forms, one can develop a glossary of concepts which offer access to a method in translating the traditional morphology of archetypes into a contemporary architectural expression. The extracted concepts are the spirit behind Samarkand's paradigmatic forms, and they offer the designer a construct to enable the presence of temporal, cultural and symbolic content in the contemporary built environment.

A morphology of concepts was developed in the book *The Sense of Unity: the Sufi Tradition in Persian Architecture* by Nader Ardalan and Laleh Bakhtiar. The Sufi mystics searched for the true

principles governing Islamic art and architecture. Although the center of the Sufis' realm of influence was located in Persia, the descriptions of their world view resonate harmoniously with the world view in Samarkand, which was also referred to as "the Isfahan of Central Asia." In the Sufi poems the mystics identify the latent concepts behind their world perceptions and describe the essence of things. Analyzing Sufi poems and reading into aspects of Sufi thought reveals the conceptual essence of Islamic art and architecture. From this source one can arrive at a morphology of concepts.

In the world view of Islamic gnosticism, "the Way" refers to a method of realization that encompasses both art and craft. Science, the laws and principles governing things, and the processes of nature are related to a metaphysical order. The essence of craft is the externalization of the realizations of science in physical forms. Craft expresses cosmic references, functionality, and a nobility of expression. Searching for "the Way" is the activity of the Sufi mystic, of the artist, architect, poet, or craftsman. In this world view, the architect is an anonymous vehicle of realization. The architect's role is not to make a conscious expression of self. The architect strives to integrate the inner and outer aspects of a metaphysical consciousness through creation and thus participate in the creative process of nature. In this way the work becomes the realm of divine art and a means

for divine inspiration. The artist, craftsman, or builder participates in the universal order by creating an external art object in the "light" of inspiration. It is in the creating and making of art forms that man is "raised" to higher states of being, towards unity within cosmic order. Indeed, the function of craft is to help man place himself in harmony with these processes of nature by applying the "Way" (or intellect) to art as a ritualistic activity.

The symbolic language of Islamic gnosticism consists of the natural and the general, the revealed and the particular. The processes of nature, perceived as symmetrical or rhythmical, are inexhaustible and express the concept of multiplicity within unity. Within this construct the revealed and the particular are emulated by man. Geometrical forms that are "symmetrical" with respect to the center symbolize a unity within unity, which is the first principle of Islam. Symbols of either kind reflect a permanence in the world of temporal change.¹⁹

Architecture is perceived as an all-encompassing medium for achieving the sense of unity. For example, the art of the container is created through objective laws, while the contained is a symbolic recapitulation of its archetype. Forms with "outer" and "inner" essences relate through multiple states of being in a hierarchical structure to unity.²⁰ The dome, the characterizing form of Samarkand, is a "container" built according to the laws of mathematics and statics. Its function, to

encompass a hemispherical space that leads to a central point, is a symbolic manifestation of the macrocosmic vault, the heavenly skies. Together these qualities symbolize the universal spirit which itself is encompassed in the entire universe. Symbolic language provides the means through which man ascends to his metacosmic origins.

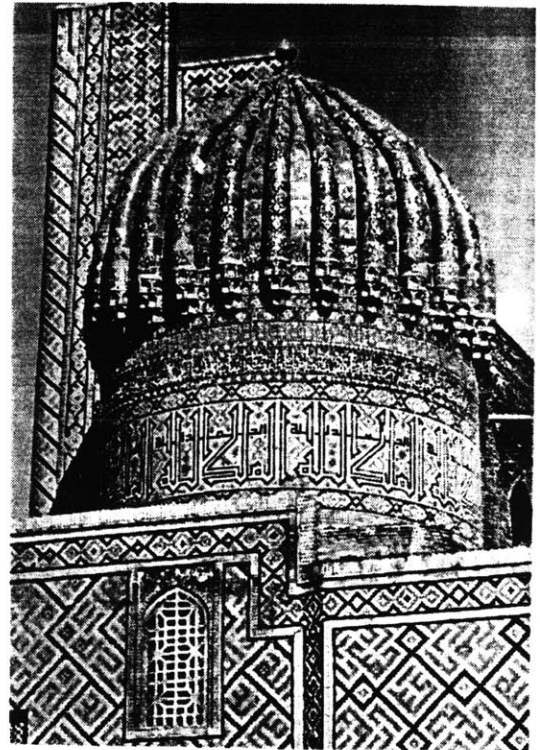


fig. 35 Ribbed dome, Shir Dor Madrasa, Samarkand

Similarly, Islamic philosophy addresses the search for order and harmony in the natural world, the intelligible world, the human soul and the city. Its concern is to find eternal truth about principles that govern temporal variations, whether they be cyclic, rhythmic, or products of the interaction of permanent factors.

Islamic philosophy is concerned with understanding the character of the Islamic community and architectural forms bound to a place and time.²¹

The geography of this world view is mapped on the diagram of the seven stages or "subtle centers." In this diagram, man is placed at a central position in the universe, at the pivotal point between the arc of ascent and the arc of descent between the

The Arc of Descent and Ascent of Seven Stages

*The creative ascent to the Divine, which is a latent potential in all mankind, may be accomplished through Divine Grace in the seven levels of realization through man's seven "subtle centers."*²²

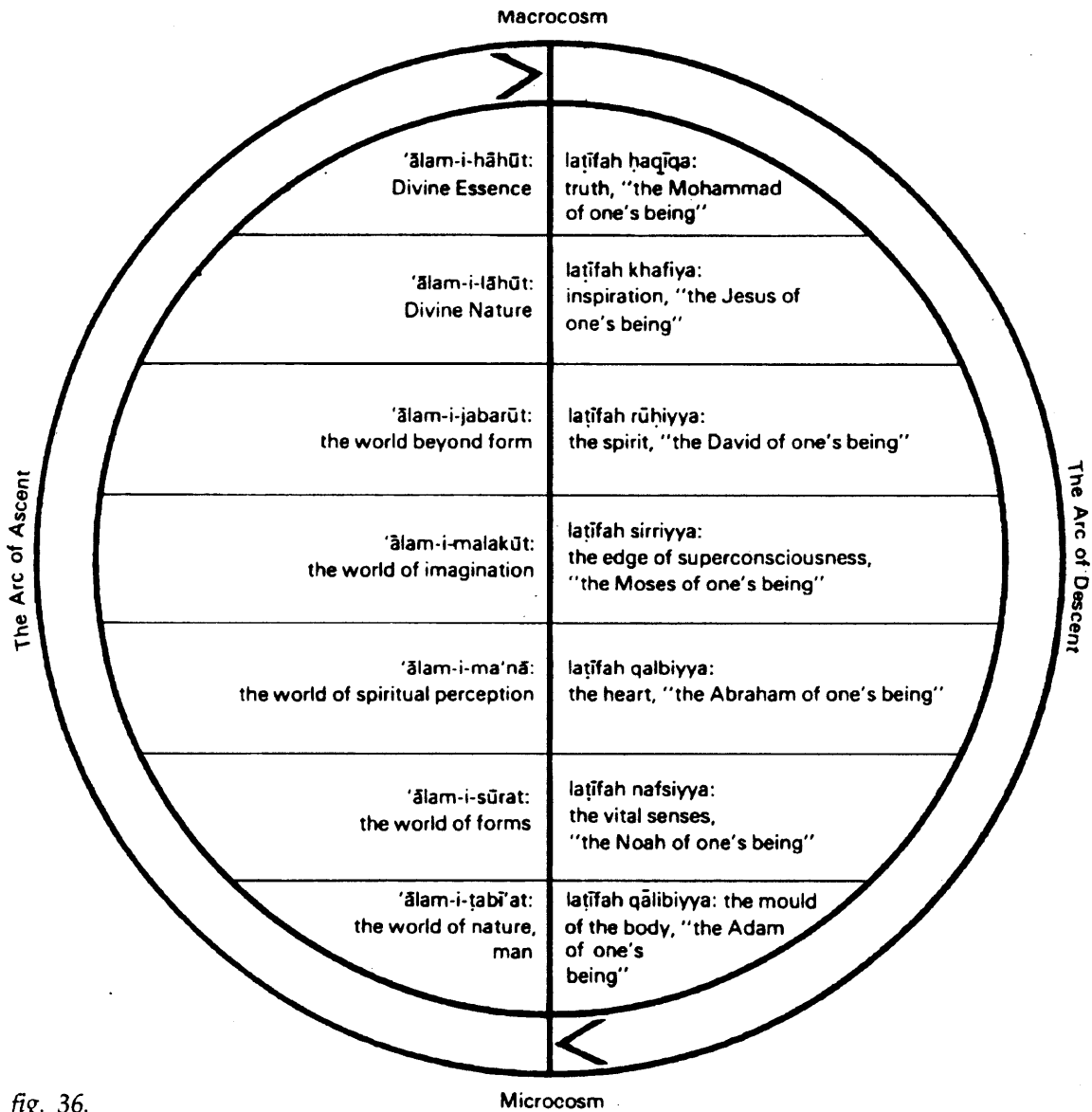
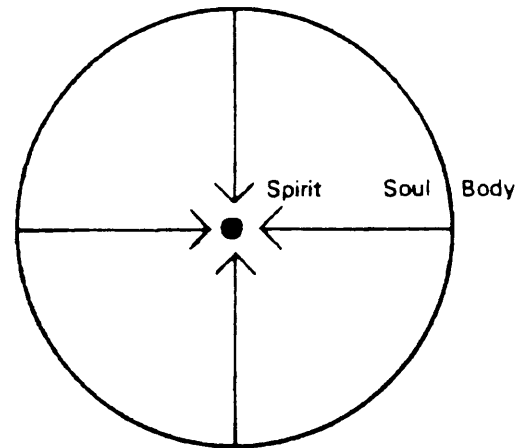


fig. 36.

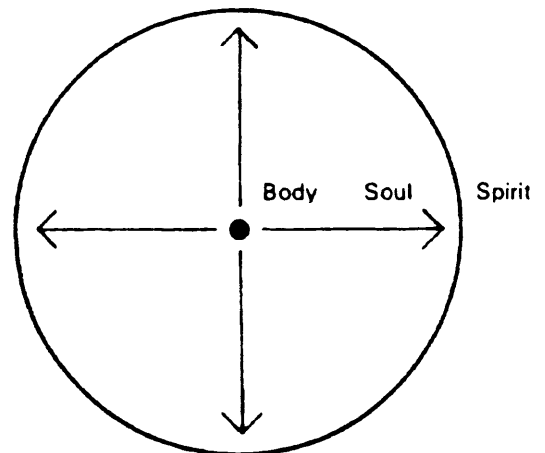
macrocosmic dimension and the microcosmic dimension. The horizontal dimension is the realm of the temporal world. The vertical describes the ascent and descent toward spiritual divinity through the creative act. Universal man, personified in the Prophet or Jesus, the Son of Man, is the archetype of creation. Through him all things return to the source. Through man's creative endeavors he is witness to the profundity of the realization of his potential. The concept of Islamic art is considered such an endeavor. It exhorts the contemplative realization of Unity. An art object thus created releases the inner beauty of matter, and the level of its beauty corresponds to the artist's level of comprehension.²³

Space

"Space is one of the most direct symbols of Being. It is primordial, all-pervading, and, in the cosmology of Islam, the 'locus' of the Universal soul."²⁴ In this world view, with its metaphysical interpretation of life, man situates himself in the universe, which is composed of a macrocosm and a microcosm, each containing three great division: the body (jism), the soul (nafs), and the spirit (ruh).



Microcosm (Hidden)



Macrocosm (Manifest)

fig. 37

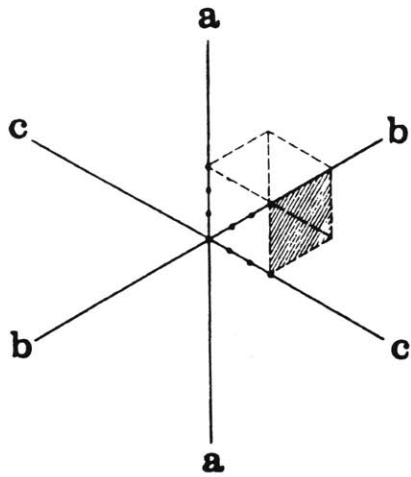


fig. 38 Man's orientation in space

The coordinate system and the six basic directions of motion were correlated by Ibn Sina, the noted eleventh-century Persian philosopher, with the left and right, front and back, and up and down directions of the human body. ²⁵



fig. 39 Kashan, Timchah-yi-Amin al-Dawlah

Positive space continuity provides a hierarchy of relationships allowing a correct coming together of forms. In structured space, man knows where he is; direction is meaningful to him.²⁶

The fundamental elements of traditional architecture are: space, shape, surface, color and matter.

"The relationship of space to shape is perceived in distinct levels of interactions. The city...is viewed as an active shape bounded by passive space." Moving within the three-dimensional mass of the city, active, positive spaces interact with negative, passive space... Through the use of geometry and mathematics, a vital positive space carves a hierarchy of negative, geometric volumes..."²⁷

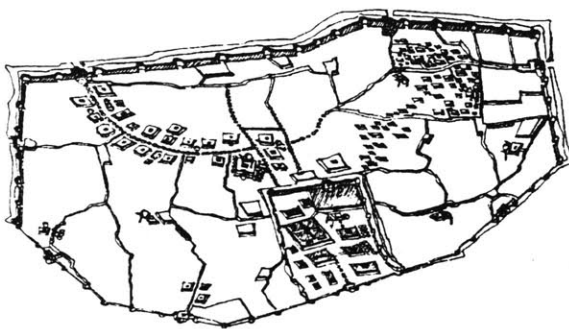


fig. 40 The positive form of the city is exhibited in a schematic bird's-eye view of the city of Teran as it was in the year 1850.²⁴



fig. 41 Positive interior space,
Malik caravanserai, Isfahan

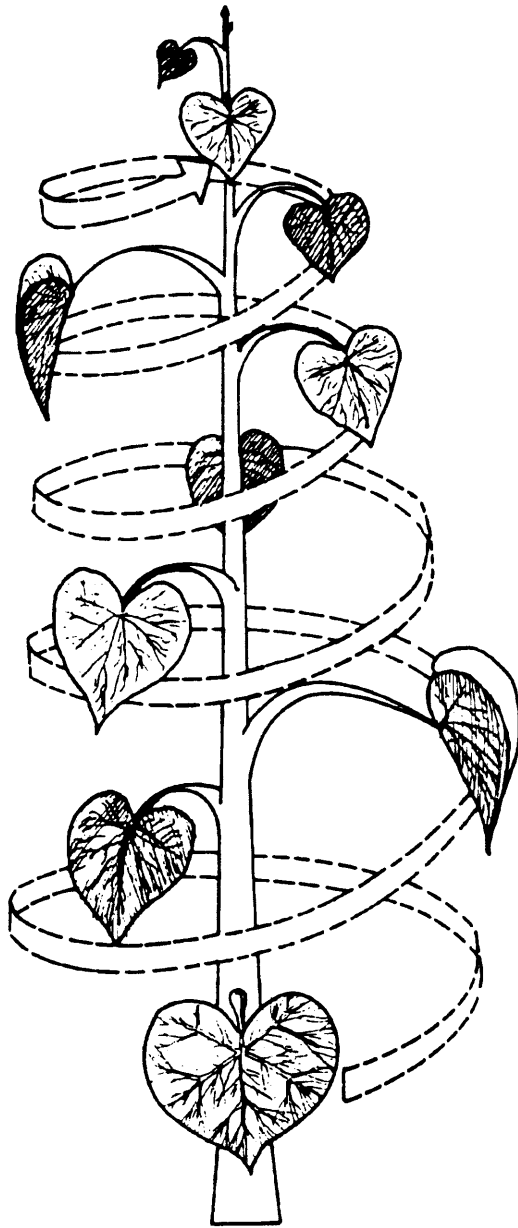
Shape

"Shape results from the delimitation of structured space. Numbers are the units of this spatial definition, and geometry expresses the personality of these numbers. Numbers and geometry, as mathematical expressions, used in the creation of shapes, are abstractions from the intelligible world and serve as a basic guide to the eternal and concrete essences that reside in the Divine Order."²⁸ Understanding the processes of nature offers a construct to emulate and an order to mirror in the creative act.

Leaves and their Growth

*The growth of new leaves from the stem of a plant occurs in sequences that describe the spiral. The amount of turning from one leaf to the next is a fraction of a complete rotation around the stem this fraction is always one of the Fibonacci fractions. Nature spaces leaves in this manner to avoid higher leaves shading the lower ones from the nourishing rays of the sun. In the example shown, there are five complete turns, with eight spaces between leaves 1 to 9, so that the ratio of the spiral is 5 : 8.*²⁹

Squaring the circle



Traditional architecture can be seen as a development of the fundamental theme of the transformation of the circle through the triangle into the square. The square, the most externalized form of creation, represents the earth, the polar condition of quantity, whereas the circle, as heaven, represents quality ; the integration of the two is through the triangle, which embodies both aspects. The square of the earth is the base upon which the Intellect acts in order to re integrate the earthly into the circle of heaven. Reversing the analogy, the square, as the symbol of the manifestation of the last of the created worlds, reverts to the first; thus the heavenly Jerusalem is seen as a square in its qualities of permanence an immutability, and the circle is seen as earthly Paradise. The end of the world is seen symbolically as the "squaring of the circle" -the time when heaven manifests itself as a square, and the cosmic rhythm, integrating itself into this square ceases to move. ³⁰

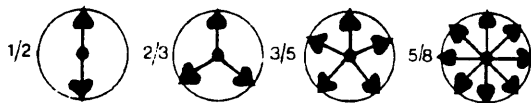


fig. 42 Plan of plant growth

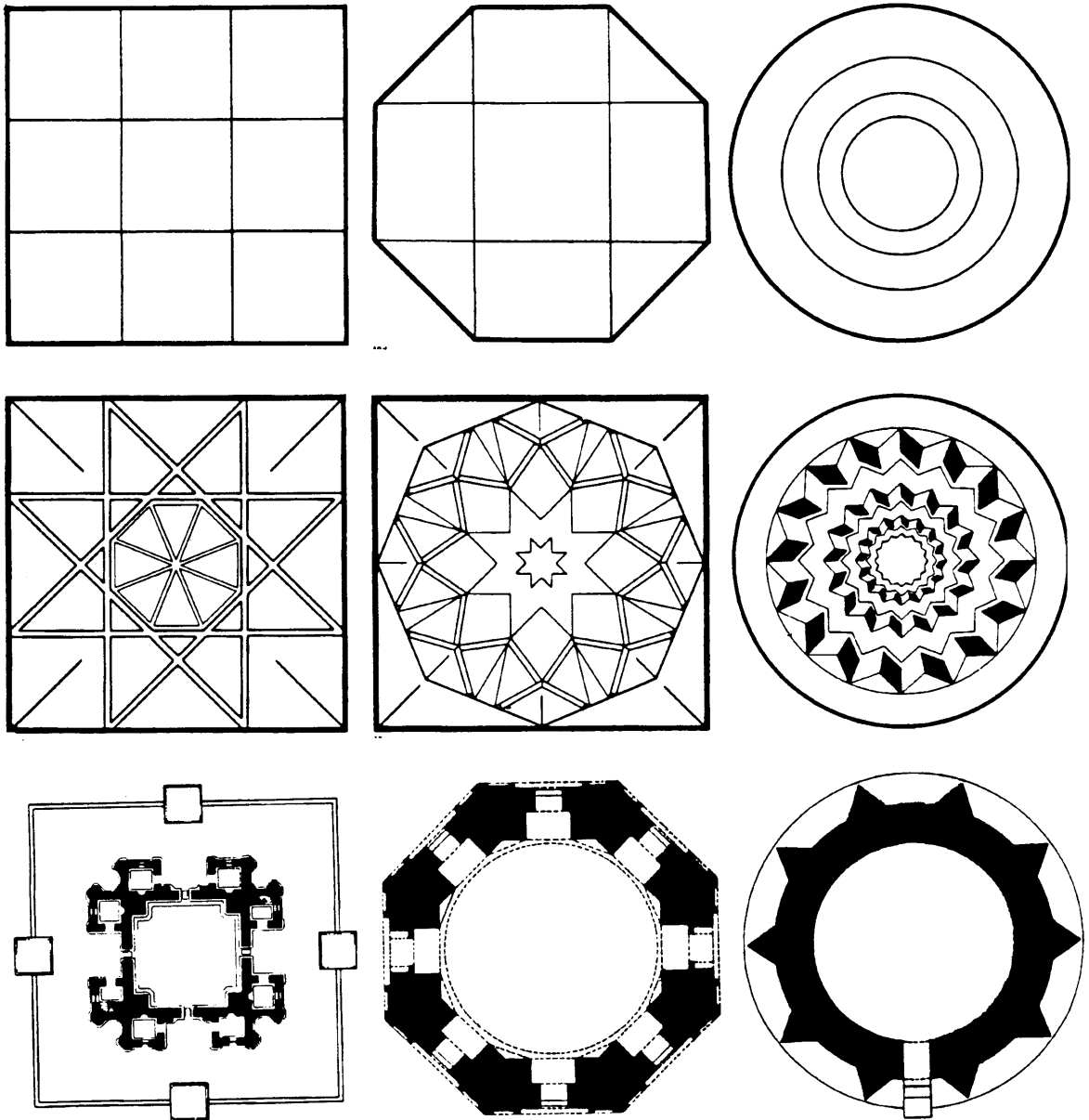


fig. 43 **Mandalas**

1. Diagram of a nine-square mandala
2. Masjid-i-Jami, Isfahan, vault no. 185
3. Mausoleum of Khwaha Rabi, Mashhad, plan
4. Diagram of an octagonal mandala, a transitional phase
5. Masjid-i-Jami, Isfahan, vault no. 62
6. Jabal-i-Sang, near Kerman, plan
7. Diagram of concentric circular mandala
8. Turbat-i-Shaykh-i-Jam, geometrical rosette
9. Gunbad-i-Qabus, plan

Surface

Physically, surfaces delimit shape and crystallize earthly cosmic spaces. Intellectually, they may, through the development of their transcendent qualities, guide the soul to higher planes of realization that lie beyond the created places of man. Through the inherent richness of the materials themselves, through surface configuration and adornment, or through the combined effect of these two, the transcendent qualities of surface can evolve.³¹

The concept of floor

The horizontal dimension of floor symbolizes the earth upon which the microcosm stands.³²

The concept of wall

"The wall symbolizes the transcending third dimension of space where the vertical direction corresponds to the ontological axis. synonymous with man himself, the wall becomes the locus of the soul of a defined space."³³

Roof

The roof is a recapitulation of the heavenly vault, the locus of the Spirit and the point whence the ascending arc of realization reaches its zenith and the descending arc begins its course towards the *mulk*.³⁴

The mandala, or cosmogram, is the most significant expression of the interaction of the circle and the square in traditional art, and has been represented in many forms throughout the cultures of man: as the reflection of the cosmos and the cosmic processes within all things.

Geometric Patterns

The concept of geometric patterns is based on the number 1 and its generation in the world, where geometric shapes and patterns abound. These shapes, as the personality of numbers, are understood by traditional man as aspects of the multiplicity of the Creator. The concepts relates to the cosmic processes characterized by extension in all directions, by boundlessness and by infinite divisibility.³⁵

Matter

Matter in the traditional view is the passive complement of the Intellect and, without the Act or Word, would not possess any existence at all.³⁶ According to the scheme given by Ibn `Arabi, matter possesses five meanings, which in descending order are spiritual matter, intelligence, soul, celestial matter, and corporal matter.³⁷ Corporal matter corresponds to the matter of the sublunar regions and is revealed in the sublunar worlds symbolized by fire, air, water and earth, the four fundamental conditions of matter, which is manifest in every body (*jism*).

Fire

The qualities of fire, in the form of heat and fire, are significant to architecture in its capacity to bring things into harmony through its ability to mature, rarefy, redefine and intermingle. Many cosmologies have been developed in which the sun symbolizes the deity and its illumination, the means whereby all things in creation are brought into existence.

Air

Air is the vehicle of light. Its effect is to render things lighter, to rarefy, to make sort, giving matter the ability to rise.

Water

Water is symbolic of the giving of life and of the descent of the revelation. In Islam, the Muslim is re integrated into his primordial state through ablution. Especially in the arid climate, water plays a vital role in attracting life and people and acts as a magnet polarizing space. Linear patterns of settlements follow the paths of the water. In the courtyard, the dependent spaces focus on a central pool reflecting the sky.

Earth

The earth, cold and dry, dense, passive and heavy, is the focus where the descending and the ascending orders meet is symbolized in geometry by the cube and in nature by the cosmic mountain.³⁸

"The mountain symbol, an ancient form found on the Iranian plateau, crystallizes man's view of the world and the element 'earth' as the locus of the generation of life. In the Islamic perspective all four elements and their combination form the three kingdoms, (metal and mineral, animal, and plant) which are manifested on earth and which, together with the hierarchy of creatures, are symbolized by the cosmic mountain, Mount Qaf. ³⁹ The cosmic mountain surrounds all of the earth and in it lies the Fountain of Life. Within this mountain also lie hidden all the 'treasures' protected by the dragon; gold and other precious minerals lie deep in the mountain, symbolizing the 'hidden gold' which lies buried within the breast of man, while the dragon symbolizes the carnal soul (nafs al-ammarah) which must be slain in order for the treasure to be reached. Acknowledging man's reverence for the hidden qualities of earth itself are the daily prayers in which man's forehead touches the earth."⁴⁰

The Archetypes
Paradigmatic Forms

| Archetype | Form | Style |
|---|--|---|
| 1. The Recapitulation of Paradise | Garden (<i>Bāgh</i>) Courtyard (<i>Ḥayāṭ</i>) | Bāgh-i-Fīn Madrasah-yi-Nīmāwar |
| 2. Sacred Mountain | Socle (<i>Takht</i>) | Takht-i-Jamshīd (Persepolis) |
| 3. Transition—the Way | (<i>Īvān</i>) Porch (<i>Tālār</i>) | Masjid-i-Jāmi ^c , Chilīl Sutūn Sanctuary Portal |
| 4. Hierarchic Demarcation (of time and space) | Gateway (<i>Darvāzah</i>) | ‘Ālī Qāpū |
| 5. Multiplicity | Room (<i>Ṭāq</i>) | Madrasah-yi-Nīmāwar |
| 6. Unity | Sphere Dome (<i>Gunbad</i>) | Masjid-i-Jāmi ^c , North Dome Chamber |
| 7. Reintegration | <i>Chahār Ṭāq</i> | Sasanian <i>Chahār Ṭāq</i> Masjid-i-Shāh main sanctuary chamber |
| 8. Ontological Axis | Column (<i>Mīl</i>) Minaret | Manār-i-‘Alī |

fig. 44 The archetypes of traditional Islamic architecture

The Garden

The garden is viewed as a defined space encompassing within itself a total reflection of the cosmos, a concept fostering order and harmony, revealed to the senses through numbers, geometry, color and matter. At the same time it reflects for the intellect the essence, the hidden dimension latent in positive space. ⁴¹

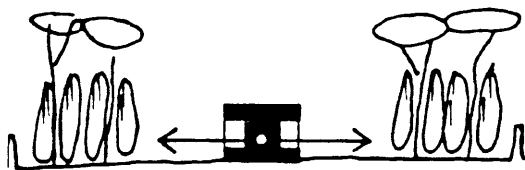
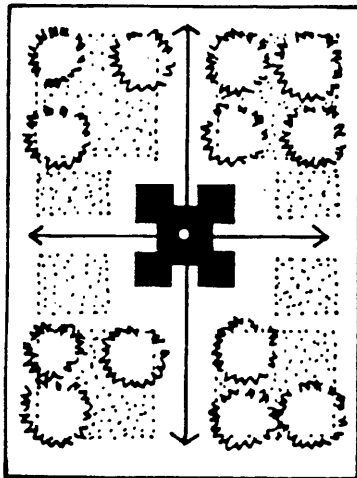


fig. 45 The Concept of Garden Macrocosm (manifest)

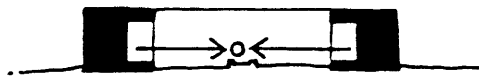
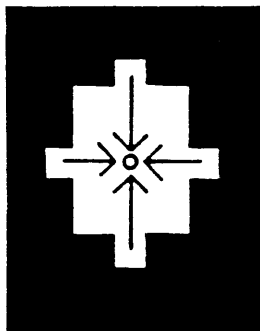


fig. 46 The Concept of Garden Microcosm (hidden)

The Safavid Hasht Bihisht, or garden of the Eight Paradises, quite literally recreates a dynamic paradise not only in its overall plan but in the very concept of its central pavilion. Here the attributes of the mandala are fully expounded, providing both a centrifugal movement outward into the paradise of nature and a centripetal motion inward, through its four porches, to the basin of water and the fountain, its spiritual center. Generating ripples of ever-expanding diameters, the effusion of the fountain recommences the cycle of conscious expansion and contraction. Parallel examples abound, each exhibiting a subtle development of the theme of man's ultimate reintegration with the source through his encounter with nature.

The open garden, however powerful its symbolism, is a supreme luxury that few can afford within the urbanized context. The idea of the courtyard paralleled that of the open garden plan... The courtyard plan, which generates a centripetal force, is a more feasible urban form, capable of providing that basic contact with nature..."⁴²

Socle

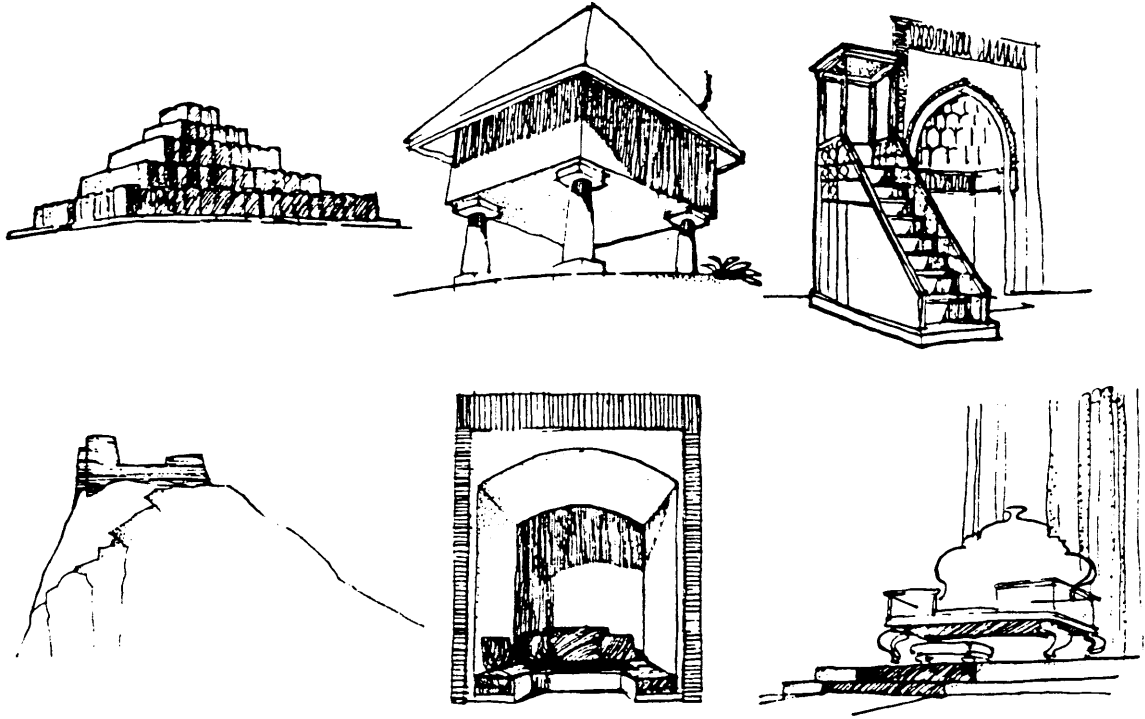


fig. 47 The Concept of Socle

The socle recreates the idea of a revered and elevated temporal place that, in its architectonic sense, manifests "mountain."

Porch

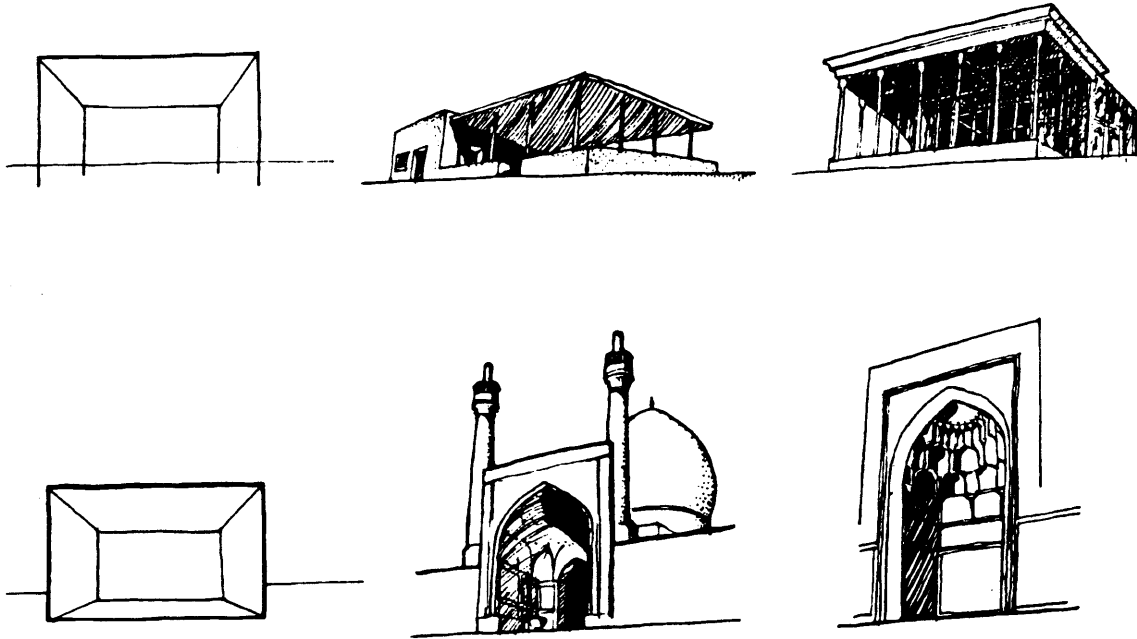


fig. 48 The Concept of Porch

The concept of porch as transition and of iwan, in particular, as niche has had profound implications throughout Islamic history. The iwan is the "way" or transitional space between the temporal and terrestrial worlds. Metaphysically the iwan can be viewed as the locus of the soul moving between the garden or court, taken as spirit, and the room, seen as body. ⁴³

The Concept of Gateway

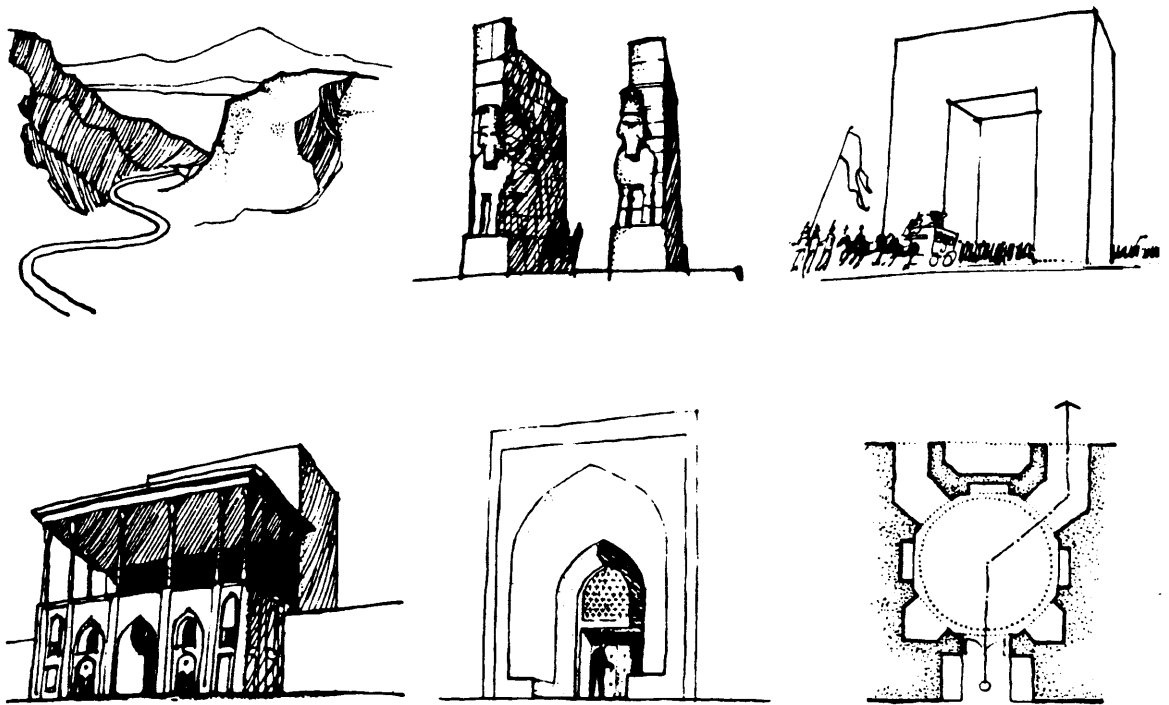


fig. 49 The Concept of Gateway

"The traditional expression bab, when referring either to architecture or literature indicates a movement through defined space that occurs over a certain length of time. A gateway of a city and a chapter of a book are both known as bab, being either the beginning or the end of a journey... The doorway is clearly viewed as a symbolic gesture, for, had it been purely a practical necessity, it would have never developed such elegance of form and design." ⁴⁴

The concept of Room

"The room is delimited by the six surfaces of the primary coordinate system. In relation to the cosmogram of the mandala, a room may be considered as one of the peripheral square through which a centripetal or centrifugal movement with regard to the center may occur. Within the hierarchy of spatial linkages, the room is, therefore, a space dependent on a primary space for its light, ventilation, and view, and dependent esoterically for the means by which its soul may seek expression... Viewed symbolically, the room depicts the 'cube of man'. (A) carved, niched volume manifests the energy of expansive positive space... The floor, as the earth, becomes a socle, providing a base upon which man and the microcosm stand; the walls become convoluted and concave, extending the imagination into the transcendent vertical dimension beyond the apparent limits of the room; while the roof encompasses this outward journey and returns the ascending arc or realization toward the temporal world again...(The 'cube of man'" is related to the family unit. Just as family life, with its concentric circles of privacy, its withdrawn form public view, so the courtyard house closes itself from the outside world, preserving the sanctity of the inner circle." 45

Minaret

"The incorporation of the minaret into the Islamic tradition is...both a continuation and conceptual expression of an ancient symbol. Archotypically, it reflects man's ontological axis... Externally, it represents man, a defined form who alone among the creatures stands upright in the universe; internally, it recalls the soul of man yearning to return to its primordial place of origin." 46

Dome

*"Behold yon azure dome, the sapphire sky,
Rear in unpillar'd might its canopy!
That vast pavilion gemm'd with world of light
Whose circling glories boast a boundless flight."*

Sa'di, trans. A.J.
Arberry, *Persian Poems*,
p. 129.

"Throughout history, traditional civilizations have thought of the tent, house, tomb or sanctuary as a symbol of the universe... Consequently, the terms 'cosmic tent,' 'majestic parasol,' 'cosmic egg,' and 'heavenly bowl,' to give but a few, preserve an ancient memory and convey something of the ancestral beliefs and esoteric meanings associated with the dome. Within Islamic culture, the dome (gunbad) maintains its ancient imagery while providing a vivid manifestation of fundamental Islamic cosmogony. By means of symbolic transfer, the Islamic attributes of center, circle, and sphere inherent in the dome are fully realized... the Spirit, which at once surrounds and pervades all being, much as a dome encompasses its enclosed space, and the vault of the sky embraces all creation. The passage from the vault apex, symbolizing Unity, is viewed as being downward and expansive, or upward and contractive, toward Unity."⁴⁷

Chahar Taq

"The place of worship of the sacred fire, the chahar taq,... remains today as the most powerful integration of traditional forms and symbols put together by man. In shape, it is a dome resting on a square of four arches. In plan, it is a mandala. Its best antique remains are to be found in the Sasanian cult temples, in the center of which burned the symbolic fire; or in the royal throne chambers such as the Takht-i-Taqdis; and perhaps, best of all, in the analogous chahar bagh plans of the Sasanian paradise parks. In all three examples the common element is the idea of mandala as cosmogram.

As a traditional concept of great profundity, the chahar taq was incorporated into the world of Islamic forms where it reassumed its former preeminence. Viewed through Islamic esotericism, it becomes and remains today the architectural manifestation of reintegration and of creation itself. In its forms, it embodies the most basic resolution of the square and the circle.

The cubical volume of the base, viewed as man, earth, or the earthly paradise is the supreme symbol of immobility and the most externalized manifestation of the Creator. By its four pillars it evokes the four elements, the four directions, the four winds, the four seasons, and the four colors. In short, it presents to the imagination those basic and, apparently, most stable aspects of temporal life.

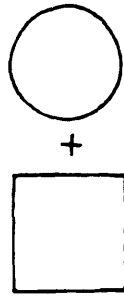
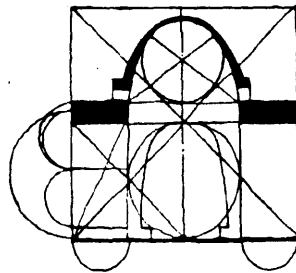
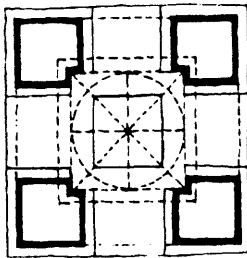


fig. 50 The Concept of Chahar Taq

*Superimposed upon this rectangular space is the circular or spherical dome, representing the world of pure quality. Symbolizing the lightness and total mobility of the spirit, it is a form that has no beginning and no end. Its sole point of reference is the center, through which develops the metaphysical axis that links it with the axis of the square resting below it. This Vertical Cause unites the two forms qualitatively, and the transformation of the circle into the square represents a quantitative unification... Here then, within the primordial forms of the circle and the square traditional man finds his spatial locus. The chahar taq shelters his place of spiritual birth, life and death."*⁴⁸



Magnitudes of Order

"Man, the city, and the cosmos are viewed as each being composed of three parts, namely the body, the soul, and the spirit."⁴⁹ The city emulates man's anatomical nature or the zodiac. In macro and microcosmic concepts, man is body, the cosmos is spirit, and the city is soul and acts as a vehicle to metaphysical awareness, as in art objects. (see fig. 37) "The four elements correspond to the four parts of the body and the four gates of the city... The perfect city might have twelve gates corresponding to the twelve months of the year."⁵⁰

In Islamic principles to express unity, there "are three fundamental ways by which man shapes his environment.

- Natural order is developed by those closest to nature: the nomad and the villager.
- Geometric order relates to the system of man's most ancient cities as a unity within unity.
- Harmonic order creates multiplicity within unity, geometric shapes linked in natural patterns within the framework of a super conscious geometry."⁵¹

Man exists most wholesomely within a physical environment that is analogous to him. The city then emulates the human anatomy which, by inverse analogy, relates to the cosmos. Traditionally, the city begins at the palace precincts as the spiritual head of the body, then grows in cellular growth

towards the symbolic heart, the Masjid-i-Jami, forming the vital backbone of the body. The growth continues to the city gate. Feeding into the backbone, the pedestrian streets are like ribs. The vital organs are placed in proximity to each other: the bath houses, the schools, the caravanserais, the granaries, the bakeries, water cisterns, tea houses, and the stores of merchants and of craftsmen. The linear bazaar defines the primary movement system; the residential paths, like veins feeding the tissue, compose the secondary movement system. The tertiary movement system of the traditional city is the water network or channels and below grade systems, feeding water cisterns, bath houses, larger gardens and points of intersection at significant points of encounter.

The city is a three-dimensional mass, which positive spaces carves out a hierarchy of negative geometric volumes through which man moves. It is primarily an interior architecture that preserves the city and is inseparable from the city fabric. External shapes, such as the minaret, exist as landmarks bearing witness to significant internal spaces. Consequently, the created act is less concerned with objects in time than with the rhythmic continuity of space itself and the synthesis of space and time. Only through rhythm is one able to escape the prison of time.

Nature is in continual repetition, and in its repetition is where eternity lies. Individual forms coalesce in totalities, those

that are vital and varied yet relate in rhythm. Cities and building, analogous to the forms of nature, appear complete and beautiful at every stage of growth. As vital forms, they have within them the heritage of the past and the seeds of their potential future. The city's coherence is based on a faith in permanence within change, the hidden within the manifest, and above all, a profound unity within multiplicity.⁵² Man and nature are thus permitted to move unimpeded through temporal paradise whose timeless quality is similar to that pervading the sites of great ruins where birds have nested, wind has carved passages through walls, and the rhythms of nature have once again assumed command.

¹⁹ Nader Ardalan, *The Sense of Unity*, (Chicago, 1973), pp. 3-10.

²⁰ Ibid.

²¹ Muhsin S. Mahdi, *Architecture and Community* (Millerton, 1983.) pp. 21-24.

²² Nader Ardalan, *The Sense of Unity*, (Chicago, 1973), p.7.

²³ Ibid.

²⁴ Ibid. p. 11.

²⁵ Ibid. p. 12.

²⁴ Ibid, p. 16.

²⁶ Ibid.

²⁷ Ibid. p. 12.

²⁸ Ibid. p. 21

²⁹ Ibid. p. 24.

³⁰ Ibid. p. 29.

³¹ Ibid. p. 33.

³² Ibid. p. 35.

³³ Ibid. p. 37.

³⁴ Ibid. p. 37.

³⁵ Ibid. p. 40.

³⁶ Ibid. p. 57.

³⁷ From Corbin, *Ibn Arabi*, p.299.

³⁸Nader Ardalan, *The Sense of Unity*, pp. 58-60.

³⁹The cosmic mountain, Mount Qaf, along with the Divine Throne [*`arsh*], the Divine pedestal [*kursi*], and the cosmic tree [*Tuba*], are all important elements of Islamic cosmology. See Nasr, *Cosmological Doctrines*..

⁴⁰ Nader Ardalan, *The Sense of Unity*, p. 60.

⁴¹ Ibid. p. 68.

⁴² Ibid. p. 69.

⁴³ Ibid. p. 71.

⁴⁴ Ibid.

⁴⁵ Ibid. p. 73.

⁴⁶ Ibid.

⁴⁷ Ibid. p. 74.

⁴⁸ Ibid. p. 75.

⁴⁹ Ibid. p. 79.

⁵⁰ Guenon, *Symboles fondamentaux*, p. 123.

⁵¹ Nader Ardalan, *The Sense of Unity*, p.

79.

⁵²Ibid. p. 126.

Chapter IV. Contemporary Samarkand

Far from the concepts that generated its archetypal forms, contemporary Samarkand is a collage of juxtaposed city fabrics poorly integrated in style and scale. The unresolved dialectic between the positive space/passive matter of the Timurid city and the positive object/passive space of the Soviet city must now be addressed, now that the USSR is dissolved and Uzbekistan stands autonomous. The one hundred and twenty years of Russian and Soviet presence and cultural influence has, for the time being, come to a close, and can now be recorded as another chapter of turbulence in the history of Samarkand.

The emerging cultural identity of Samarkand will consist of some hybrid mix of the Soviet and Uzbek and many other diverse cultures comprising Samarkand's population. 69% of the city's population of roughly 390,000 (1989) is Uzbek, the Russian component comprises 11%, the Tantras, Kazakhs and Tajiks, each 4%, the Kara-Kalpaks, 2%, and the Korlans comprise the remaining 1%. In the past 20 years, the population of the city has increased by 110,000.

City planning reveals the political balance of power of recent history. The citadel and its palace was razed in the last century shortly after the Russian Imperial army occupied Samarkand in the 1870's. The site was converted into army barracks, a training camp and

a hospital. Later the Soviet Administrative Complex was to occupy the site symbolic of the seat of power.

Broad avenues with long vistas cut through the fabric of the traditional courtyard housing, and disrupted the spatial order of the city. Like a receding hair line, the mohallas retreated from the principal avenues along which Soviet bloc style housing and administrative buildings currently occupy the cleared, open spaces. During the early colonial years, the Timurid city and the Russian city were two completely separate entities. Integration between the two has remained minimal, even though the disparate city fabrics have crossed each other more over time. The mix has achieved no architectural integration. The attempt to reconcile the two and create a new harmonious whole without destroying one or the other is a modern intent that recognizes Samarkand's ability over time to absorb foreign influence into its own discrete identity. The revitalization of Samarkand should strive towards this end.



fig. 51 A view looking East, with the Registan Square on the left and Soviet bloc housing in the foreground.



fig. 53 The Soviet Administrative Complex in the foreground, the Timurid city is behind.

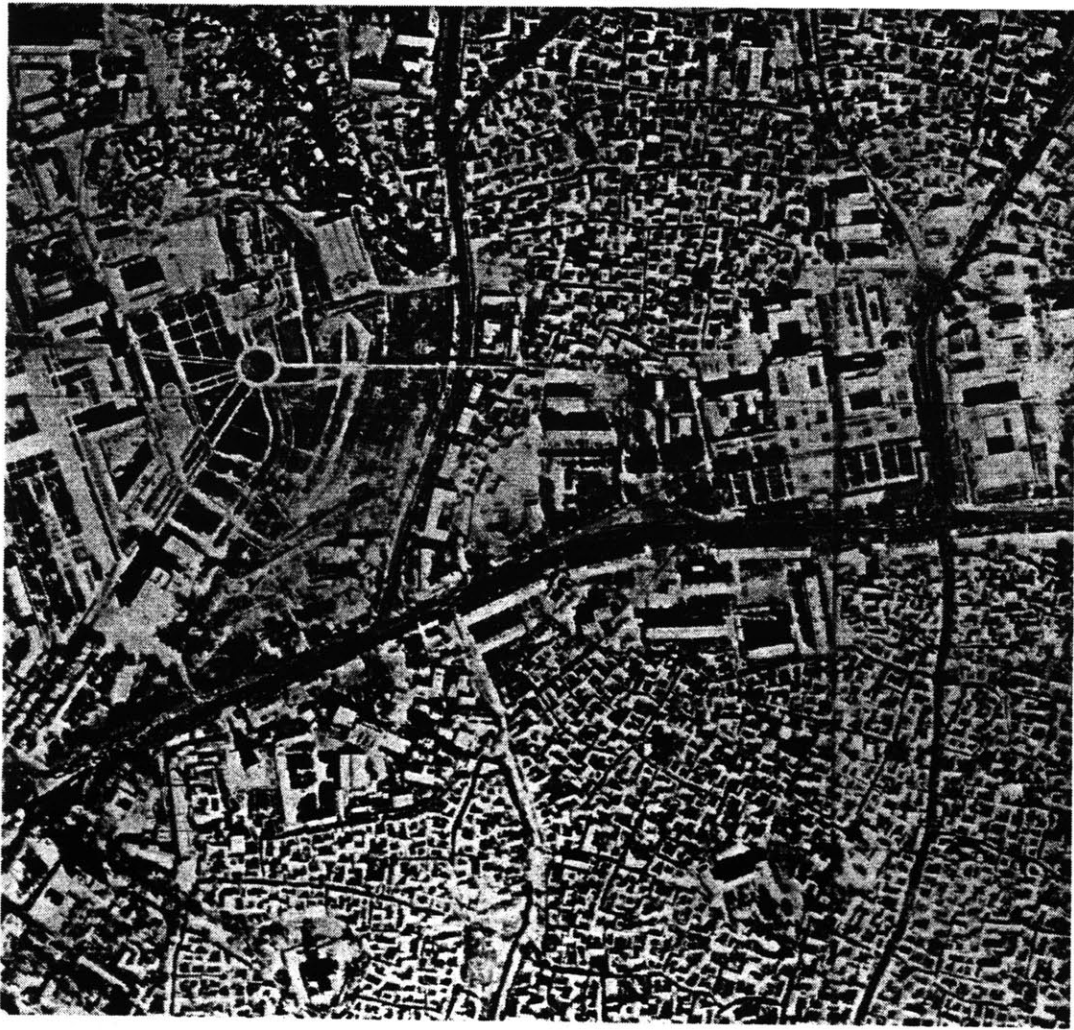


fig. 52 An aerial photograph of the urban fabrics composing Samarkand's center.

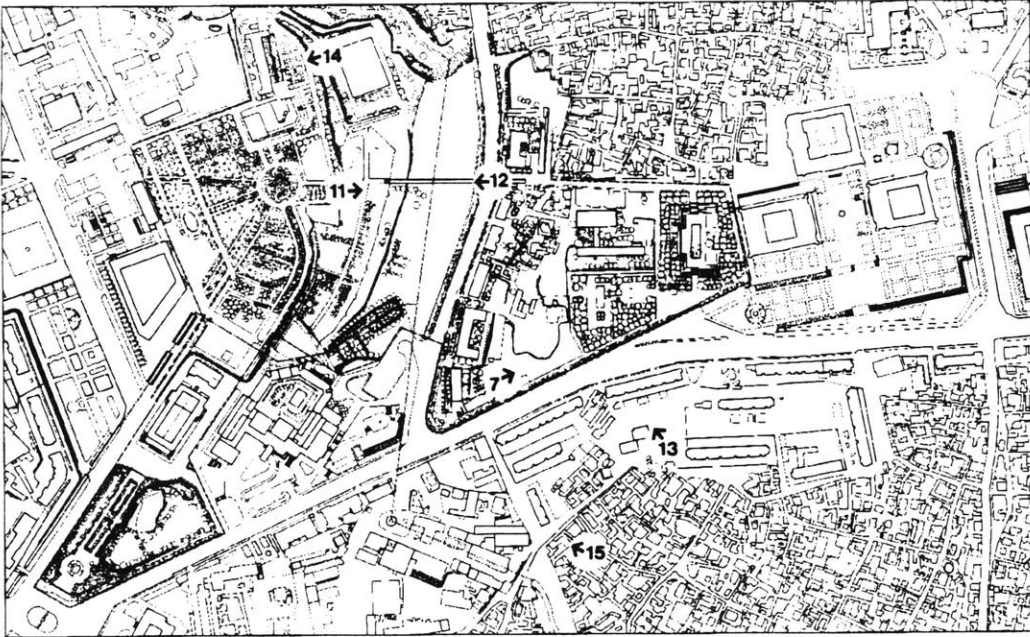


fig. 54 A plan of the city center includes the Administrative complex on the left and the Registan Complex, with the Tschar-Su round pavilion on the right.



fig. 55 A view of the Registan Square in the foreground and Tschar-Su. The Soviet administrative tower is in the background to the right.

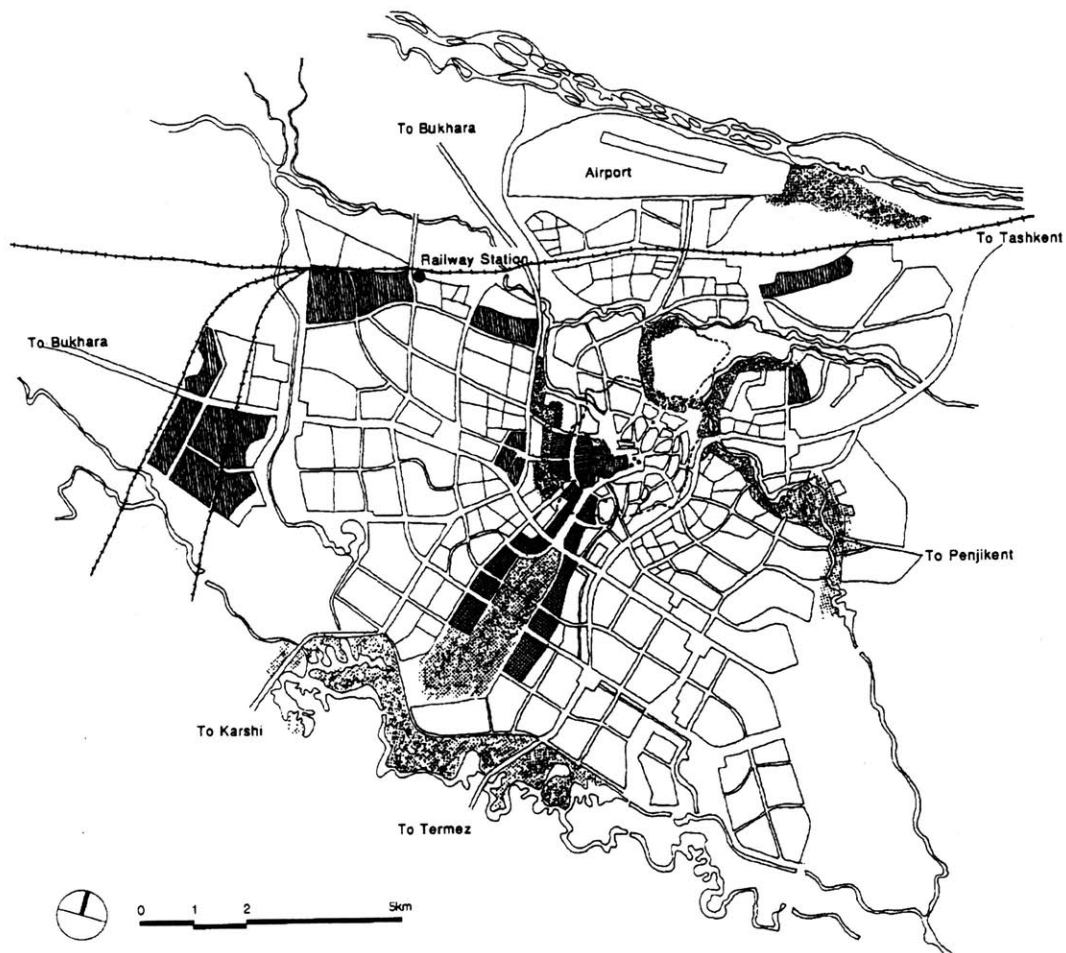


fig. 56 City zoning from the 1981 Master Plan. Areas shaded with vertical line denote areas zoned for industrial use. The horizontal lines near the center denote a zone for administrative use. The remaining areas shaded with points are zoned as green space.

"The planning of contemporary Samarkand has had its own pitfalls. According to the architect Kadirova the new public buildings are eclectic in style, are disjointed and have ruined the vistas that had opened towards the Registan. The new public housing schemes have not considered the cultural, climatic and regional aspects of

Uzbekistan. For instance, the multistoried residential apartments have not taken into account the three essential spaces that are required in a Central Asian house. Every Uzbek and Tajik family has a winter kitchen and a summer outdoor kitchen that has a "tandoor" (clay oven). The winter rooms, the summer courtyard and the intermediate iwan with pillars form the core of the Central Asian house and none of this is easy to provide in apartments. A similar disregard has been shown towards public areas like the "chaikhana", shashlyk eating places and the mohalla centers.⁵³

There is the issue of the reconciliation of the two scales: the gridlike roads for automobiles and the organic pattern of old Islamic cities. Either a new road destroys the cohesion of a quarter or the absence of a road threatens the viability of the quarter.

The Town Fabric

Samarkand, like most towns of Central Asia before the Russian period, had been divided into a number of independent self-administered units known as mohallas. These consisted of a cluster of houses belonging to people of a particular class or occupation such as the metal casters, wool beaters, bakers, etc. Other mohallas were occupied by nationalities such as the Iranians, Indians and others. The organizational center of each mohalla was the mohalla mosque and the periphery of the mohalla was

enclosed by an internal windowless wall with an entrance gate that was locked at night for safety.

The climatic variation between the long hot summers and the short but severely cold winters determined the elements of traditional domestic architecture. There are three distinct spaces in the mohalla buildings which can be traced even to the larger community complexes. The first of these is the inner winter rooms protected by the outer rooms and galleries. The second element is the internal courtyard with a fruit tree or grape vine, and the third element is the pillared gallery or iwan which faces one side of the courtyard and whose area generally exceeds that of the winter rooms. It is in the iwan that most people spend their summer days.



fig. 57 A typical mohalla courtyard

The housing in contemporary Samarkand which occupies the area of the pre-modern urban settlement maintains the mediaeval courtyard morphology. The traditional building materials consisting mostly of mud and timber are being replaced in many mohallas in the course of improvement and expansion by brick and concrete. However the single and part double story design of the housing in these parts is still preserved. The Russian part that lies to the south-west of the old town is also low in density. However, these buildings, built as apartment blocks in the 19th and early 20th century, have been laid out along wide tree-lined avenues. Apart from the residential buildings, the Russians had also built many institutional buildings along these avenues that are being used as offices, shops and research and cultural institutes. The layout of this portion of Samarkand dates back to the 1890's. The third type of fabric that composes contemporary Samarkand has been created by Soviet planners in the last four decades. This fabric was laid out in a series of master plans that were updated over the years and has given Samarkand many high-rise buildings. Apart from hotels and the administrative center built on the site of Timur's citadel, the periphery of the town has a number of high-rise housing complexes occupied by families who have been dispersed by the changes being implemented under the master plan. Planning for easier vehicular movement as

well as the growing industrialization of the city over the years, has given Samarkand a complex intermixed fabric in which the pre-modern and modern elements have been juxtaposed.

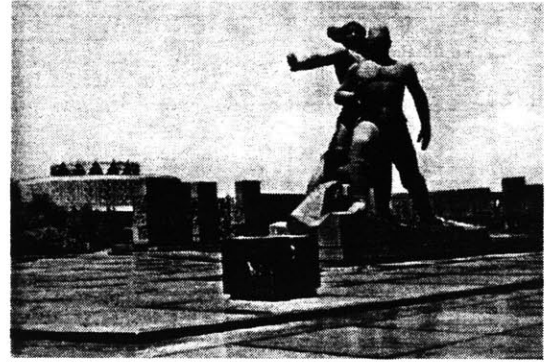


fig. 58 The Soviet ideal, Tashkent

The simple contrast between the monumental buildings and the vernacular architecture of the housings which was clearly apparent in Timur's time, has now evolved as a complex urban mix of traditional and contemporary forms and functions. The pre-modern bazaar street with a concentrated location for the market place has now been displaced by vehicular through-roads and scattered market and shopping places. The urban fabric of the town has been undergoing constant changes. The Registan square exemplifies the process of these changes. Today, it stands as a museum piece consisting of three major reconstructed monuments. But over the years, this space and its buildings have been used as a market place, an open mosque, a caravanserai and a khanaqah, and much later as an urban space surrounded by three madrasas...,⁵⁴

"The pre-modern city of Samarkand has been the subject of a number of plans that have aimed at giving a formal direction to its expansion and modernization. The basic approach of the Soviet town planners has been to consider the modern and the pre-modern settlements as one unit and to find ways of integrating the two. The planning of green avenues passing through the town has been one way to attempt this integration. The Russian planners, in the last century, had located their extension of the city along the curved avenues towards the west of the old town to encircle the site of the citadel. At that time, the clearing of the remains of Timur's citadel and the location of the military camp on the site had provided the only meeting point between the old pre-modern Timurid settlement and the new Russian colonial settlement.

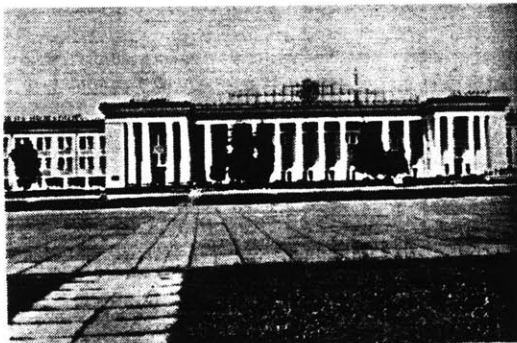


fig. 59 An example of Russian colonial architecture

Subsequently the political and administrative center was built during the Soviet period on that very crucial meeting point where the military camp was once located.

In all of the city are the remnants of fortification - walls eighteen feet high with little penetration, some windows, but with the accent laid on the continuity of walls of different colors, materials, and ages. The entries in these walls indicate the location of hidden surprises of life, which are veiled from the city arteries and the public. The entries in the walls are highlighted by colors, decorative elements and changes in size. The generous doorways frame pictures of the gardens. The garden, an integral piece in the architecture, helps to define the entry. The new quarters lack the blending of interior and exterior space into an integral whole, as in the courtyards, where the interior and exterior spaces dissolve one into the other."⁵⁵

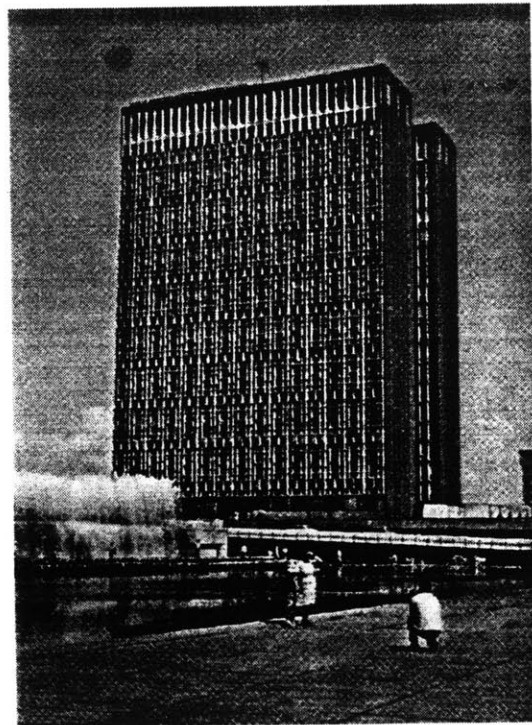


fig. 60 Soviet tower in Tashkent

The extroversion of Soviet buildings eliminated the outer walls and gateways that contained the tissue of the city in an urban scale order. In terms of the religious and symbolic, the wall represented a physical demarcation between the profanity of the street and the sanctity of mosque. The wall further provided order to the labyrinthine character to the mohalla by stating a delimitation of the urban fabric's edge. Beyond that formal delimitation defining the limits of the mohalla, walls provided the means of integration between the internal and external space of the courtyard.

To achieve a synthesis of the traditional, pre-modern and modern architecture of Samarkand, there must be an interplay between the positive object characteristic of recent building and the positive space characteristic of the traditional mohalla. Because the Ulugh Beg Cultural Center is intended to act as the focus of the city and an important catalyst for the emerging cultural identity of Samarkand's inhabitants in the 21st century, it should demonstrate an positive attitude towards the integration of the Russian/Soviet city and the traditional city by offering examples or methods for the gradual assimilation of the modern landscape. Furthermore, the Ulugh Beg Cultural Center is to integrate the complex of contemporary buildings in the midst of a historical city, specifically, the Registan square, and should resonate harmoniously with the Registan

Square without resorting to the repetition of antiquated forms. Finally, the modern presence should respect the monuments of the past, but nevertheless not be afraid to challenge the them with a bold, contemporary response.

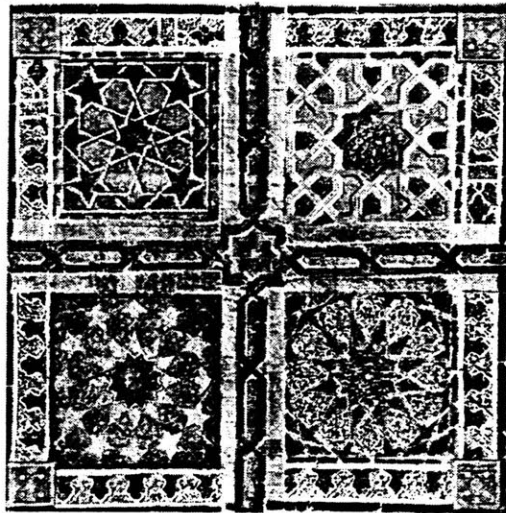
⁵³ The Aga Khan Trust for Culture, "History of Samarkand and Site Information," *The Revitalization of Samarakand*, (Geneva, 1990), p. 8.

⁵⁴ The Aga Khan Trust for Culture, "History of Samarkand and Site Information," *The Revitalization of Samarakand*, (Geneva, 1990), pp. 8-11.

⁵⁵ *Ibid.*, pp. 12-16.

Part II

The Physical Manifestation of Culture, Symbol, and Time



Mosaic Design (by author)

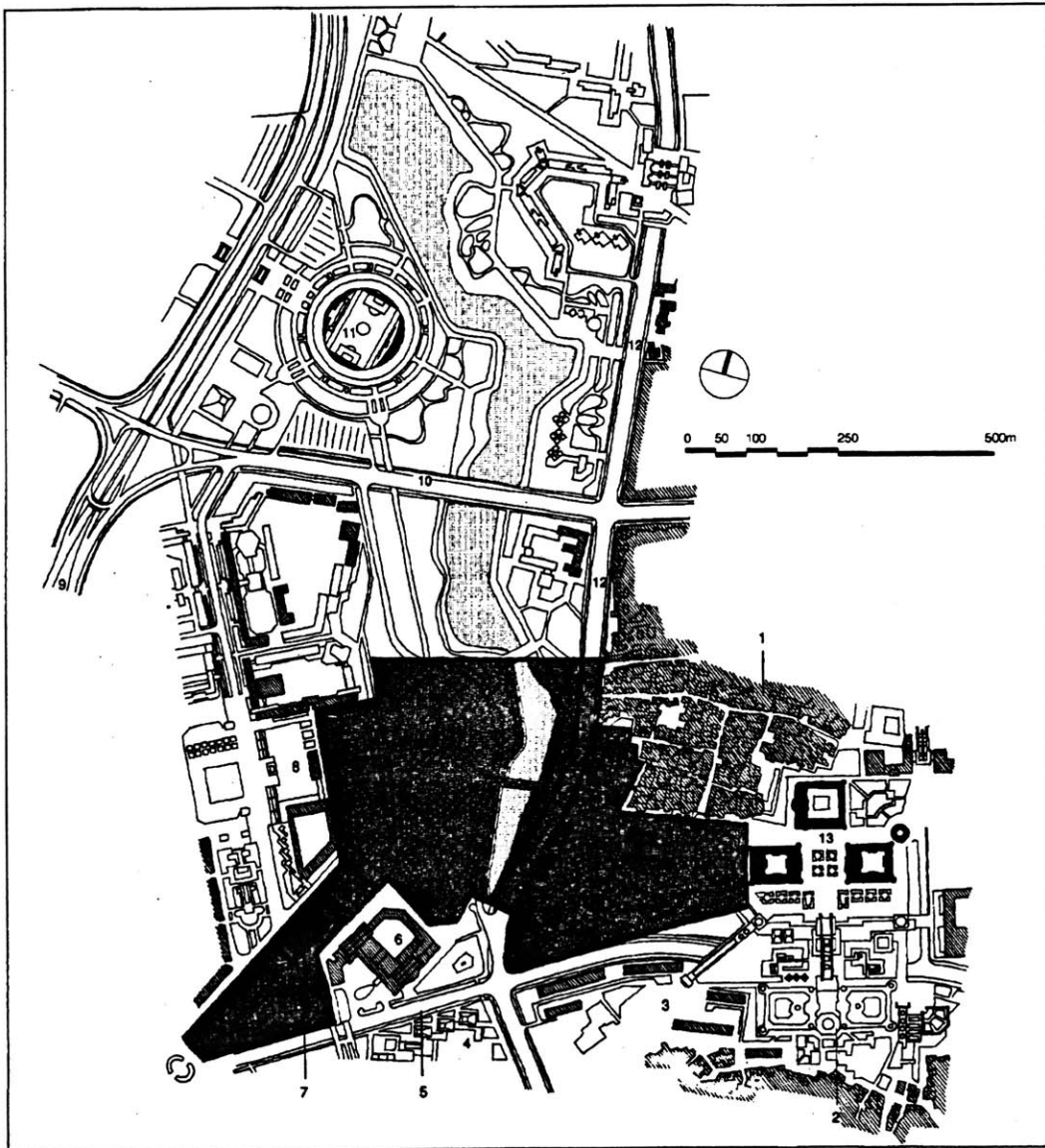


fig. 61 The Revitalization Competition Site marked on the 1981 Master Plan

Chapter V. The Revitalized City

*The sound of the word Samarkand is itself an evocation of beauty. Who has not heard of your fame and glory? Who has not dreamt of your beautiful tomb of Timur and Bibi Khanum's mosque? Your immortal glory lives on through the spirit of Shah-i-Zinda. Every stone and every turquoise tile have their own tale to tell of Registan, that eternal lamp. The golden Zarafshan whispers its secrets of the memories of the great Ullugh Beg. His footsteps echo down the streets, and he lives on. Oh my Samarkand, your beauty and your glory reign in every lane, in every tree, in every stone, now as before. Your men still have the golden hands of master builders and still possess the vision of the great men of Samarkand.*⁵⁶

The first concept employed in revitalizing Samarkand is the concept of unity. The most fundamental question facing contemporary Samarkand is how to unify the disparate fabrics of the city into one harmonious whole. All decisions spring from this initial premise. The second fundamental concept employed is the concept of center. Given the importance of "center" throughout Samarkand's history, and the need and desire of the population to build a contemporary cultural center, the issue of center must be addressed correctly, and that should be in light of the historic meaning of "center" throughout Samarkand's urban history.

One means to unify modern Samarkand is to re establish once more one center for the whole city. Currently, the Registan square is the symbolic center of

the city, but it is not the living center of the city. The complex is regarded and used as a museum made up of Samarkand's most significant monuments of the past. Tourists come to the Registan square in the evening to view a sound and light show starring the colossal monuments.

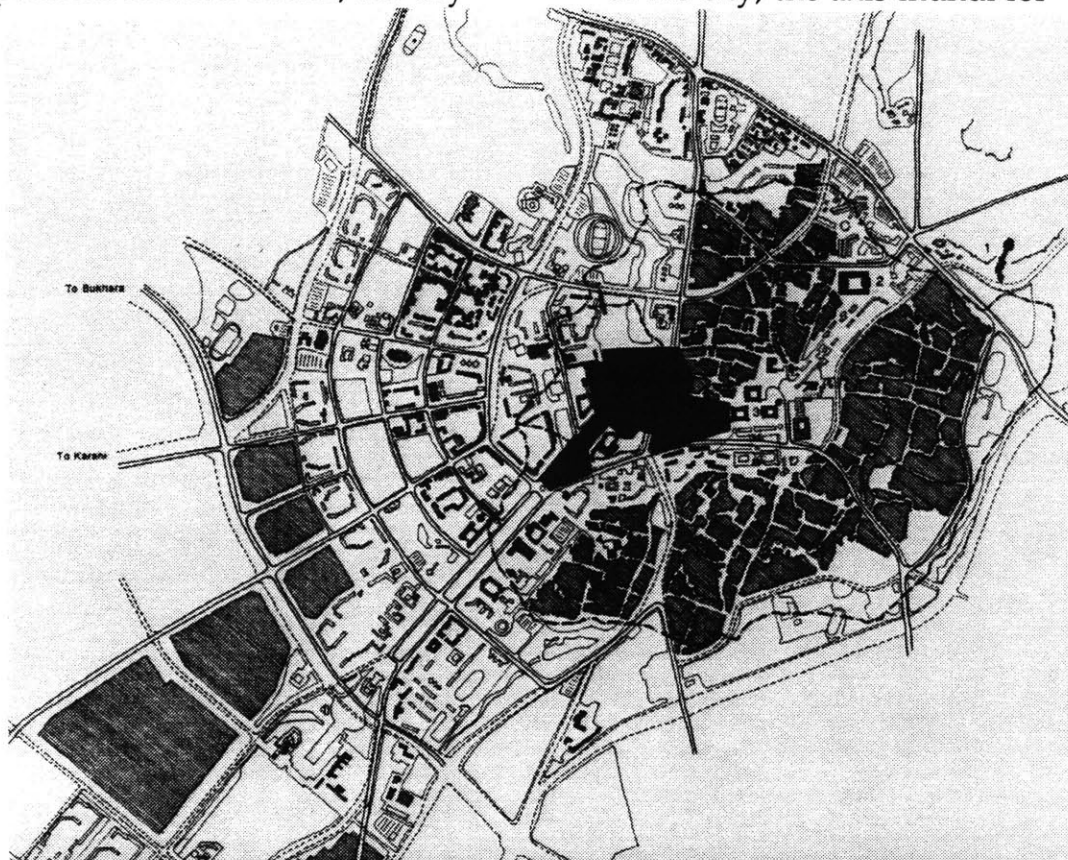
Traditionally, the center was associated with trade; the Tschar-Su-Su pavilion was the symbol of the marketplace. With the modern network of roadways, the bazaar, which was once one continuous line stretching from one city gate, through the center and extending to the opposite city gate, was broken into fragments and left in pieces along thoroughfares and in discrete marketplaces. The introduction of trade and shops in the vicinity of Registan would restore a use always associated with the center and activate Registan once again a living center.

The empty site directly adjacent and towards the west of the Registan square was the site selected by the promoters of the ideas competition to be the locus of the contemporary cultural center. The terraced site is predominantly open, and it sits between Registan and the Soviet Administrative Complex. But development must extend beyond the limits of the designated site if Registan is going to be focal point and axis mundi of the city.

The Administrative Complex, situated on the site of the former citadel, turns away from the Islamic city and receives the radial Russian city as its point

of focus. It is scaled larger than the Registan square and expresses a defiant dismissal of Registan as focus of the city. Indeed the tension between the heart of the city and the seat of power has transpired throughout Samarkand's history. With the dissolution of the Soviet Union, a more decentralized approach towards the Administrative Complex responds to the modern political climate. Hence, the city

from the city fabric, the activating, positive space surrounding the building has been rendered passive, and it stands as an object isolated in space. To try to recreate that order is futile, because the demands of the automobile has shifted the scale of the city, and the viability of contemporary life in the Registan square will depend on its vehicular accessibility. Given the current configuration of the city, the axis mundi for



may focus once again on Registan. Such an intent recognizes the passing of governments and the permanence of culture.

Historically, six main streets of the Timurid city led to the Chahar-Su pavilion from the gates of the city. Today the Chahar-Su still exists, but it stands in isolation since its disintegration

fig. 62 A map of central Samarkand according to the 1981 Master Plan. The dotted line indicates the former limits of the Timurid city, and the citadel, to the left. The dark area in the center is the site selected by the competition promoters. Registan lies to the right of that, and the Administrative Complex to the left.

Samarkand today and tomorrow is the Registan square itself, not the commercial pavilion.

Registan, as a conglomeration of buildings responds better to the scale of the modern city, and the

revitalization of Registan should integrate even larger urban gestures that activate the static geometry of the square and further integrate it in the living fabric of the city.

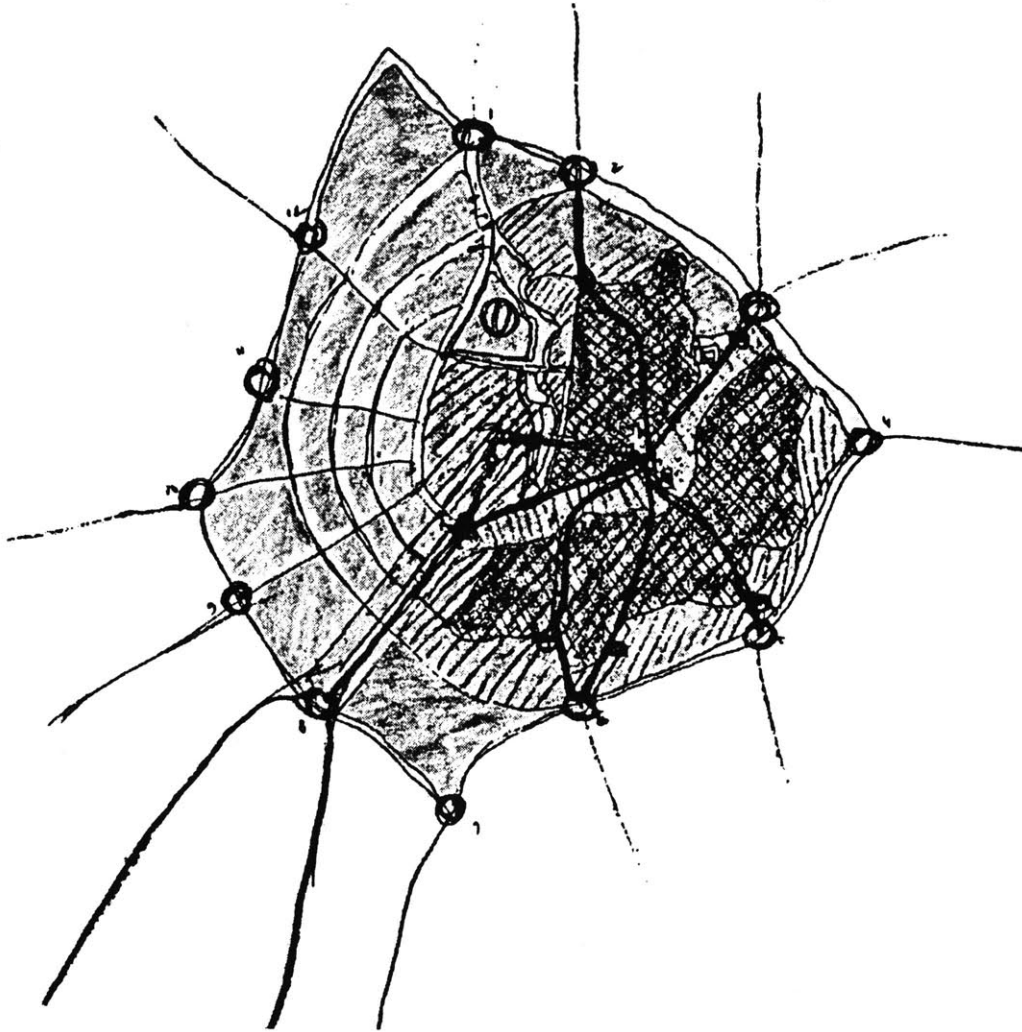


fig. 63 A diagram showing a proposal for re-establishing the identity of Samarkand's center. The six radiating avenues of the Timurid city are recovered and punctuated by "gates" marking routes of access. On the peripheral artery 12 new gates make reference to the center from a distance.

To further enhance the sense of center, acknowledgment of Registan as the axis mundi should be apparent from most any point in the city. A way of achieving this is by encouraging the construction of the roads proposed in the 1981 Master Plan which encourages movement around the periphery of the city at varying depths, allows for vehicular

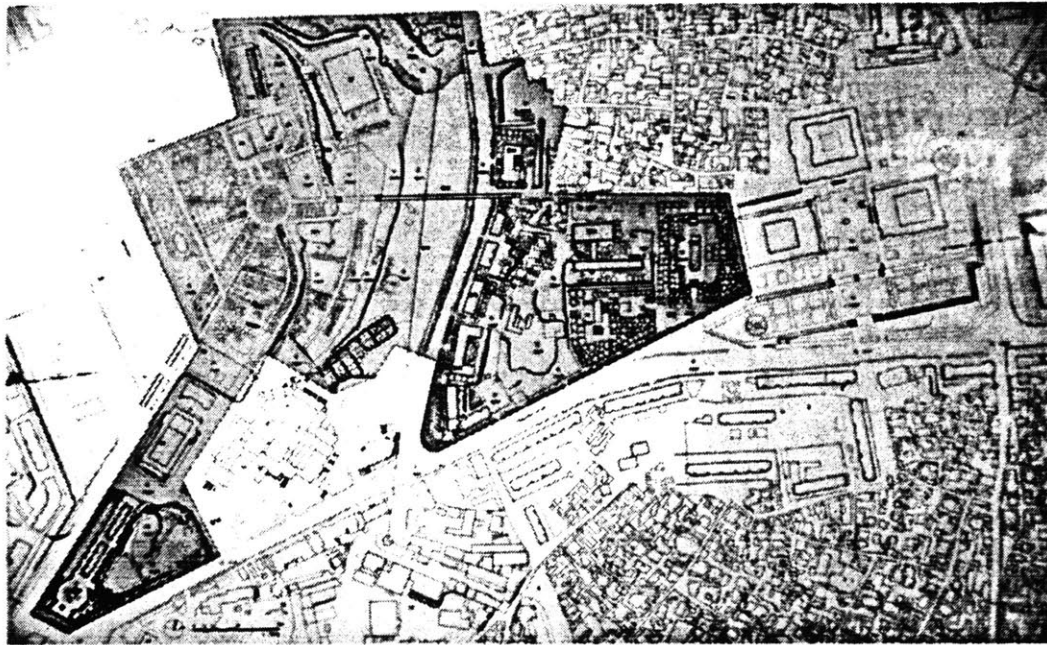


fig. 64 (above) Plan of the city center with the competition site highlighted with tone. The straight line running north-south through the center of the site is an underground water pipe. In the revitalized scheme, this area is proposed to be an outdoor museum of irrigation in which the techniques of irrigation throughout history are demonstrated. This irrigation museum is a piece of the green space that runs the length of the river branch.

fig. 65 (below) Plan of the city center after revitalization. The eastern half of the city is intensified with the growth of the traditional courtyard housing fabric. Along Registan street, to the south of Registan square, new institutions are introduced to bring contemporary uses and activities to the center. The east-west line cutting through the housing and connecting the Registan to the old citadel site is a new bazaar culminating in Registan.

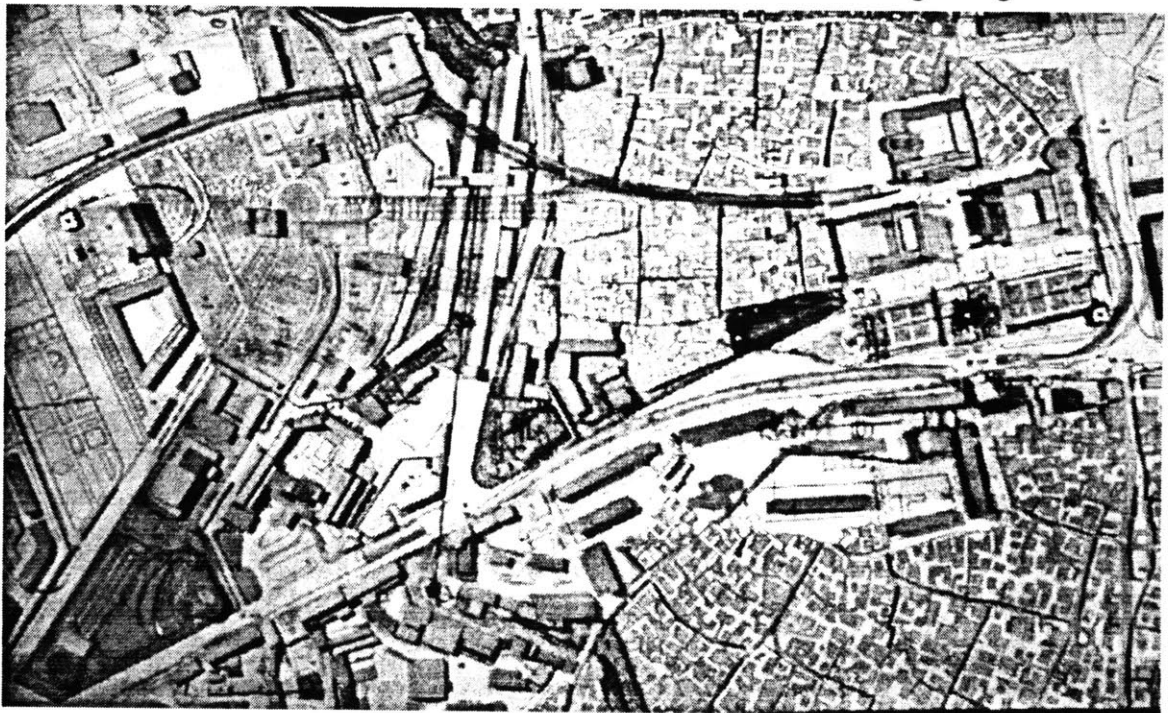




fig. 66 The Revitalized plan

congestion to by-pass the center, and civilizes the amount of vehicular traffic near the center. A method in finding the appropriate balance between the vital access routes and the maintenance of the old city fabric is to introduce cul-de-sac feeders into dense, highly developed areas to allow for the delivery of supplies and services, but also to delimit the quantity of through traffic into those delicate urban tissues. The original six gates of Samarkand should be recovered and marked on peripheral vehicular routes. Furthermore, twelve new "gates" erected on the greater periphery of the Russian and Timurid city are proposed to indicate points of vehicular penetration into the city, and they are to be named after the twelve signs of the zodiac.

Further large scale gestures will enhance a sense of unity in the city of tomorrow. A continuous green space is proposed to follow a branch of the Zarafshan River that extends across the breadth of the city between gates numbered 1 and 6 on the city diagram proposal. (fig. 63). This continuous passage of green will introduce a public promenade through the city that traverses "Soviet," "Russian" and "Islamic" quarters of the city, and intersect major avenues. It nevertheless will remain independent of the hierarchy of streets. Throughout its history Samarkand has depended on developments of irrigation techniques for its growth and survival.

The revitalized scheme calls out for the intensification of the Registan complex with the

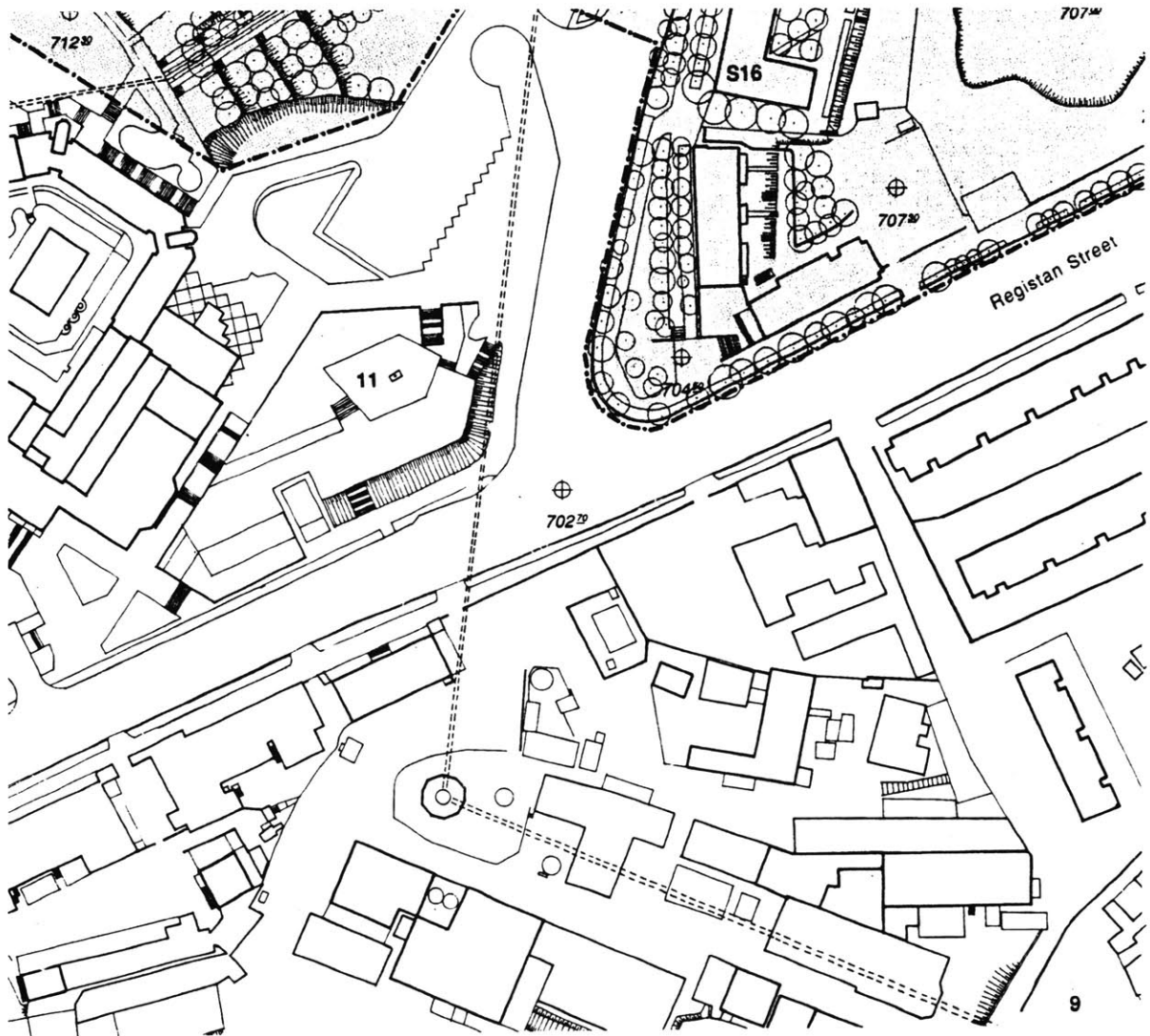


fig. 67 A portion of the existing conditions at the intersection of Dagbit Street and Registan Street. The workshops and light industrial buildings located south of Registan Street have some collective order with shared, exterior walls, but their intensity along Registan Street is weak and needs intensification. The double dotted line indicates an underground channel. The water channel should be unearthed and some of the buildings cleared so that the green public space along the water channel can traverse the entire city.

addition of new institutional, commercial, and residential buildings, which together internalize the square and delineate its center as the still point of a turning wheel. Two circulation arteries, one major, for automobile circulation, and one minor, for pedestrian use, connect the building tissue within the locus of Registan to the western portion of the competition site, which spatially is defined to be the more open sector of the site.

The major artery is Registan Street, along which the proposed revitalization scheme

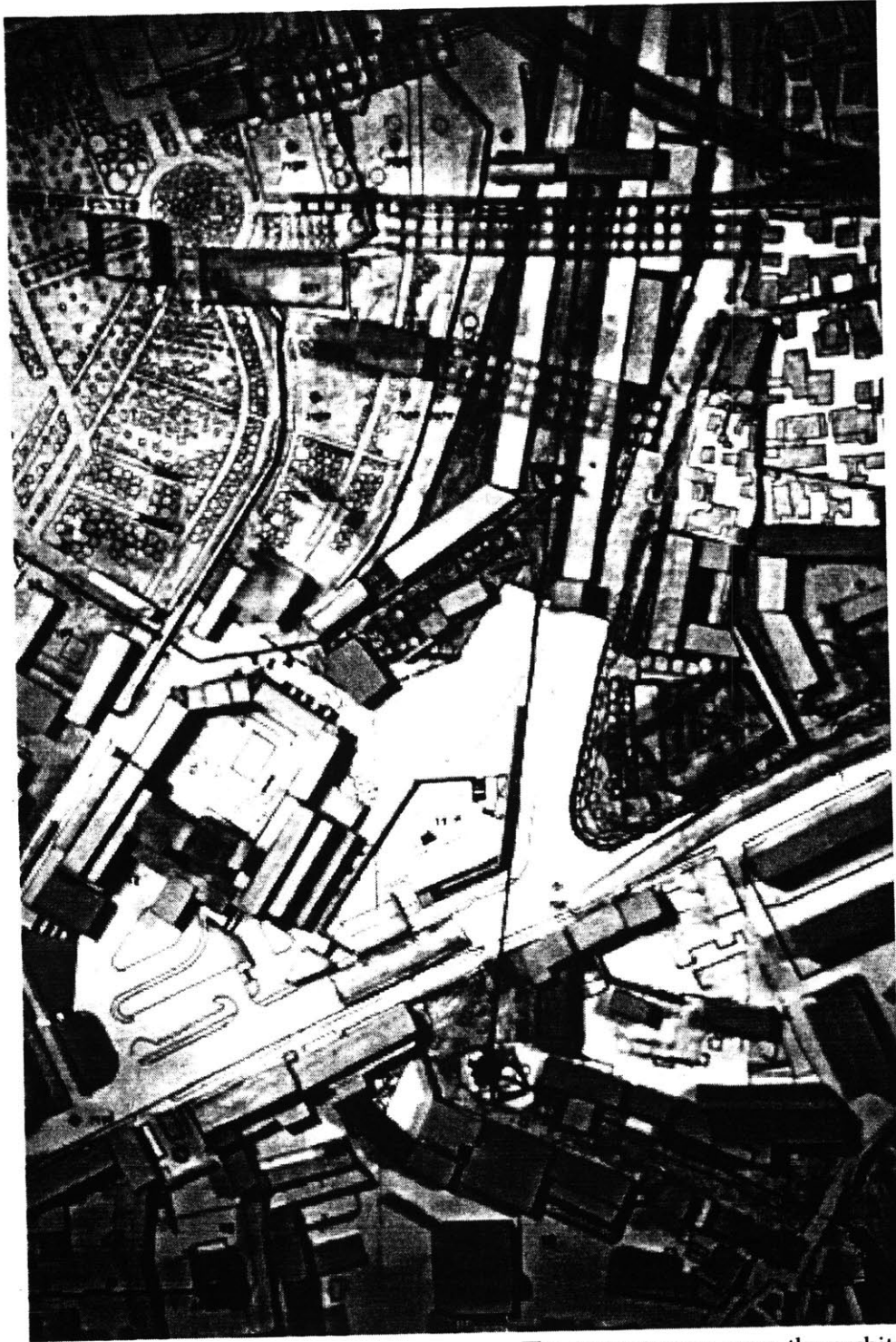


fig. 68 A portion of the revitalized plan shows the new conditions at the intersection of Dagbit and Registan Streets. Where the water channel changes direction is a modern "hauz," a structure traditionally used to mark a source of water.

The water towers were the architectural ornamentation for Samarkand. Taking octagonal and rectilinear forms, they were made in a step-like fashion out of local stone and filled at the hottest period of the year when the mountain snows melted.



intensifies the existing building edge through the addition of walls and secondary "facades." The new linear elements of varying heights, materials and ages connect one building to the next more rigorously and continuously. Furthermore, the intensification of the street and building edge, guided by the concept of "gateway" (see p. 58) will generate a continuous urban fabric both physically and conceptually. The idea of the intervention is based on the concepts that generated the traditional forms of the mohallas, but it is applied to act on a larger urban scale. The intensification of the street edge allows for more pronounced building entries along Registan Street. Increasing the depth of the building edge through the addition of a second "facade" increases the duration of the temporal experience of enter-

fig. 69 A view of Dagbit Street, center, the archeological park to the right, and the southern edge of Registan Street with its edge intensified. There should be several pedestrian crossings to access the park and the activities along the water channel.

ing. These ideas are introduced to the mid-scale fabric comprising the loose agglomeration of single and two-story workshops located on the southern edge of Registan Street.

The secondary artery is the proposed bazaar route for pedestrian use. Like Registan Street, the new bazaar would connect the western half of the site to Registan in a more dense and intimate scale. On its northern edge, the bazaar abuts the Tila Kari madrasa so that the narrow bazaar route culminates into the open space of the Registan square, which is also

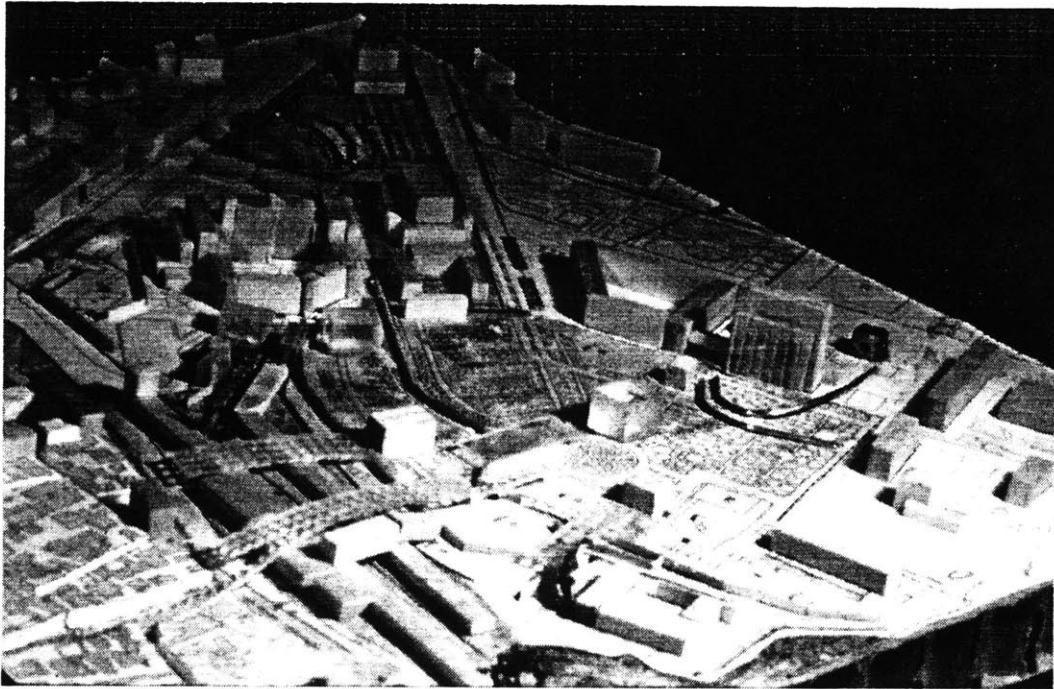


fig. 70 View towards the back of the Administrative Complex

encouraged to be used as a market place as a means to re integrate Registan into the living city. At the opposite end, the bazaar route crosses Dagbit Street and engages the mid-scale fabric proposed along the street's western edge and the citadel walls.

Given the order and scale of the Soviet complex on the site of the citadel, a loose agglomeration of autonomous buildings is more in context with the Soviet city. As one approaches Dagbit Street, the circulation artery dividing the competition site in half into its eastern and western portions, the urban fabric becomes more physically interconnected and diminishes in scale. Dagbit Street offers an opportunity to make the necessary shift in urban scale. Transition is achieved along the western edge

of Dagbit Street, which historically was the moat of the citadel. Along this low, centralized portion of the site, a series of new, low, linear pavilions and buildings are proposed to provide indoor and outdoor exhibition spaces and informal gathering spaces, which are sadly lacking in today's Samarkand. Situated between Dagbit Street and the remains of the citadel walls, the outdoor museum of irrigation, an integral piece of the green belt traversing the city, the proposed low buildings account for uses requested by the people of Samarkand: a club for youth, with a dancing hall, places for the elderly, informal meeting areas for discussions, conferences, meetings, exhibitions. and the like

The actual site of the citadel is proposed to be an archeological park, where the remains of the Timurid walls, the 16th century water channels, and the Emir's bath house can be viewed in a park-like setting along with new archeological excavations to take place on that site. The archeological park will also have some unobtrusive buildings or pavilions, one, which is a museum of the citadel; another, a children's pavilion with puzzles and a puppet theater. This "western" portion of the site will accommodate facilities for viewing films and projections on the "back" side of the Administrative Complex, where a large screen as a second facade is proposed. Projections can be viewed from the archeological park as well as many other portions of the new center. (see fig. 70)

The urban scale interventions proposed in revitalization seek to express the concepts of "unity" and "center." The wall (and its conceptual origins in the archetypal vocabulary of the historic city) is introduced as a new, unifying element: as a membrane that delimits and defines the shape of recognizable entities in the various scales of the city. The revitalized urban fabric proposed around the Registan square is further studied in a less conceptual manner in the next chapter, where the physical exploration of concepts of the paradigm become more complex.

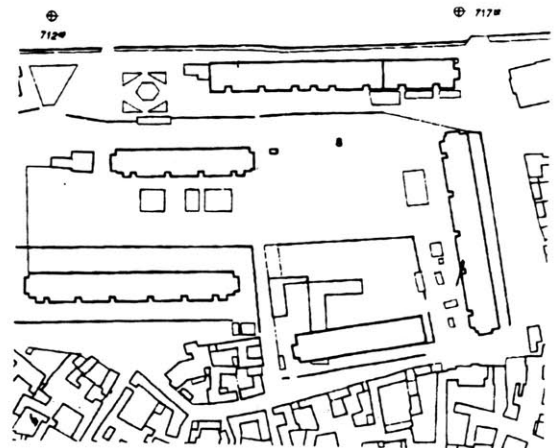


fig. 71 Soviet bloc housing directly across from the Registan Square

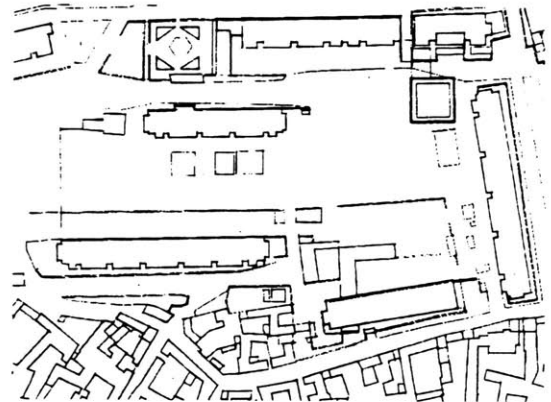


fig. 72 Interventions, especially along the southern edge employ walls and "second" facades to better achieve transition between the two housing types.

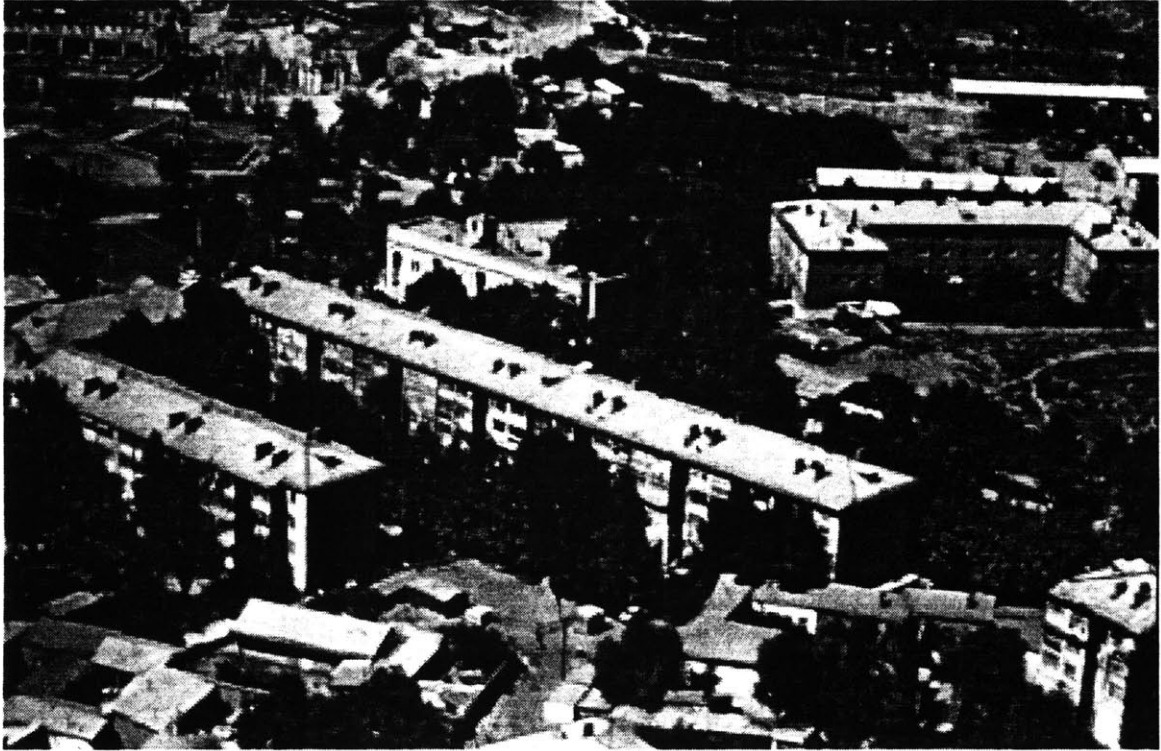


fig. 73 View of typical apartment buildings in contact with the traditional mohallas

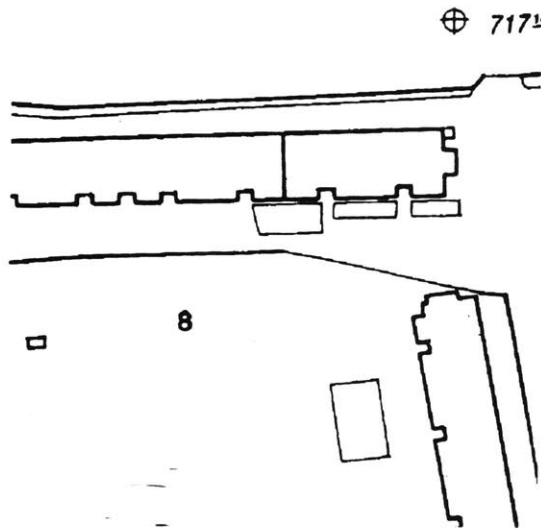


fig. 74 Soviet housing blocs

Housing blocs directly across from the Registan square are converted to institutional uses. Employing the concept of gateway and wall, the building edge is intensified and integrated into its

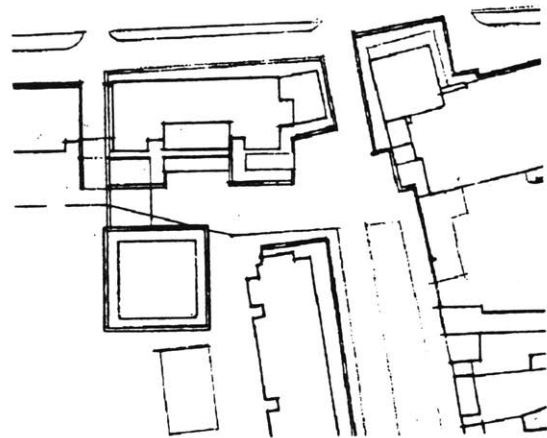


fig. 75 Housing blocs with initial intervention

surroundings. This is a schematic plan for a school of art and music. The adjacent buildings are used for practice rooms, studios, and dormitories for the students in the school.

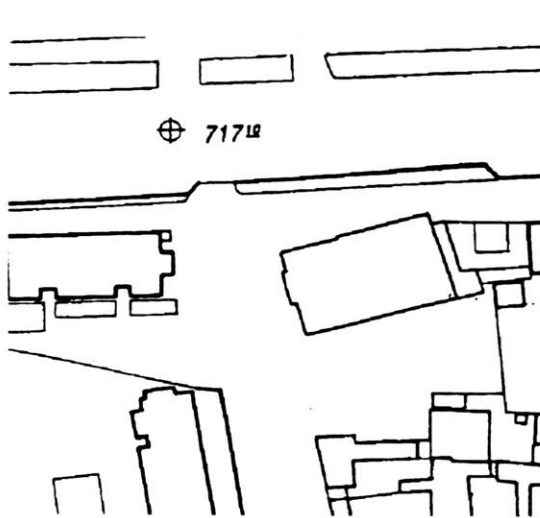


fig. 76 The southern edge of Registan Street prior to revitalization: The building immediately adjacent to the proposed music and art school is a new public library and library of ancient manuscripts. The library of ancient manuscripts is a cylinder within a perfect cube, the center of which is directly on axis with the symmetrical axis of the Registan square, and it has an orientation different from the rest of the building to signify its apartness from the ordinary and its solidarity with the symbolic geometry of the Registan square.



fig. 77 The same edge after intervention

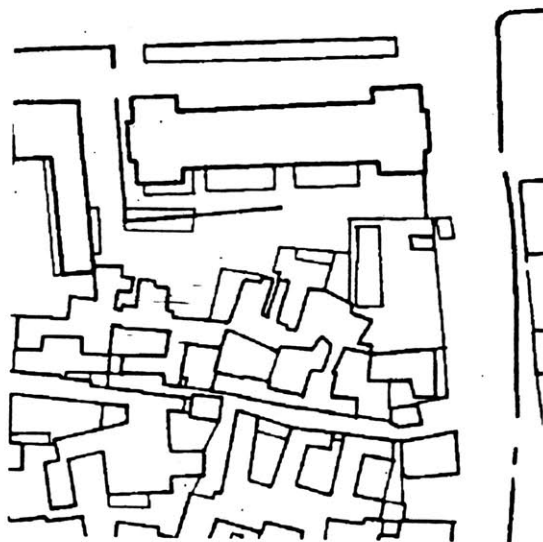


fig. 78 A colonial building directly adjacent to the proposed library and music and art school.

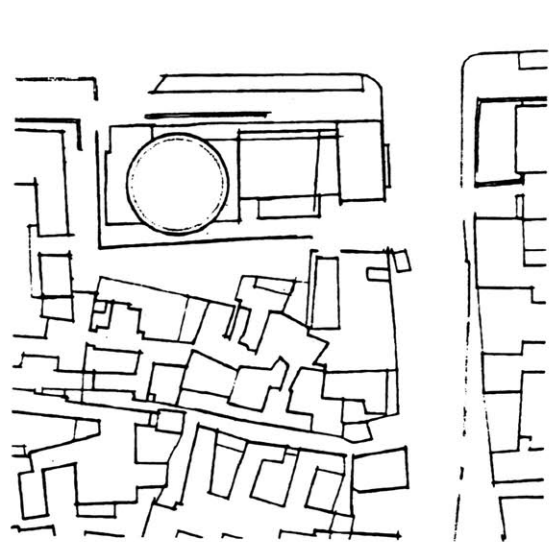
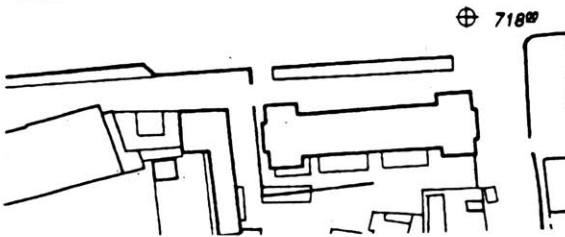
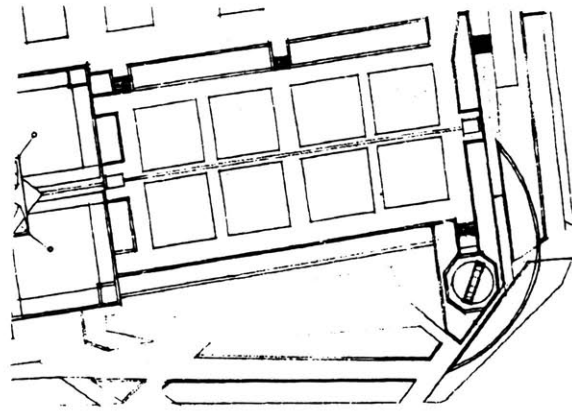
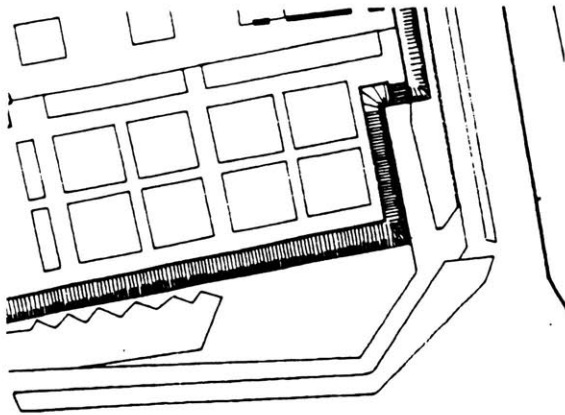


fig. 79 To the right of the new library, a proposed planetarium integrated into the mohalla



⊕ 718°

fig. 80 The site across the street of the proposed planetarium.

fig. 81 A proposed observatory and Academy of Sciences to occupy the corner site of the Registan complex.

The composition of the domes of the observatory and planetarium indicate the direction of true North. To the left is a small parking lot. Below the site is a large, subterranean parking. It is accessed along the service road to the north of the observatory.

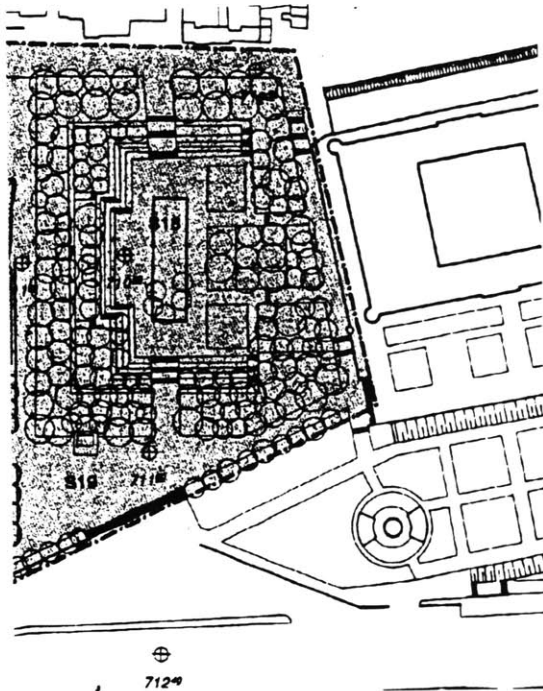


fig. 82 Site behind the Ulugh Beg madrasa prior to revitalization

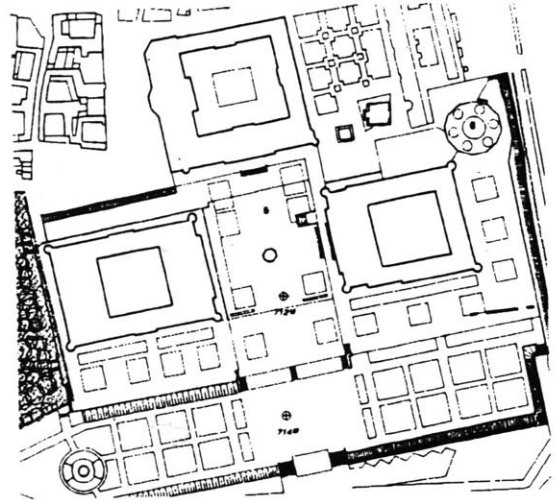


fig. 83 Registan prior to revitalization

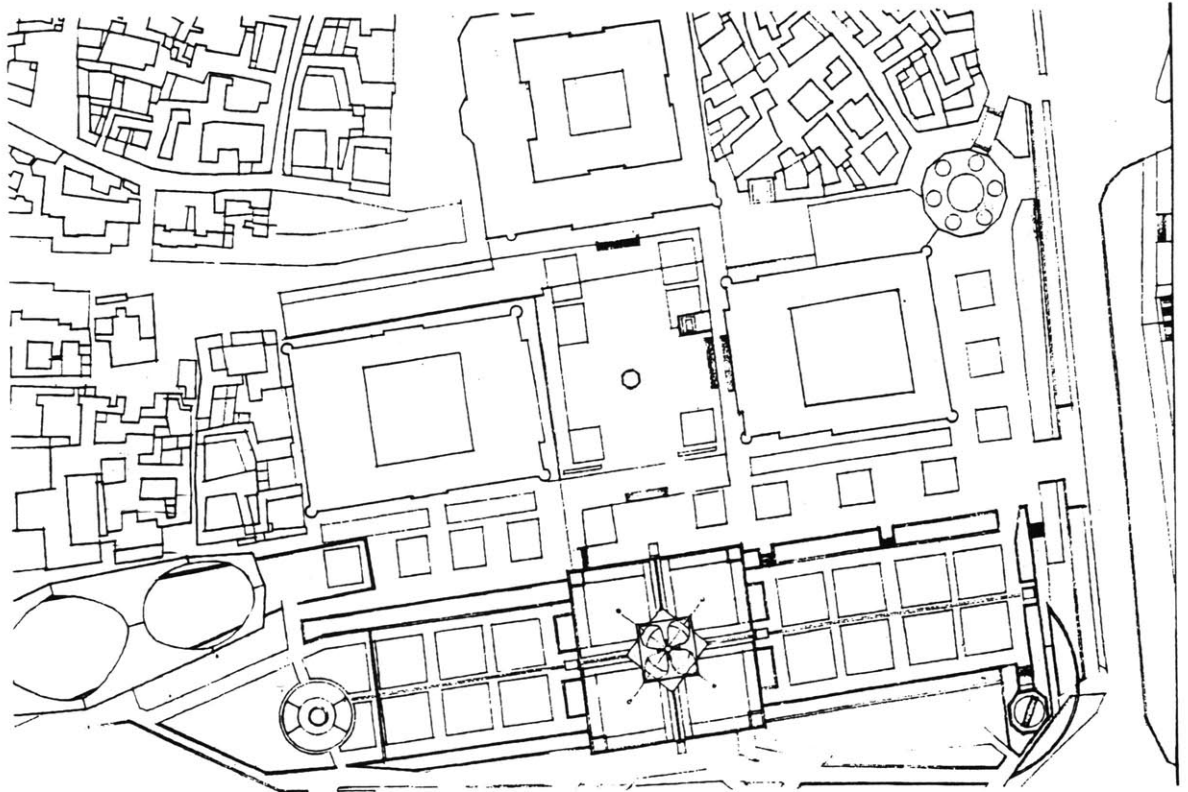


fig. 84 The revitalization of Registan

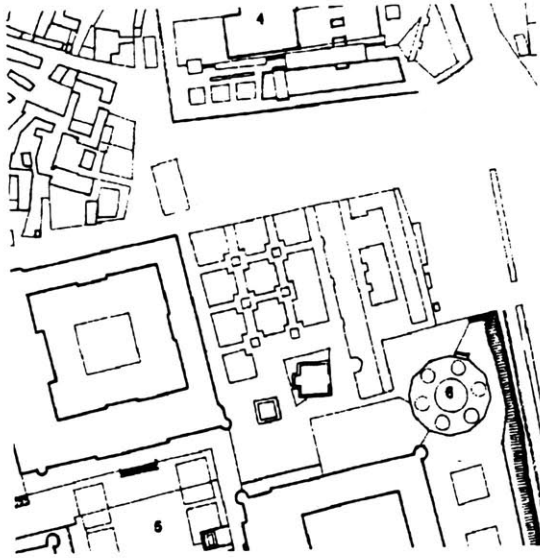


fig. 85 Site north of Registan. The round building with six domes and one central one is the Tschar-Su.

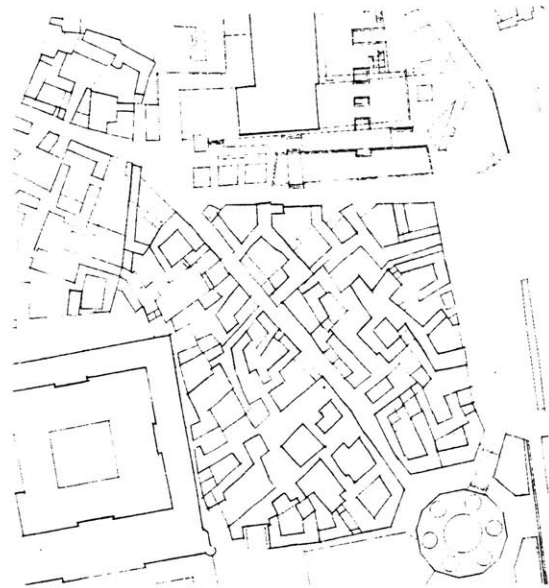


fig. 86 The mohallas are extended to internalize Registan square and to reactivate the pavilion with the surrounding city fabric.

⁵⁶ See the Aga Khan Trust for Culture, "Questions and Answers," Samarkand Revitalization, (Geneva, 1990), p. 14.

Chapter VI. Registan: the Shining Point

"In Samarkand, time unfolds itself from cataclysm to cataclysm, from tabula rasa to tabula rasa. When the Mongols destroyed the city in the 13th century, the inhabited neighborhoods became a pile of ruins and cadavers. The neighborhoods had to be abandoned; the survivors went to construct their dwelling on another site, more to the south, to the degree that all of the old city, the Samarkand of the Seldjuks, covered little by little by layers upon layers of sand, is nothing but a vast elevated field. Under the earth live treasures and secrets; on the surface, pastures. One day everything will have to be opened, unearthing the houses and streets. Thus liberated, Samarkand will be able to tell its story."

"...the neighboring ruins naturally inflame the imagination of our miserable contemporaries. And then there is this city hidden under the earth. Across the centuries, how many children have fallen into the crevices, and never reappeared, how many strange sounds have been heard, or believed to have been heard, coming forth seemingly from the entrails of the earth! This is how the most famous legend of Samarkand was born, the legend which, for many, is in the mystery that surrounds the name of this city."

From Amin Maalouf, *Samarcande*, pp. 336-38.

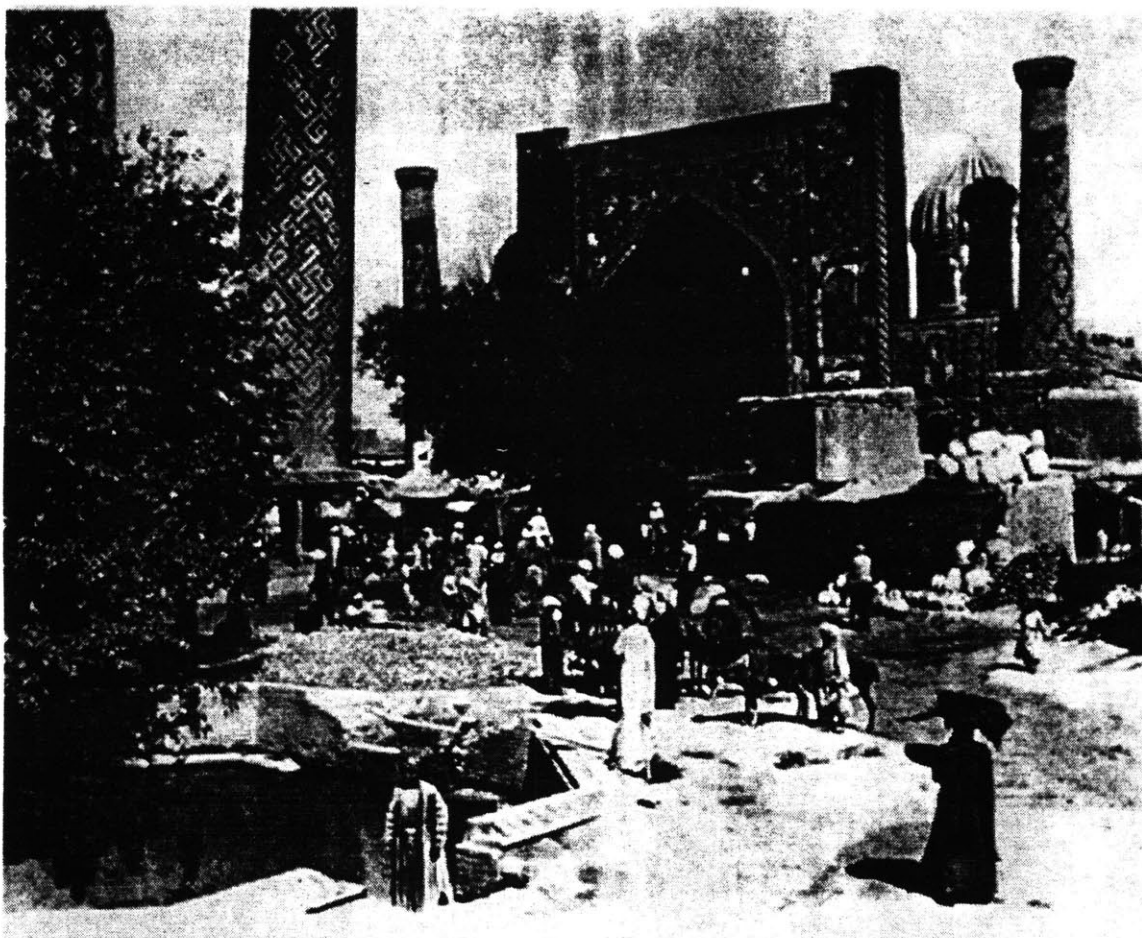


fig. 87 View of Registan in the 1940's, before the restoration of Shir Dor.

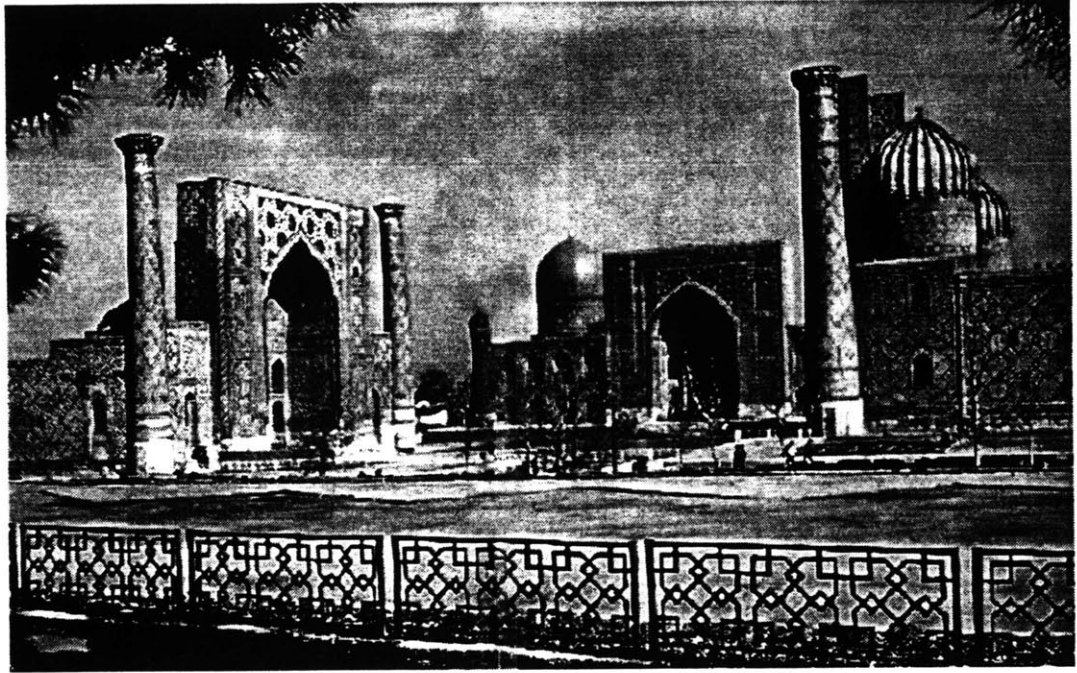


fig. 88 View of Registan today from the edge of Registan Street

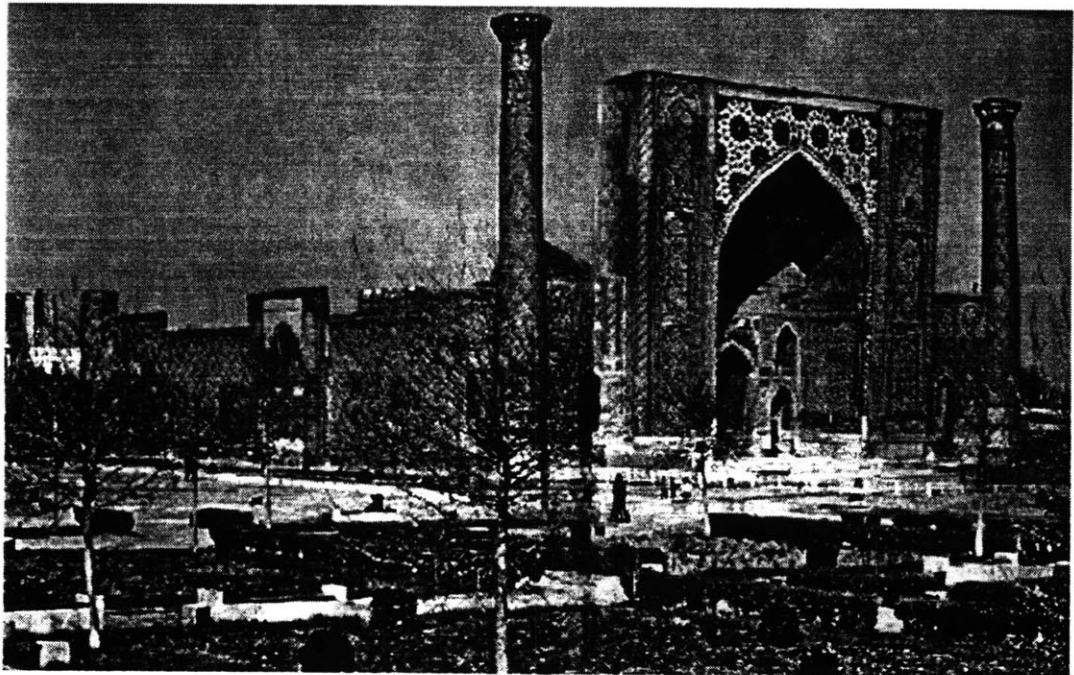


fig. 89 The Ulugh Beg madrasa, 15th century

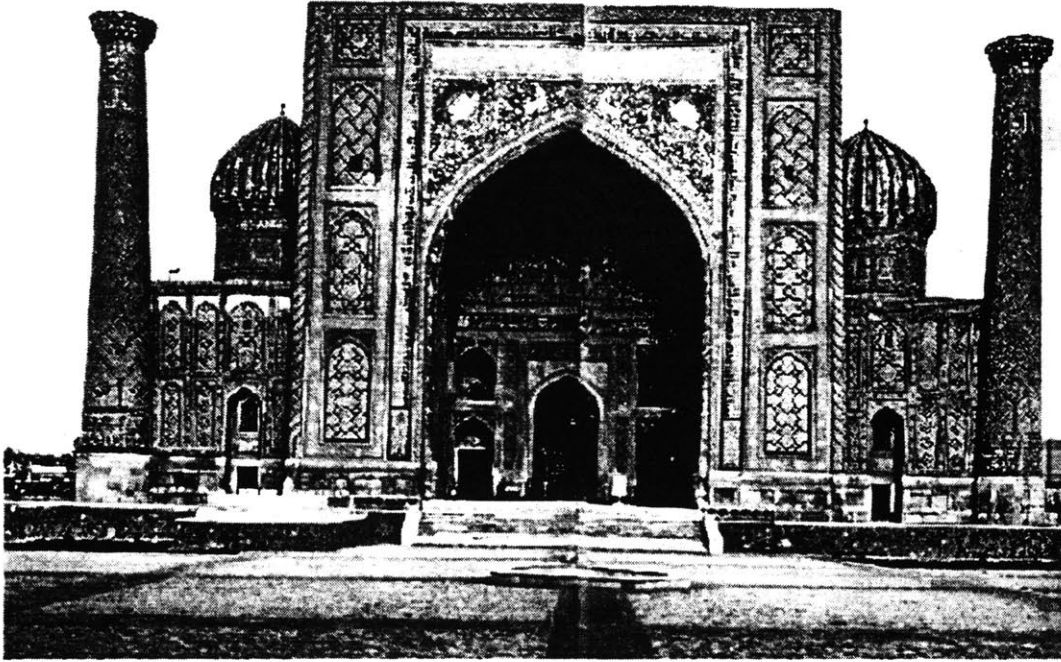


fig. 90 Shir Dor "Lion Bearing" madrasa, the mirror image of the Ulugh Beg madrasa, 17th century.

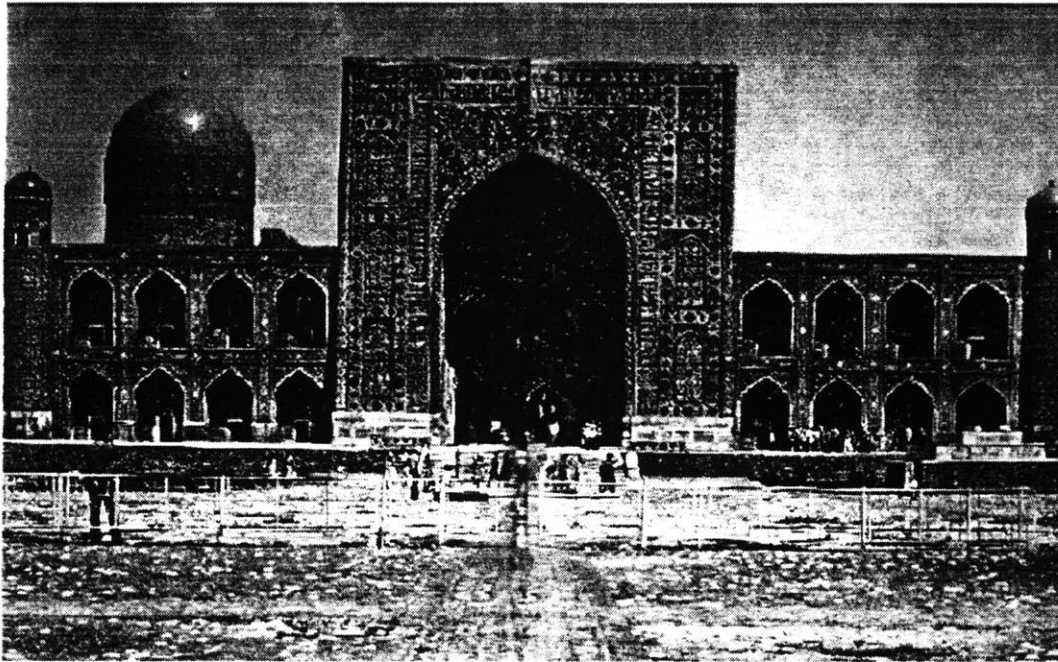


fig. 91 Tila Kari, 17th century

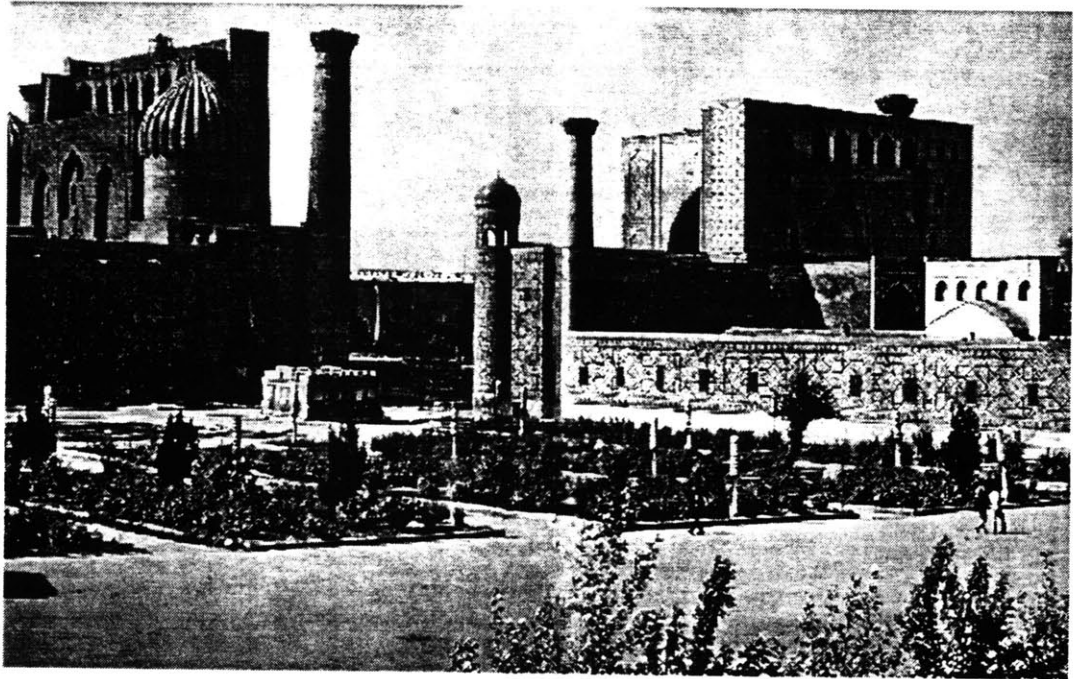


fig. 92 View towards the South, Tila Kari is on the right, and Shir Dor on the left. In the background the Soviet bloc housing is visible.



fig. 93 Aerial view of Registan, looking towards the southwest.

Registan, which means the "field of sand," is a composition of space and time. The three colossal madrasas, the Ulugh Beg madrasa, the mirroring Shir Dor madrasa, and Tila Kari, which means "covered in gold" were constructed across a period of two hundred years, between the 15th and 17th centuries. The ensemble is considered to be one of the highest achievements in Islamic architecture. Revitalizing Samarkand assumes the challenge of completing the architectural composition with a contemporary addition to the fourth side of the Registan square. The intent is to complete the composition with a sequence of public buildings and open spaces that stand as a landmark, generate a sense of pride, and relate a message that is comprehensible and understood. The final composition is to simultaneously complete a circle in time and initiate the beginning of something new.

The composition is comprised of a subterranean museum lying beneath a vast, elevated plain, with a large, central pavilion in steel. On either side of the building are enclosed gardens. The garden on the eastern side is a modern chahar-bagh, and the garden on the western side is a zoological garden. On the opposite side of the animal park is a large courtyard associated with a new mosque proposed to occupy the southwestern corner of the Registan complex. At the opposite edge of the chahar-bagh is the observatory and Academy of Sciences, proposed to stand across

the street from the Russian museum.

The southern edge of Registan Street includes the school of art and music and its adjoining dormitory, and performance hall, the public library and the Library of Ancient Manuscripts, a self-contained unit within the general library, the adjoining choi-khana and the new planetarium, proposed to occupy the corner site. Schematic designs of these buildings were laid out in Chapter V "The Revitalized City."

The new institutions within the locus of Registan were designed in an urban pattern that can be developed and built at any speed and in almost any order. Many of the projects on the southern edge of Registan Street are rehabilitation projects, such as the art and music school and the adjoining dormitory. The intent was to accommodate for the challenges facing cities like Samarkand where economy discourages the demolition of any existing building that is sound, and where the rate of development in the future is uncertain. The proposed museum, which is to occupy the prominent position opposite Tila Kari, as the fourth element in Registan's composition, is intended to be the initial intervention in the Revitalization of Samarkand. Its intended role is to act as a catalyst for development, stand as a symbol of the emerging identity for the people of Samarkand, and provide an early, visible sign of the evolving cultural center.

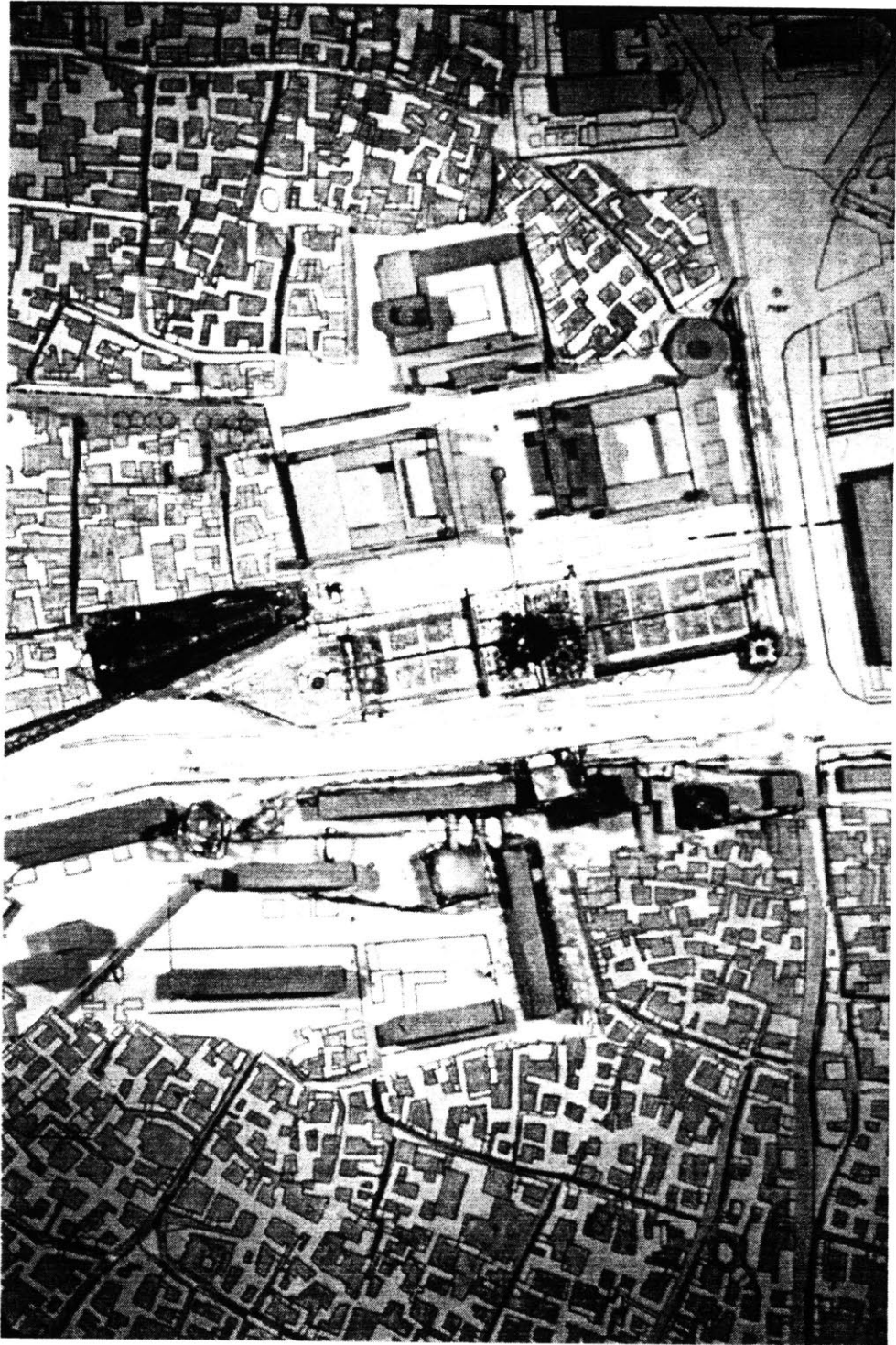


fig. 94 A model of the Registan complex and the surrounding urban fabric after revitalization.

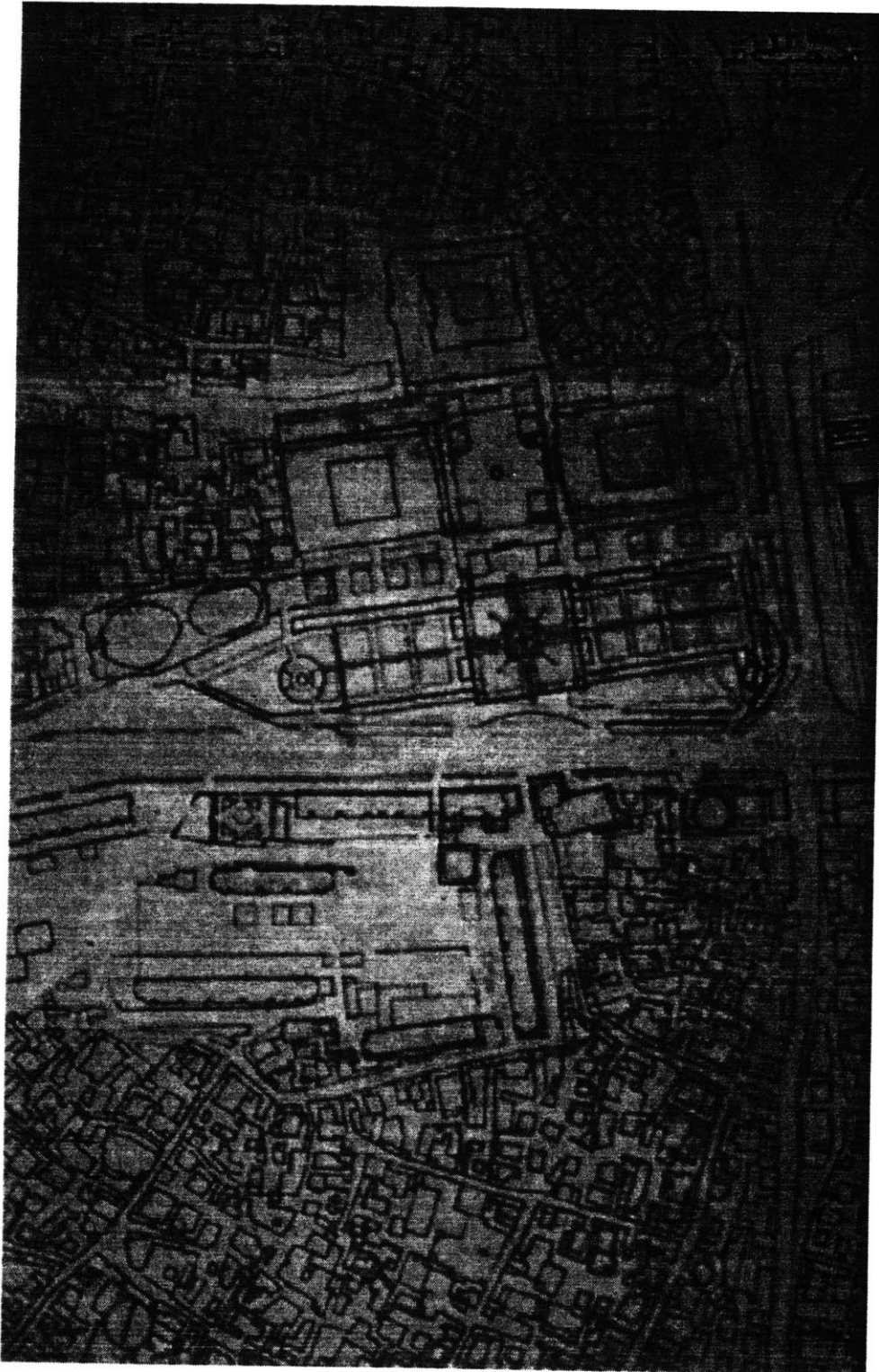


fig. 95 Plan of Registan revitalization.

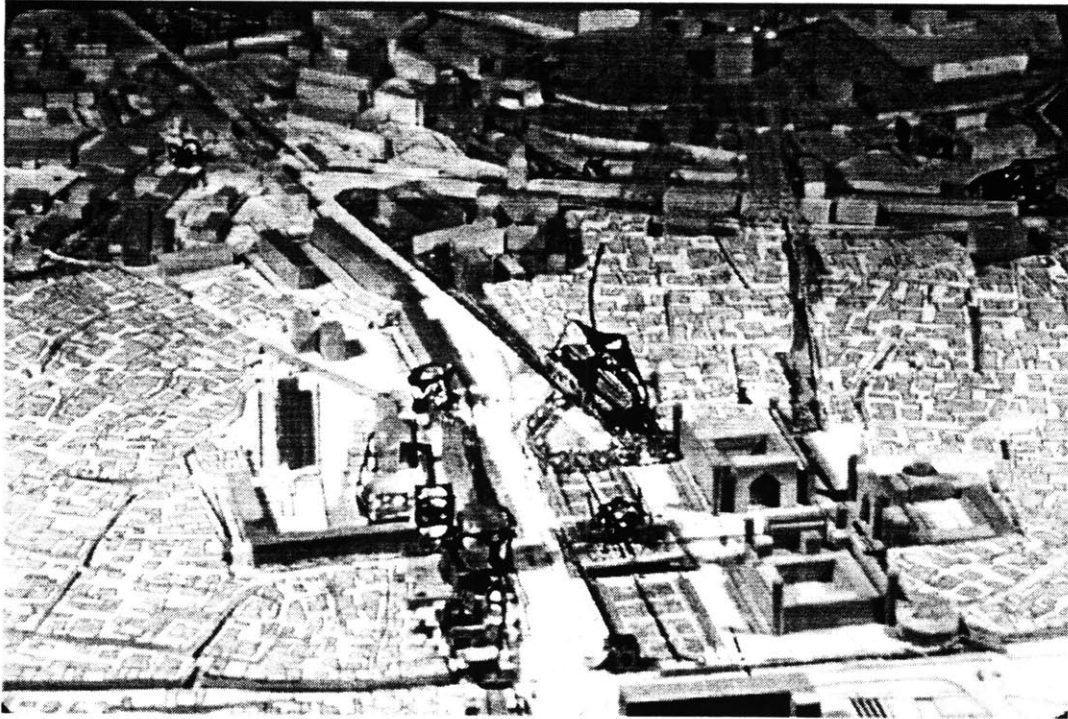


fig. 96 View of the Registan square looking towards the West.

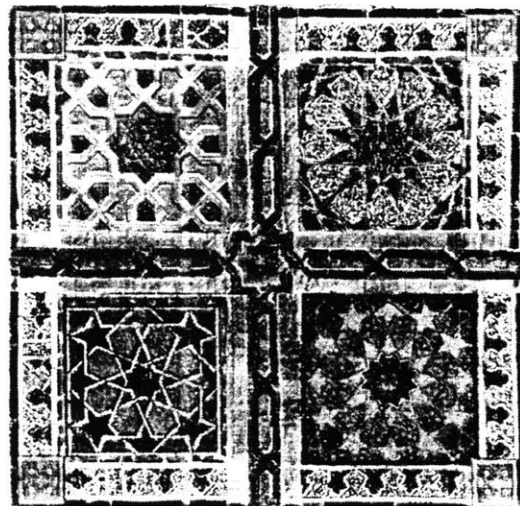
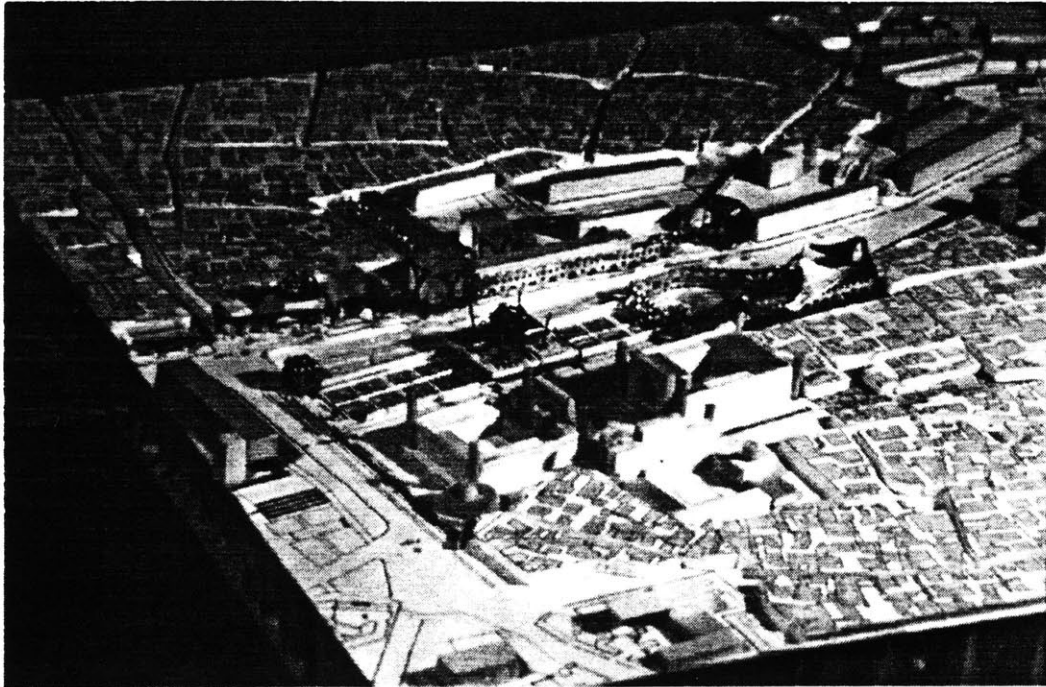


fig. 97 The mosaic of the elevated platform



The museum as a whole is a monumental object visible from a distance along the long vistas of Registan Street. The elevated platform, a rationalized, ideal diagram of the earth, acts as a monumental entrance to the Registan complex. Raised three feet above the level of the street, the platform, measuring 60 meters x 60 meters (roughly 180 feet x 180 feet) is the "threshold" to the Registan square. The steel pavilion, scaled to the size of the iwan portal of Tila Kari, situated across from the new museum, is the "gateway" to the square. One crosses the vast, colored mosaic that covers the platform, passes under the "gateway" pavilion, and proceeds into the Square through a choreographed sequence of experiences over time. As the passage into the mosque is never direct, though one can see the inner court through a screened opening at the entrance, the passage

fig. 98 View of the Revitalization model looking towards the South.

through the monumental entry into Registan is also indirect. The visitor must follow the flow of water, which bubbles up at the center of the platform and flows out to its edges, descend from the platform along side of the cascading water, pass through one of the gardens on either side, and enter the square through the garden gates.

The elevated platform has many symbolic references, and is perceived differently from its four sides. As a whole it embodies the concept of floor, as symbol of the earth upon which the microcosm stands. From the South, the platform is perceived as a giant carpet of tiled mosaic patterns. It is slightly above the grade of the street and is a "socle" for the city,

as is the raised floor covered in carpets the socle in the home. From on top of the platform the flanking natural gardens are visible. The gardens continue the same square pattern established in the mosaic pattern. Association between garden and carpet are intended, and the juxtaposition of the geometric patterns and natural patterns recall the origins of the Islamic artistic tradition, in which the rationalized, geometrical view of the world is perceived as harmonious with the multiplicity of patterns within the unity of the cosmos.

As one descends the platform along side the sound of cascading water, one descends from the rationalized plane of the supernatural garden into the order of nature. The physical experience is an analog of the transition between metaphysical stages. (Recall the Seven Stages of Man, p. 45.) Looking at the elevated platform from the garden level, the building is meant to evoke the cosmic mountain, from which springs the fountain of life. The walls of the subterranean museum below recede into shadow whence the fountain of life has its mysterious origins in darkness. Its sealed inner walls of steel enclose the museum like a tomb. (See p. 53)

The water falling from the platform irrigates the lush gardens below the stark, geometric plane. (See fig. 100) As an ensemble, the chahar-bagh, the animal garden and the tiled representation of the chahar-bagh embody the macro-cosmic concept of garden. (See p.

55-56 and fig. 46) The walled-in gardens themselves are self contained and embody the micro-cosmic concept of garden (fig. 45). The macrocosmic garden in the modern city is in modern is a space for the general public instead of the private use of the autocrat.

The modern chahar-bagh proposed in the Revitalization scheme simply requires the enclosure of the existing modern garden. By surrounding the garden with walls, the internalized space recalls the Islamic notion about sacred spaces. The sacred space of the first mosque was delineated by the simple gesture of driving four stakes to delimit a territory named sacred. Plantings in the chahar-bagh are intended to shade the central water channel that cuts the length of the central path through its middle. (See figs. 101 and 102). Traditionally, platforms and rugs are placed over the water channel where there is shade. The evaporation of the water from below cools the body and provides a pleasant micro climate in the hot, dry summers. With the protection offered by the surrounding walls, the garden is an oasis in the city, and the embodiment of the concept of the pleasure garden. Furthermore, the environment provides a setting to ensure the continued practice of traditional recreational activities of Samarkand. (See fig. 103).

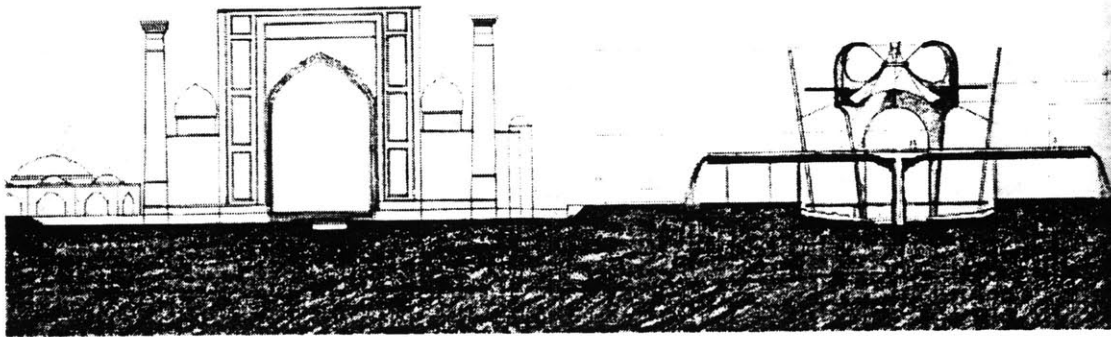


fig. 99 Section through Registan and the proposed museum. Chahar-Su and Shir Dor are on the left.

"Accounts of Samarkand, as late as the 10th century AD, mention that the main square had enormous timber statures of camels, horses and exquisitely carved statues of deer and mountain goats."⁵⁷ The proposed animal garden is intended to arouse another domain of symbolic imagery. Part of the expression of man's world establishes his position as ruler over the animal kingdom. In modern times man places himself precisely in the same position with respect to the animal kingdom; his view is virtually unchanged since the Indo-Iranian tribes depicted in their cult buildings their dominance over 5,000 years ago. Introducing a menagerie to Registan, with peacocks, goats, ducks and even exotic, caged animals is for the purpose of delight, but also to provoke memories and fantasies about the city's history, or the Sogdh wall paintings of the leopard hunt, which might be on exhibition in the adjoining

museum, or the lions of the Shir Dor portal, visible from the animal garden. The animal park would also recall man's origins and his position with respect to nature. These are the issues about which traditional art and architecture sought to express an opinion.

The mosque adjacent to the menagerie park is a modern Masjid-i-Jami, or Congregational mosque. Its courtyard was formed also in congruence with the principle of sacred spaces. Today the area which courtyard and mosque would occupy is on the edge of a turn-off from Registan Street. An existing fountain stands near by. By enclosing it with walls and internalizing the space, the ornamental fountain, which was part of the secular, modern city, becomes the sacred fountain of ablution.

The mosque is demarcated in a similar way, first by a simple wall enclosing the sacred space and then roof and closure added. The initial concept of the mosque is to create a series of courts of increasing intimacy as one makes the temporal and physical transition into the sacred point of

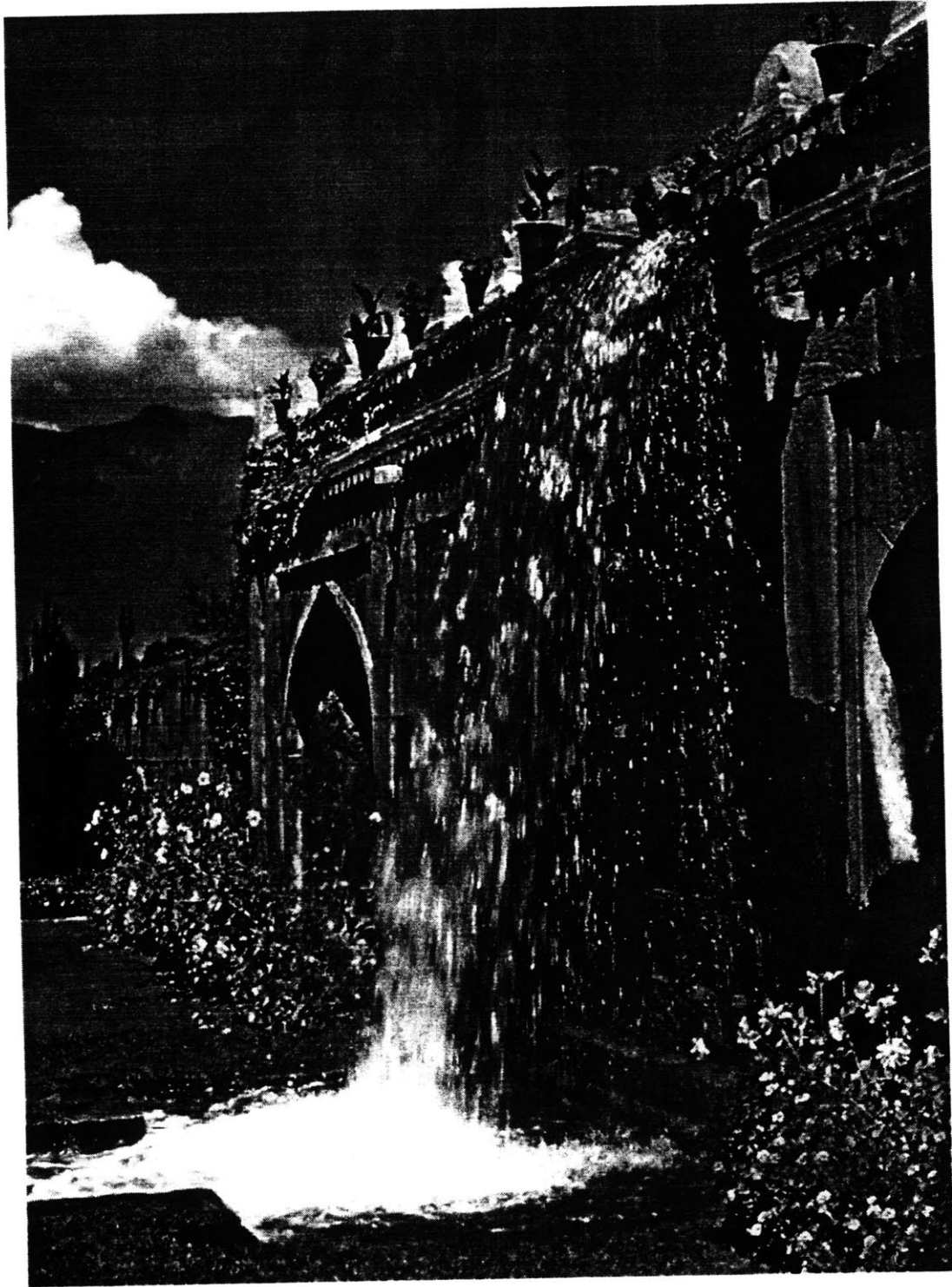


fig. 100 The cascade of the lower terrace at Shalamar Bagh in Kashmir.



fig. 101 The waterway leading to the secondary pavilion at the Bagh-i Fin, Kashan, Iran is a reference for Samarkand's modern chahar-bagh.

culmination. Between the mosque and the outer courtyard, a secondary means of access leads to the Registan and follows along the direction established by the niched, external walls of the enclosed animal park, museum facade and chahar-bagh. The axis culminates on the opposite side of Registan, across the street from the entrance to the Russian museum. The niched walls of the gardens could be used as temporary booths on market days. Entrance to the new museum in though this wall face, which internalizes the Registan square.



fig. 102 "The water from the Bagh-i Fin runs into a public tea garden, where wooden frames covered with carpets of cushions are placed over the canal so that the maximum coolness can be enjoyed from the water rushing beneath."⁵⁸

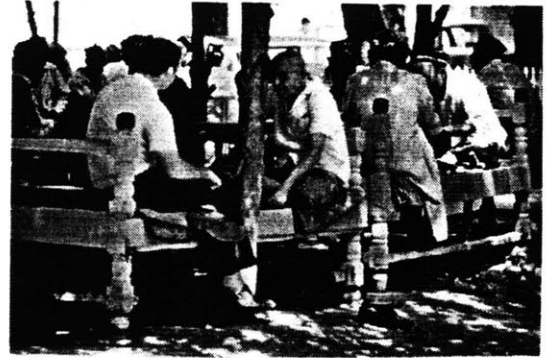


fig. 103 A typical traditional tea-drinking scene in Samarkand.

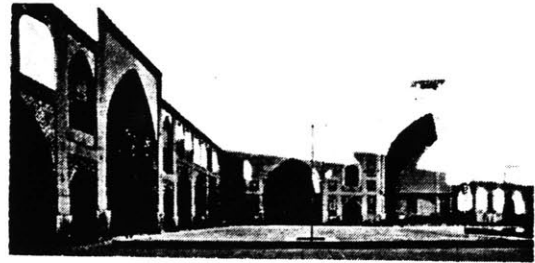


fig. 104 Walls internalizing a sacred space. Masjic-i-Hakim, Isfahan.

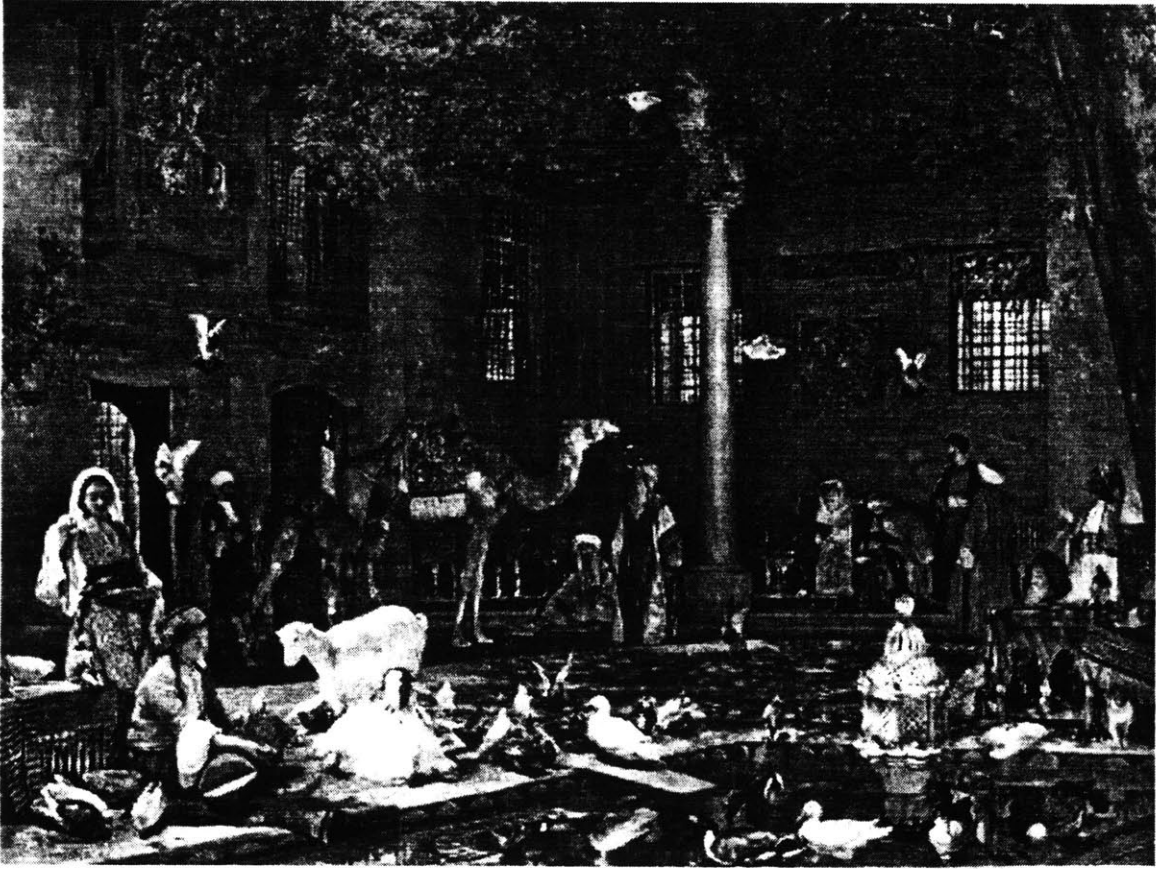


fig. 105 The courtyard of the House of the Coptic patriarch, Cairo, 1864, by J.F. Lewis.



fig. 106 A warrior riding an elephant is attacked by leopards.

⁵⁷ The Aga Khan Trust for Culture,
"History of Samarkand and Site
Information," *Samarkand Revitalization*,
(Geneva, 1990), p. 2.

⁵⁸ John Brookes, *Gardens of Paradise*,
(London, 1987), p. 112

Chapter VII. The Museum of Samarkand

"They say the king of Samarkand wanted to realize the dream of every human being, to escape death. Convinced that it came from the sky and desiring to act so that death could never reach him, he had built a palace under the earth, an immense palace in iron to which he closed all access. Fabulously rich, he also had an artificial sun forged that rose in the morning and set in the evening to warm him and to indicate the passing of the days. Alas! The god of Death succeeded in deceiving the vigilance of the monarch, and slipped into the interior of the palace to carry out his duty. He had to prove to all human beings that no creature escapes death, whatever his power or his wealth, his ability or arrogance may be. In this way Samarkand became the symbol of the inevitable encounter between man and his destiny."

From Amin Maalouf, *Samarcande*, p. 338

The intent behind the museum was to create a public monument of significant symbolic value to reveal the concepts that generated the monuments of the past, through the placement of the modern monument in immediate proximity of the Registan square. It is intended to relate to the monuments of the Registan Complex, complete the square of the composition, and emphasize the Registan square as the living center of contemporary Samarkand. It takes on a related, but different form than the three madrasas, yet it nevertheless shares their meanings.

As a whole, the building is meant to evoke the symbolism of the cosmic mountain as an archetypal representation of man's

view of the world, and to refer to the plural meanings and references of: the chahar bagh, the four rivers of paradise, the quartered palace of the world ruler, which, raised on a platform, binds the microcosm of the world, which it represents, with the cosmic order beyond.

Within the cosmic mountain lies is the "Fountain of Life," the source of the rivers upon which all civilization in these arid valleys depend. Thus water, originating inside the "cosmic mountain" within the earth, nourishes the gardens and the animals, quenches the thirst of man, allows for his delight and his return to its mysterious source only to find it regenerated again. Within the cosmic mountain too lie the untold treasures, guarded by the dragon, symbol of the carnal soul which must be slain to reach the treasure.

The great underground chamber recalls the legend of Samarkand. The subterranean chamber, beneath the plane of the rationalized earth, is the legendary palace of iron constructed by the king to seal himself from his mortal fate. Today light and air penetrate into this unsealed, underground chamber, which reminds us that no matter one's might or arrogance, one cannot escape one's mortal destiny.

The space itself is dark, cool and tomb-like, but sized in a monumental scale. The treasures inside are the heritage of Samarkand, fragments of the past, treasures from centuries ago, and findings from excavations. Citing

oneself in the passage of time, in the succession of generations, is, in a sense, partaking in eternity. In the face of death, in full awareness of one mortality, one is most alive. The dragon is man's fear of life and fear of death. (see Becker p. 19.) Culture stills the anxiety of death.

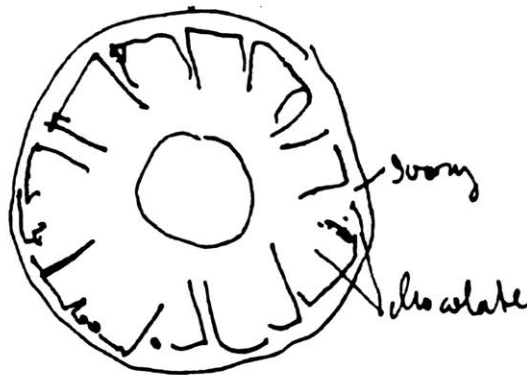


fig. 107 Inscriptions, such as the one on this ceramic bowl, figured most predominantly among the Samanids. "Planning before work protects you from regret: prosperity and peace." (The Metropolitan Museum of Art, New York)

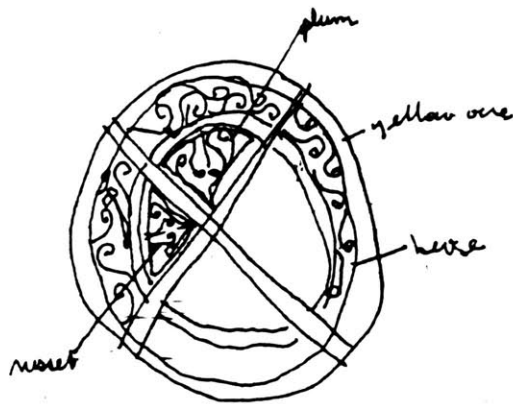


fig. 108 Ceramic bowl - X century. Slip-painted earthenware. Transoxiana, Samarkand. (The Metropolitan Museum of Art, New York)

This is the symbolic purpose of the museum building: to create a physical setting which is analogous to a metaphysical landscape: a symbolic landscape much like the ones encountered in dreams. It is not at all unlike creating the setting for a ritual, in which the participant has an experience of

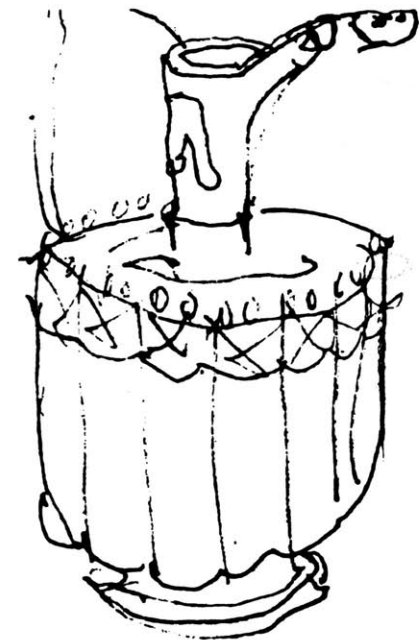


fig. 109 Ewer of Khorasan, Seljuk period. Bronze inlaid with silver, circa 1200 AD. The Seljuk motifs: signs of the zodiac, animal-headed scrolls, harpies and Arabic inscriptions in human headed naskhi script. An inscription from the Mongol period: "I am 'habb' of water wherein there is healing. This I achieve by the virtue of my sufferings on the day I was cast among the firey flames." (Metropolitan Museum of Art, New York)

deeper self-knowledge. The museum is a setting for a ritualistic-like experience that may or may not occur. It might simply evoke a feeling of solemnity or apprehension underground. One emerges from the dark, central-

ized interior into the bright primordial scene of animals and plants and sky, up to the vast elevated platform from which one views a greater, rationalized order of the Registan Square, and sees the whole of the animal park, the chahar bagh below, Registan and a gesture to the sky and light in the central pavilion. The water that returns in subterranean channels to the museum's central column, which stands in a pool, and it

to Samarkand's history, strives to act as a total symbol that reflects a permanence in a world of temporal change.

The giant pavilion built of steel in tension responds to the iwan of Tila Kari, built in 1646, through its related scale, its symmetrical position, and its common axis with the iwan. As Shir Dor was built to mirror the Ulugh Beg madrasa, the new building of Registan complex is

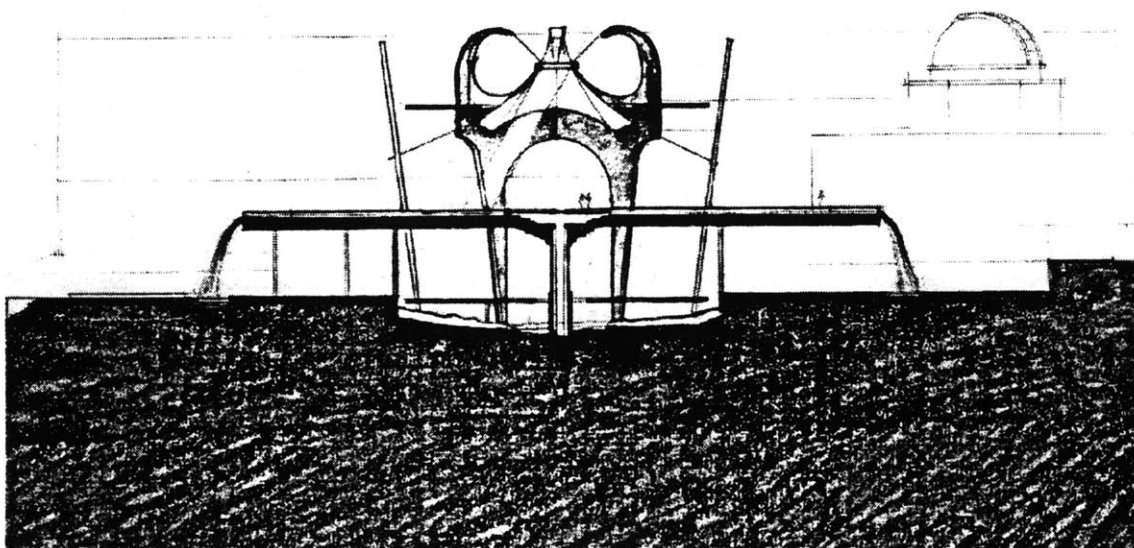


fig. 110 Section through the museum. The dome of the proposed observatory is visible in the background.

resurfaces again underneath the central pavilion, in the center of the vast platform.

The three parts of vertical composition are the pavilion, the tiled platform and the subterranean, cubic space, which all center on a common axis mundi unifying the three parts. The ensemble which makes reference

intended to "mirror" Tila Kari not in a literal sense but in a meta-physical sense. The lack of vertical mass deliberately disrupts the symmetry of the completed, square composition, to recall the cyclical processes of nature in which the completion of a cycle is also the beginning of something new. The platform, relating to the level of the street above the Registan Square, is a threshold, or a beginning of something new to occur on the opposite side of the street.

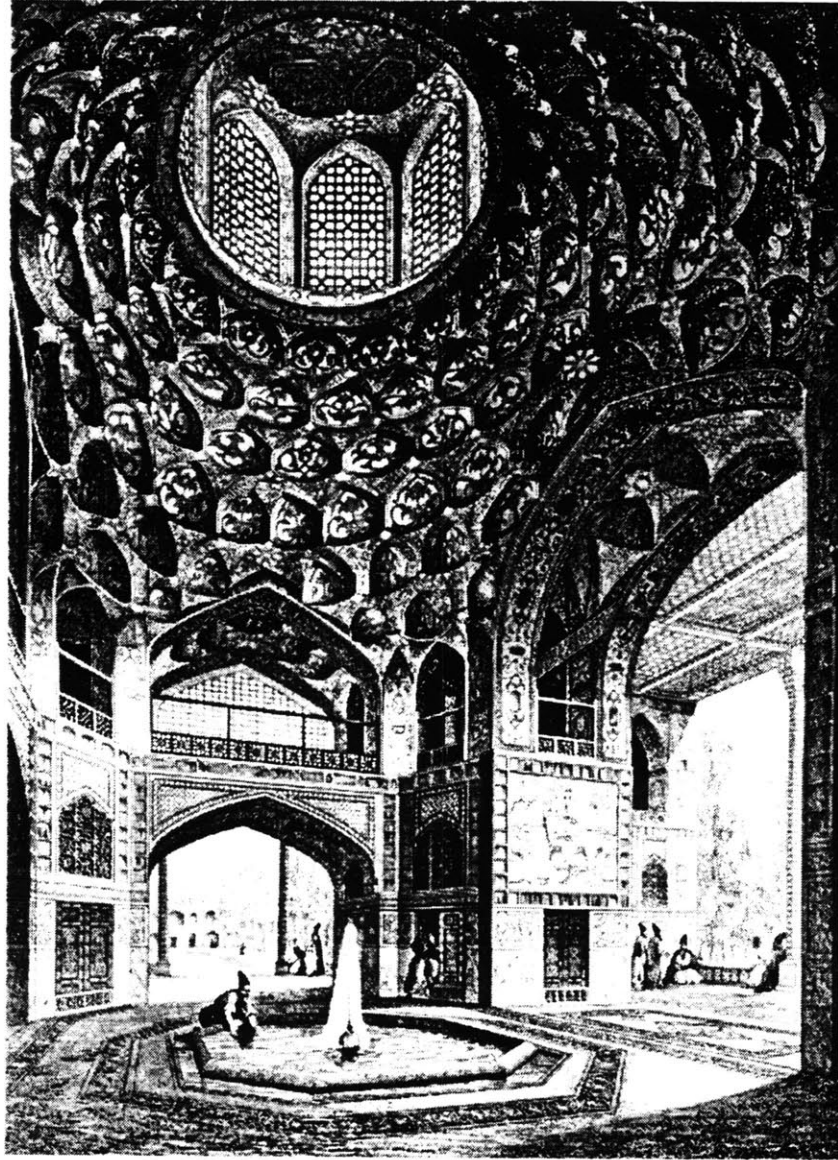


fig. 111 "An 1867 engraving of the interior of the Hasht Behist, showing the galleries and the openings of the upper rooms, and the central fountain which repeats the octagonal shape of the building."⁵⁹

The pavilion is both an extroverted object to be viewed from distant points in the city along the axial cuts of its main avenues, and it is also an introverted container of space ever conscious of its center and vertical axis.

"Here the attributes of the mandala are fully expounded, providing both a centrifugal movement outward into the paradise of nature and a centripetal motion inward, through its four porches, to the basin of water and the fountain, its spiritual center. Generating ripples of ever-expanding diameters, the effusion of the fountain recommences the cycle of conscious expansion and contraction." (See p. 55)

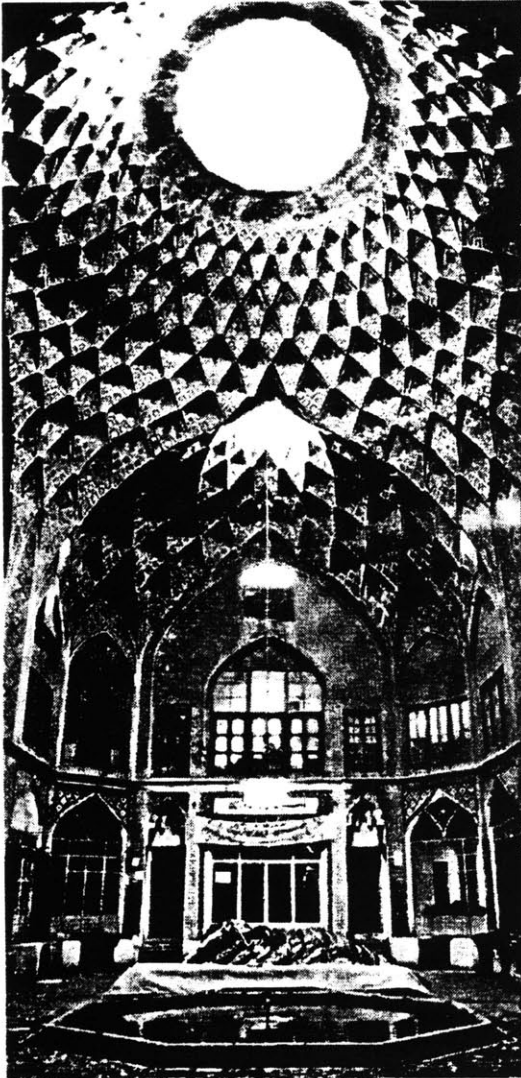


fig. 112 Kashan, Timchah-yi-Amin al-Dawlah (nineteenth century). Interior view.

The four steel arms that bend towards the center define a spherical shape that recalls the contained space of the dome but in a more dynamic, modern expression of implied enclosure. They reach towards heaven and are simultaneously pulled towards the earth by a tent which hovers between the plane of the great socle and the virtual dome above it. The dome-like spatial shape is meant to refer to the

other domes of the Registan and the concept of dome, with its duality of internal and expansive attributes. The pavilion "traps" or "contains" a piece of the sky, the heavenly vault it is meant to recapitulate.

Also in this composition, one of the origins of the dome's form, the king's tent, is recalled as it floats in suspension in the contained space of the virtual dome. The relationship between the dome and the light of heaven is recreated in new form. The translucency of the white tent controls the strong light of Samarkand with a subdued luminescence, white, as the pure light descending from the sun. This "virtual" dome of the pavilion, the tent and the use of light all refer to the early domes, which were not entirely enclosed, but ended in an oculus, so as to relate the heavenly vault of the dome and the light of the sun. A single beam of light passes through the oculus of the tent, its tension ring. As the dome marks the burial place of the ruler, the pavilion rises above the legendary "subterranean palace in iron," where the king of Samarkand met his unavoidable fate.

The form also recalls the fragments of by-gone eras, and makes reference to death, the realm from which springs the fountain of life. The reference to kings calls back the origins of the concepts about cosmic cities, in which the city is identified with the world, the memory of kings as world rulers, the identification



fig. 113 Tila Kari madrasa

with the ruler's palace with the center of the world, and the symbolic equivalence of the palace, the tomb, the world center and the sacred mountain. Furthermore, the adjacent animal garden is a direct reference to the Mogul animal parks and to the king's hunting grounds.

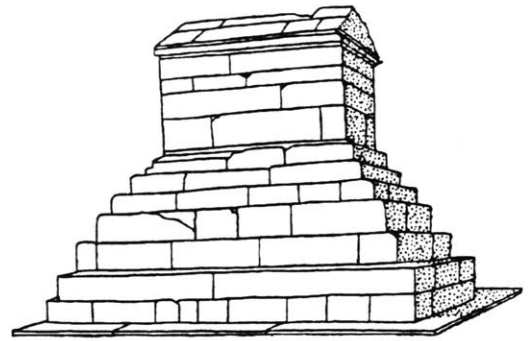


fig. 114 The Kyros grave, Pasargadae, about 530 BC



fig. 115 Tombstone of Susam ibn Abbas.

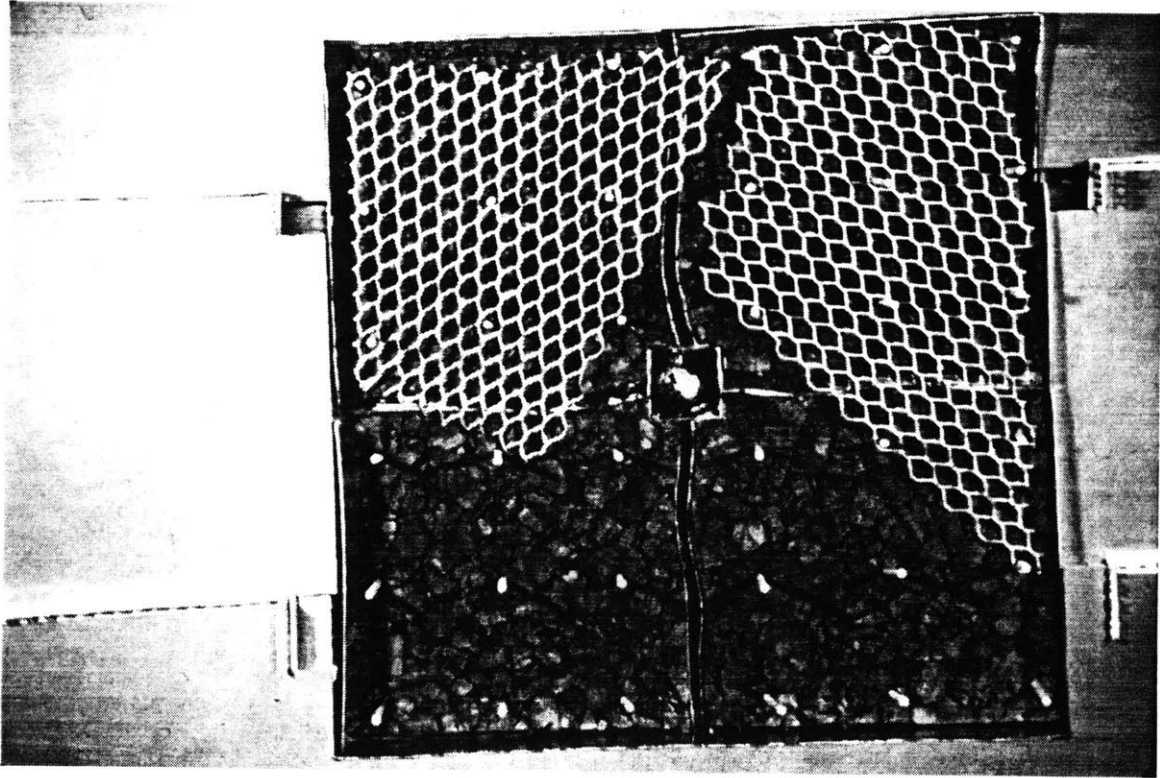


fig. 116 The subterranean chamber is quartered, with a raised, floor made of steel grill through which one sees the floor of the earth below. The containment walls are plates of steel. The space is illuminated by artificial light in a vast ceiling cavity. The lights are scattered at random as are the stars.

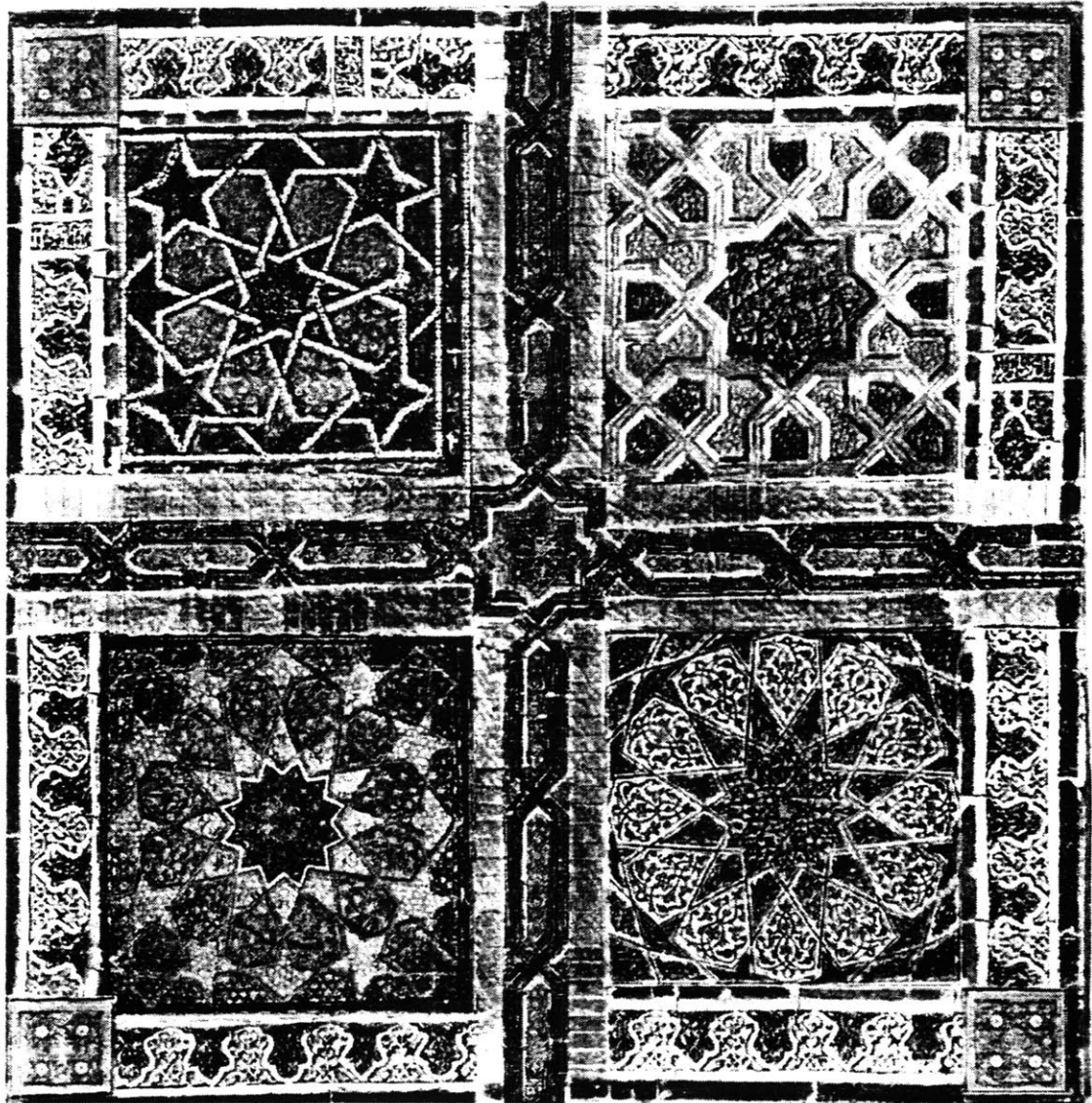


fig. 117 The design of the mosaic for the elevated platform. Prominent colors are assigned to each quadrant: blue (earth) for the northeast, green (water) for the northwest, red (fire) for the southeast, and yellow (air) for the southwest.

⁵⁹ John Brookes, *Gardens of Paradise*, (London, 1987), p. 87.

Chapter VIII. Beyond Samarkand

*Whatever is seen in this visible world,
Is as a reflection from the sun of that
world.*

*The world is a curl, down, mole and brow
For everything in its own place is
beautiful...*

*The spiritual world is infinite,
How can the finite eyes attain to it.
How can the mysteries behold in ecstatic
vision*

*Be interpreted by spoken words?
When mystic treat of these mysteries,
They interpret them by symbols
For objects of sense are as shadows of that
world.*

From Mahmud Shabistari, *Gulshan-i-raz*,
p.71.

"Has contemporary culture made cultural discreteness obsolete? and what does that mean?" This inquiry seeks to design a revitalized city composed of culturally specific design. One of the inherent limitations of the inquiry is that the methods cannot be tested without constructing the buildings conceived in this light, and the observing the response of the receiving population. Nevertheless, the intention of the thesis is not to prove the hypothesis, but merely to present an exploration as a contribution to the body of thought generated around the problem of culturally specific design in the contemporary environment.

One of the issues in the Muslim world that is in common with of the whole world is the issue of a culturally responsive, modern environment, as a

response to the prominence of buildings otherwise devoid of context or cultural meaning. One's intention is a fundamental part of action, and a collective search is what it is about.

How can the discoveries of the past become part of today's world, and how do the latent ideas behind paradigmatic forms enter into a design process and become a valid part of today's expression? According to Professor William Porter, a design vocabulary should:

- Map onto similar features of an ancient city that can be made visible
- Reflect current manifest aspirations of a population, where their past experiences includes a family of forms that is recognizably related
- Serve as a clue to the past that has no other significance than to be discovered
- Reflect latent aspirations that can be discovered either by indirect methods of inquiry or by positive reaction to proposed design or to actual projects, and
- Have its own internal order.

The decisions made on these initial premises can be enriched and expounded upon by the process developed in this inquiry. The discoveries of a symbolic past can be used to temper and guide the design of cities and architecture in an effort to smooth the transition between a past and and future, and guide the city's emerging cultural identity.

The process is summarized in the following steps:

- Cite the problems, develop hypothesis and the set of intentions [Introduction]
- Identify the characteristics of the place on a local level [Chapter I]
- Analyze regional urban forms, and understand their origins in art and history. [Chapter II]
- Understand the spirit in which traditional forms were generated, identifying the latent concepts behind the forms [Chapter III]
- Measure the conditions of the contemporary city and problems to solve [Chapter IV]
- Apply the same spirit to technical means and forms today and utilize the research as means to temper responses to latent and manifest aspirations of the population, which are mapped onto the city in the urban scale [Chapter V]
- In the city center [Chapter VI]
- And in a single building [Chapter VII]
- Evaluate the investigation as a case study which can act as a model for further investigations elsewhere [Chapter VIII]

The process may be applied to any cultural context, but the difficulty arises in the development of a glossary of archetypes. Some cultural identities may translate with difficulty into an architectonic language, and the symbolic

meanings could easily be lost in translation. This type of inquiry relies on the prior existence of an established, recognizable architectural tradition, which is far enough into the past that it can be understood in the present. Furthermore, the communicability of symbolic references depends very much on the skill of a master planner or architect in the absence of cultural continuity. With a cultural tradition established, the master builder and artisans are far better equipped to generate an architecture that truly emanates the population's world view. In this case it is not left to the individual to struggle towards authentic regionalism.

In this inquiry, the schematic designs are developed by the individual, but the actual buildings should be implemented in by local architects and skilled craftsmen. Furthermore, the phenomenon of vernacular architecture is still accommodated for in the urban planning, in which the mohallas are continued to be built by the people. The tradition of courtyard housing is still ongoing, despite the radical changes that occurred over this century. Perhaps only a direction needs to be stated and an example given, and the indigenous population will best determine the fate of their future built environment.

Appendix I

In 970 AD the Arab Ibn Hawkal journeyed to North Africa, Spain and the Sahara, Egypt and the northern regions of Islam including Transoxiana. The passage from his book *Kitab Surat al-ard*, translated as *Configuration of the Earth*, he describes Samarkand in detail:

"The capital city of Sughd is Samarkand, located to the south of the River Sughd on an elevation. The city is composed of a citadel, an old city and a suburb: the prison is now located in the citadel: the government seat was previously located there as well but today only its ruins remain. From the top of this citadel where I climbed, one can appreciate the most splendid view one can dream of: green trees, shiny castles, streams with rapid flows and luminous cultures. There is no space that the eye gets tired of, no garden whose beauty does not make one happy to see; the compound is divided in well-delineated squares and its splendor is infinite. Cypress trees are cut in such way to form the most curious figures: animals, such as elephants, camels, cows, wild beasts looking at each other as if they were to start a dialogue, or measuring each other for an attack or a fight. What a view. What a hole for fortunes to be engulfed. What a show to subjugate the heart of human beings. Let's add to this the rapid streams, the ponds filled with continuously

shivering water, exquisite resting places, summerhouses and gazebos built splendidly and well aligned: these are beautiful houses, superb meeting rooms which are the sign of the heights of the vision of illustrious princes.

Samarkand is enclosed in a fortified wall pierced with four doors: the east one, the Chinese door rises higher with regard to the surrounding ground and it is accessed by numerous steps; it overlooks the river Sughd; the next door called Door of the Naubahar, to the west, is also located on an elevated area; the northern door is called the Bukhara door, and the Door of Kish is to the south.

The city is filled with big markets and as is the case for large cities, it has quarters, bath, khans, and residences. The water is brought to the city through lead ducts that are raised, and for this purpose a dike has been built that stands relatively high above ground level and that, in some places, constitutes a real hill made out of stones, in the market center, starting and the exchange counter; the water flows from the coppersmiths market up to the entrance of the city through the door of Kish. The bed of this water channel is made out entirely of lead. The surroundings of the city are below the city level, because the soil was formed from the extraction of the soil and the clay. A aqueduct was necessary to bring the water through this moat into the city. It is an antique pre-Islamic channel; it is located in the middle of the markets and goes

through a place called Ras al-Taq, one of the most populated quarters of Samarkand. On both sides of this channel, lie cultivated fields that are considered waqf for repair and maintenance; Zoroastrian guards protect these fields in all seasons; it is a compulsory service and for this reason, they are exempt from polltax.

The mosque-cathedral is located downtown below the citadel from which it is separated by the length of a street. This channel provides water for the city and orchards can be spotted. Downtown, there are few administrative buildings in a place called Asfizar; these buildings belong to the Samanid but the government building is located in the citadel. The city overlooks the River Sughd that separates it from the surrounding suburbs. The market and the suburbs lie behind the River Sughd from the place called Afshina and the door of Kuhak, then, it forms a circuit by way of Warsanin, the door of Fanak, the door of Riwdad, the door of Qasr Asad, the door of Ghadawad and stops at the river, so that this stream is used as a moat for the suburb situated in the northern region. The diameter of the space circumscribed by the wall that surround the suburb is about two parasangs (7 miles). The central point, with the grouping of the markets is Ras al-Taq, and it is rightly the place from where the markets, the streets and the avenues start. Inside this perimeter are spread quarters,

palaces, orchards: almost all these streets and houses have running water and only a few of these houses do not have orchards so much that if one looks to the city from any place of the citadel, one cannot see it because it is hidden by orchards and trees that are in the middle of the residences and that border the streams and markets. The khans and the seat of the merchant corporations are placed in the suburb, except for a very small number that are located in town. It is the commercial center of Transoxiana and it was the governmental capital until the reign of Ismail ibn Ahmad, may God have pity on him!

The exit points that were open in the wall of the suburb do not have wooden nor iron doors any more since the riots that had broken: public services order to tear off the leaves of the doors and the holes remained open, without doors. It is the case for the doors of Ghadawad, Isbishk, Sukhashin, Afshina, Warsanin, Kuhak, Riwdad and Farrukhshidh...

The ground of Samarkand is good for the health and it is extremely dry: if one believes the doctors, this excess of dryness would be harmful to the health if it was not compensated by abundant fog that lingers above the streams that go through the streets and entering the houses and if it was not for the large number of willows in the countryside. The houses are built in adobe and wood....Almost all avenues,

streets and markets of the city are paved with stones..."

The author then gives a lengthy description of the river disposition, the streams and channels, and the irrigation of villages and of cities.

If one climbs up a mountain above the river of the Sughd, one can see contiguous green fields in the midst of which one can see sprout many a white citadel, many palaces with high walls, but in the structure of this general effect it is rare to see a hole in this greenery of a fallow land or even some desert..."

11

Appendix II

In 1403 Henry III, King of Castille, sent two ambassadors to establish friendly contacts with Timur. Ruy Gonzalez de Clavijo recorded in a diary his impressions of Samarkand four hundred years after Ibn Hawkal's accounts:

"Now therefore that I have narrated in detail all that befell us during our stay in Samarkand, I must describe that city for you, telling of all that is there to be seen in and round and about, and of all that Timur has accomplished there to embellish his capital. Samarkand stands in a plain, and is surrounded by a rampart or wall of earth, with a very deep ditch. The city itself is rather larger than Seville, but lying outside Samarkand are great numbers of houses which form extensive suburbs. These lie spread on all hands for indeed the township is surrounded by orchards and vineyards, extending in some cases to a league and a half or even two leagues beyond Samarkand which stands in their center. In between these orchards pass streets with open squares; these are all densely populated, and here all kinds of goods are on sale with bread stuffs and meat. This is why the population without the city is more numerous than the population within the walls. Among these orchards outside Samarkand are found the most noble and beautiful houses, and here Timur

has his many palaces and pleasure grounds. Round and about the great men of the government also here have their estates and country houses, each standing within its orchard: and so numerous are these gardens and vineyards surrounding Samarkand that a traveler who approaches the city sees only a great mountainous height of trees and the houses embowered among them remain invisible. Through the streets of Samarkand, as though its gardens outside and inside, pass many water-conduits, and in these gardens are the melon-beds and cotton-growing lands...

...Thus trade has always been fostered by Timur with the view of making his capital the noblest of cities: and during all his conquests wheresoever he came, he carried off the best men of the population to people in Samarkand bringing together master craftsmen of all nations. Thus from Damascus he carried away with him all the weavers of that city, those who worked at the silk looms. Further the bow-makers who produce those cross-bows which are so famous: likewise armorers: also the craftsmen in glass and porcelain, who are known to be the best in all the world. From Turkey he had brought their gun-smiths who make the arquebus, and all men of other crafts wheresoever he found them, such as the silversmiths, and the masons. These all were in very great numbers...

So great therefore was the population now of all

nationalities gathered together in Samarkand that of men with their families the number they said must be about 150,000 souls. Of the nations brought here together there were to be seen Turks, Arabs and Moors of diverse sects, with Christians who were Greeks and Armenians, Catholics, Jacobites and Nestorians, and besides those (Indian) folk who baptize with fire in the forehead, who are indeed Christians but of a faith that is particular to their nation. The population was so vast that lodging for them all could not be found in the city limits, nor in the streets and open spaces of the suburbs and villages outside, and hence they were to be found quartered temporarily for lodgment even in the caves and in tents under the trees of the gardens, which was a matter very wonderful to see. The markets of Samarkand further are amply stored with merchandise imported from distant and foreign countries...

...Throughout the city of Samarkand there are open squares where butchers' meat ready cooked, roasted or in stews is sold, with fowls and game suitably prepared for eating, also bread and excellent fruit are on sale. All these viands and victuals are there set out in a decent cleanly manner, namely in all those square and open spaces of the town, and the traffic goes on all day and even all through the night time. Butchers' shops are numerous also those booths where fowls, pheasants and partridges are on sale: and these shops are

kept open by night as by day. On the one part of Samarkand stands the Castle which is not built on a height, but is protected by deep ravines on all its sides: and through these water flows which makes the position of the castle impregnable. It is here that his Highness keeps his treasure, and none from the city may enter save the governor of the Castle and his men. Within its walls however Timur holds in durance and captivity upwards of a thousand workmen; these labor at making plat-armor and helms, with bows and arrows, and to this business they are kept at work throughout the whole of their time in the service of his Highness...."

From Ruy de Clavijo, Embassy to Tamerlane 1403-6.

Translated by Guy Le Strange.

Appendix III

Babur Mirza, from the Ferghana Valley wrote this during his stay in Samarkand between 1497-98:

"...Again he (Timur) laid out two gardens, on the east of the town, one, the more distant, the Bagh-i-bulardi, the other nearer, the Bagh-i-dilkusha. From Dilusha to the Turquoise Gate, he planted an Avenue of White Poplar, and in the garden itself erected a great kiosque, painted inside with pictures of his battles in Hindustan. He made another garden, known as the Naqsh-i-jahan (World's Picture) on the skirt of Kohik, above the Qaua-su, or as people also call it, the Ab-i-rahmat (Water of Mercy) of Kan-i-gil. It has gone to ruin when I say it, nothing remaining of it except its name. His also are the Bagh-i-ghanar, near the walls and below the town of the south, also the Bagh-i-shamal (North Garden) and the Bagh-i-bihist (Garden of Paradise). His own tomb and those of his descendants who have ruled in Samarkand are in a College, built at the exit (chahar) of the walled-town, by Muhammad Sultan Mirza, the son of Timūr Beg's son, Jahangir Mirza. -

Amongst Ulugh Beg Mirza's buildings inside the town are a College and a monastery (Khanqah). The dome of the monastery is very large, few so large are shown in the world. Near these two buildings, he constructed an excellent Hot Bath

(hammam) known as the Mirza's Bath; he had the pavements in this made of all sorts of stone (? mosaic) ; such another bath is not known in Khurasan or in Samarkand. Again; - to the south of the College is his mosque, known as the Masjid-i-maqata' (Carved Mosque) because its ceiling and its walls are all covered with islimi and Chinese pictures formed of segments of wood. There is a great discrepancy between the qibla of this mosque and that of the College; that of the mosque seems to have been fixed by astronomical observation.

Another of Ulugh Beg Mirza's fine buildings is an observatory, that is, an instrument for writing Astronomical Tables. This stands three stories high, on the skirt of the Kohik upland. By its means the Mirza worked out the Durkani Tables, now used all over the world. Less work is done with any others. Before these were made, people used the Ailkhani Tables, put together at Maragha, by Khawja Nasir Tusi, in the time of Hulaku Khan. Hulaku Khan it is, people call Ail-khani.

Ulugh Beg Mirza again, made the garden known as the Bagh-i-maidan (Garden of the Plain), on the skirt of the Kohik upland. In the middle of it, he erected a fine building they call the Chihil Situn (Forty Pillars). On both stories are pillars, all of stone (tashdin). Four turrets, like minarets, stand on its four corner-towers, the way up into them being through the towers. Everywhere there are stone pillars, some fluted, some twisted,

some many-sided. On the four sides of the upper story are open galleries enclosing a four-doored hall (*char-dara*); their pillars are also all of stone. The raised floor of the building is all paved with stone.,,

,,,In the time also of *Sl. Ahmad Mirza* the great and lesser begs laid out many gardens, large and small. For beauty, and air, and view, few will have equaled *Darwesh Muhammad Tarkhan's Char-bagh (Four Gardens)*. it lies overlooking the whole of *Quba Meadow*, on the slope below the *Bagh-i-maidan*. Moreover it is arranged symmetrically, terrace above terrace, and is planted with beautiful *narwan* and cypresses and white poplar. A most agreeable sojourning place, its one defect is the want of a large stream.

Samarkand is a wonderfully beautified town. One of its specialties, perhaps found in few other places, is that the different trades are not mixed up together in it but each has its own bazaar a good sort of plan. Its bakers and its cooks are good. The best paper in the world is made there; the water for the paper-mortars all comes from *Kan-i-gil*, a meadow on the banks of the *Qara-su (Blackwater)* or *Ab-i-rahmat (Water of Mercy)*. Another article of *Samarkand* trade, carried to all sides and quarters, is *cramoisy velvet*.

Appendix IV

In her book *Turkestan Solo*, Ella Maillart, the Swiss explorer, observes Samarkand in the grip of historical chaos as three great powers - Russia, China and the British Empire - as their peoples struggle to live alongside each other. She describes the life of the Registan Square in the 1920's:

In the shadow of a doorway the public letter-writer, his head on his folded chapan, sleeps away the time while waiting for a client. In front of him, by the side of his satchel and ink-case and held down by a teapot, is a specimen of his writing.

On the opposite side of the street the while-you-wait photographer also has the results of his efforts on exhibition. He is operating on a client approaching her term, who for an instant draws aside her chedra, revealing a face that is too round, though with splendid eyes, and eyebrows artificially bridged with kohl. Her friend, on the contrary, is very up to date. She wears a short skirt, blouse and embroidered skull cap, and pays the photographer.

The Registan Square is strikingly impressive, shut in on three sides by the lofty facades of the madrasas lovingly restored by the architect Viatkin. The work begun at the birth of the century still goes on. Wherever the wretched brick that was used in the structure had disintegrated owing to wind and sun, rain and frost, concrete is now replacing it.

The enameled facing tiles are beginning to peel off.

Ulug Beg Madrasa is lovely in its stark simplicity. The immense Iwan is a somber opening, the whole arch being set in the square frame of walls whose facade is covered with geometric designs in enamel.

At each angle a solitary minaret rises, the bricks arranged in such a manner as to make patterns in lozenges of dark blue. The cupolas that linked them have long fallen into decay. The minaret on the right is under repair. It was beginning to lean, but a very slow pull exerted over a period of eighteen months, by cables which encircled it half-way up, has now restored it to perpendicular again. This process had the merit of preventing the decorative bricks from springing or falling away.

Viatkin's death was the occasion for a most solemn ceremony in the Registan Square.

This madrasa, the most important and most ancient in Central Asia, was built in 1417 by Ulug Beg, scholarly grandson and successor to Tamerlane. He was a great mathematician and astronomer, but his enemies hated him because he wished to take the universities out of the hands of the priests. Then his generals, under the leadership of his son, plotted together and killed him. His favorite pupil managed to save all his valuable scientific apparatus, and sought refuge in Constantinople in 1450.

Opposite it, either to satisfy some desire for symmetry or

through lack of inventiveness, the Shir Dar rises, a replica of the Ulugh Beg, though constructed two centuries later. The architect Jalank Touseh was an important personage at the Emir's court. The ribbed egg-shaped cupolas still stand, over-shadowed by the immense facade. It is mostly in Turkestan that the domes are raised on lofty cylindrical drums. Also, something that is not found anywhere else, the angles of the walls as well as the minarets curve outwards near the top.

Contrary to custom, an animal is figured on the mosaics of the facade, a sort of lion, and on all side phrases in Arabic characters are woven into the decoration....

...In another place occurs the phrase, "Only the eagle of thought could presume to attain the peak of this madrasa;" and again this still enchants me, "Never in all the centuries will an artist, thought's acrobat, even with the blow of fantasy scale the forbidden peaks of this minaret." And again: "Thou art the great warrior, Jalank Touseh Bahadur, and were the numbers of thy name summed up, the date of the foundation would be given" (1028 of the Hegira).

I found it impossible to go over the Shir dar, for at the time of my visit the Bassmatchi, whose trial had been in preparation for some months, were then imprisoned in it.

The facade of the Tillah Kari, built in 1630, presents some differences however, for a double

range of arches flanks the central Iwan.

In the middle of the Registan stands a thick crowd, which I penetrate into with some difficulty: it is drawn up in a circle, and gapes with astonishment at the feats of an acrobat.

Behind the Shir Dar I find a round open space, occupied by a small market, under a cupola filled with a swarming mass of humanity. Every imaginable article is being sold: embroidered skull caps, soap, tobacco, laces, silk handkerchiefs, stockings, ribbons, greasy pancakes in frying-pans, scraps of mutton on a great tray protected by a muslin dome-shaped cover, and snowy sherberts glittering with icy crystals.

Some riders appear, pushing aside the crowd with their hands. Look out! A coachman is trying to get through...

Alleyways of different trades, where in the half-light of the roof-pents the minute and identical booths face each other; squatting artisans, cobblers, carpenters; and at a short distance blacksmiths disappearing into the earth up to their knees to be on a level with their anvils which rest on the ground. Whenever the bellows are put into motion the coal blazes up, and a sudden vision of a rain-sodden England rises before me, so clearly does the smell of the anthracite recall the odor that impregnates everything in that country...

In the resounding alley of the tinkers a booth gleaming with antique copper objects makes an

admirable foil for the head of a young Uzbek who has brought some knives to be sharpened: the whites and blacks of his flashing eyes shimmer in the shadow of the enormous silky-haired, russet head-dress he is wearing.

"Fox, no doubt!" I say to him.

"No; cat!"

Ah, I forgot: Bokhara cat!

11

Illustration Credits

Introduction

Maps: Aga Khan Trust for Culture, *Samarkand Revitalization Competition*.

Chapter II

- fig. 1 Knobloch, *Beyond the Oxus*, p. 42.
fig. 2 *The Architectural Monuments of Samarkand*.
fig. 3 Golombek, *The Timurid Architecture of Iran and Turan*, map 6.
fig. 4 Brentjes, *Die Stadt des Yima*, p. 29.
fig. 5 Brentjes, *Die Stadt des Yima*, p. 40.
fig. 6 Brentjes, *Die Stadt des Yima*, p. 42.
fig. 7 Brentjes, *Die Stadt des Yima*, p. 44.
fig. 8 Brentjes, *Die Stadt des Yima*, p. 43.
fig. 9 Brentjes, *Die Stadt des Yima*, p. 45.
fig. 10 Brentjes, *Die Stadt des Yima*, p. 43.
fig. 11 Aga Khan Trust for Culture, *Samarkand Revitalization Competition*.
fig. 12 Aga Khan Trust for Culture, *Samarkand Revitalization Competition*.
fig. 13 Knobloch, *Beyond the Oxus*, p. 78.
fig. 14 Brentjes, *Die Stadt des Yima*, p. 46.
fig. 15 Brentjes, *Die Stadt des Yima*, p. 59.
fig. 16 Brentjes, *Die Stadt des Yima*, p. 59.
fig. 17 Brentjes, *Die Stadt des Yima*, p. 59.
fig. 18 Pander, *Sowjetischer Orient*, p. 133.
fig. 19 Pander, *Sowjetischer Orient*, p. 291.
fig. 20 Aga Khan Trust for Culture, *Samarkand Revitalization Competition*.
fig. 21 Pander, *Sowjetischer Orient*, p. 253.
fig. 22 Aga Khan Trust for Culture, *Samarkand Revitalization Competition*.
fig. 23 Aga Khan Trust for Culture, *Samarkand Revitalization Competition*.
fig. 24 Brentjes, *Die Stadt des Yima*, p. 63.
fig. 25 Brentjes, *Die Stadt des Yima*, p. 62.
fig. 26 Aga Khan Trust for Culture, *Samarkand Revitalization Competition*.
fig. 27 Pander, *Sowjetischer Orient*, p. 180.
fig. 28 Aga Khan Trust for Culture, *Samarkand Revitalization Competition*.
fig. 29 Pander, *Sowjetischer Orient*, p. 287.
fig. 30 Aga Khan Trust for Culture, *Samarkand Revitalization Competition*.
fig. 31 Diafilm Studios, *Samarkand*.
fig. 32 *Samarkand a Museum in the Open*, p. 41.
fig. 33 Ardalan, *The Sense of Unity*, p. 39.

fig. 34 Brookes, *Gardens of Paradise*, p. 73.

Chapter III

fig. 35 *Samarkand a Museum in the Open*, pp. 42.

fig. 36 Ardalan, *The Sense of Unity*, p. 7.

fig. 37 Ardalan, *The Sense of Unity*, p. 12.

fig. 38 Ardalan, *The Sense of Unity*, p. 12.

fig. 39 Ardalan, *The Sense of Unity*, p. 17.

fig. 40 Ardalan, *The Sense of Unity*, p. 17.

fig. 41 Ardalan, *The Sense of Unity*, p. 117.

fig. 42 Ardalan, *The Sense of Unity*, p. 24.

fig. 43 Ardalan, *The Sense of Unity*, p. 30.

fig. 44 Ardalan, *The Sense of Unity*, p. 39.

fig. 45 Ardalan, *The Sense of Unity*, p. 68.

fig. 46 Ardalan, *The Sense of Unity*, p. 68.

fig. 47 Ardalan, *The Sense of Unity*, p. 69.

fig. 48 Ardalan, *The Sense of Unity*, p. 70.

fig. 49 Ardalan, *The Sense of Unity*, p. 71.

fig. 50 Ardalan, *The Sense of Unity*, p. 75.

Chapter IV

fig. 51 Aga Khan Trust for Culture, *Samarkand Revitalization Competition*.

fig. 52 Aga Khan Trust for Culture, *Samarkand Revitalization Competition*.

fig. 53 Aga Khan Trust for Culture, *Samarkand Revitalization Competition*.

fig. 54 Aga Khan Trust for Culture, *Samarkand Revitalization Competition*.

fig. 55 Aga Khan Trust for Culture, *Samarkand Revitalization Competition*.

fig. 56 Aga Khan Trust for Culture, *Samarkand Revitalization Competition*.

fig. 57 *The Architectural Monuments of Samarkand*.

fig. 58 Pander, *Sowjetischer Orient*, fig. 95

fig. 59 Pander, *Sowjetischer Orient*, fig. 92

fig. 60 Pander, *Sowjetischer Orient*, fig. 93

Chapter V

fig. 61 Aga Khan Trust for Culture, *Samarkand Revitalization Competition*.

fig. 62 Aga Khan Trust for Culture, *Samarkand Revitalization Competition*.

fig. 63 by author

fig. 64 Aga Khan Trust for Culture, *Samarkand Revitalization Competition*.

fig. 65 by author

fig. 66 by author

fig. 67 Aga Khan Trust for Culture, *Samarkand Revitalization Competition*.

fig. 68 by author

fig. 69 by author

fig. 70 by author

fig. 71 Aga Khan Trust for Culture, *Samarkand Revitalization Competition*.

fig. 72 by author

fig. 73 Aga Khan Trust for Culture, *Samarkand Revitalization Competition*.

fig. 74 Aga Khan Trust for Culture, *Samarkand Revitalization Competition*.

fig. 75 by author

fig. 76 Aga Khan Trust for Culture, *Samarkand Revitalization Competition*.

fig. 77 by author

fig. 78 Aga Khan Trust for Culture, *Samarkand Revitalization Competition*.

fig. 79 by author

fig. 80 Aga Khan Trust for Culture, *Samarkand Revitalization Competition*.

fig. 81 by author

fig. 82 Aga Khan Trust for Culture, *Samarkand Revitalization Competition*.

fig. 83 Aga Khan Trust for Culture, *Samarkand Revitalization Competition*.

fig. 84 by author

fig. 85 Aga Khan Trust for Culture, *Samarkand Revitalization Competition*.

fig. 86 by author

Chapter VI

fig. 87 *The Architectural Monuments of Samarkand*.

fig. 88 *Samarkand a Museum in the Open*, p. 28.

fig. 89 *Samarkand a Museum in the Open*, p. 30.

fig. 90 *Samarkand a Museum in the Open*, p. 40.

fig. 91 *Samarkand a Museum in the Open*, p. 57.

fig. 92 *Samarkand a Museum in the Open*, p. 29.

fig. 93 Aga Khan Trust for Culture, *Samarkand Revitalization Competition*.

fig. 94 by author

fig. 95 by author

fig. 96 by author

fig. 97 by author

fig. 98 by author

fig. 99 by author

fig. 100 Brookes, *Gardens of Paradise*, p. 172.

- fig. 101 Brookes, *Gardens of Paradise*, p. 103.
fig. 102 Brookes, *Gardens of Paradise*, p. 112.
fig. 103 Pander, *Sowjetischer Orient*, fig. 39.
fig. 104 Ardalan, *The Sense of Unity*, p. 120.
fig. 105 Brookes, *Gardens of Paradise*, p. 176.
fig. 106 Knobloch, *Beyond the Oxus*, p. 171.

Chapter VII

- fig. 107 by author
fig. 108 by author
fig. 109 by author
fig. 110 by author
fig. 111 Brookes, *Gardens of Paradise*, p. 86.
fig. 112 Ardalan, *The Sense of Unity*, p. 17.
fig. 113 *Samarkand a Museum in the Open*, p. 56.
fig. 114 Brentjes, *Die Stadt des Yima*, p. 25.
fig. 115 *Samarkand a Museum in the Open*, p. 121.
fig. 116 by author
fig. 117 by author

Bibliography

- The Aga Khan Award for Architecture. *Architecture and Community*. New York: Aperture, 1983.
- The Aga Khan Award for Architecture. *Architecture in Continuity*. Millerton, NY: Aperture, 1985.
- The Aga Khan Trust for Culture. *Samarkand Revitalization*. Geneva, 1990.
- Arberry, A. J., ed. *Persian Poems*. London: J. M. Dent and Sons, 1954.
- The Architectural Monuments of Samarkand* (in Russian). Moscow, 1948.
- Ardalan, Nader. *The Sense of Unity*. Chicago: University of Chicago Press, 1973.
- Battuta, Ibn. *Travels in Asia and Africa*. Translated by H. A. R. Gibb. London: George Routledge, 1929.
- Becker, Ernest. *The Denial of Death*. New York: The Free Press, 1973.
- Blunt, Wilfrid. *The Golden Road to Samarkand*. Viking Press, 1973.
- Burckhardt, Titus. *Sacred Art East and West*. London: Perennial Books, 1967.
- Brentjes, Burchard. *Die Stadt des Yima*. Leipzig: VEB E.A. Seeman Verlag, 1988.
- Brookes, John. *Gardens of Paradise*. London: Weidenfield and Nicholson, 1987.
- Bulatova, V. *Samarkand: a Museum in the Open*. Tashkent, 1986.
- Clavijo. *Embassy to Tamerlane 1403-6*. Translated by Guy Le Strange. London: George Routledge and Sons, 1928.
- Corbin, Henry. *Creative Imagination in the Sufism of Ibn `Arabi*. London: Routledge and Kegan Paul, 1969.
- Curtis, William Eleroy. *Turkestan: "the Heart of Asia"*. Hodder and Stoughton, George H. Doran company, 1911.
- Dawood, N. J. *The Koran*. Translation. London: Penguin Classics, 1956.
- Gastal, Alfredo. *Towards a Model of Cultural Analysis for the Designing Process*.
- Gippenreiter, Vadim E. *Fabled Cities of Central Asia*. New York, Abbeyville Press Publishers, 1989.
- Golombek, Lisa. *The Timurid Architecture of Iran and Turan, vol. II*. Princeton, NJ: Princeton University Press, 1988.
- Guénon, René. *Symboles fondamentaux de la science sacrée*. Paris: Gallimard, 1962.
- Herdeg, Klaus. *Formal Structure in Islamic Architecture of Iran and Turkestan*. New York: Rizolli International Publication, 1990.
- Ibn `Arabi. *Risalat al-ahadiyyah*. Translated by T.H. Weir, "Translation of an Arabic Manuscript in the Hunterian Collection, Glasgow University." *Journal of the Royal Asiatic Society* (1901), pp. 808-25.
- Knobloch, Edgar. *Beyond the Oxus*. London: Ernest Benn Limited, 1972.
- Kuhn, Thomas S. *The Structure of Scientific Revolutions*. Chicago: University of Chicago Press, 1970.
- Lynch, Kevin. *What Time Is this Place?* Cambridge, MA: MIT Press, 1972.
- Maalouf, Amin. *Samarcande*. Paris: J.P. Clattes.
- Marlowe, Christopher. *Tamburlaine the Great*. Baltimore MD: Johns Hopkins University Press, 1981.
- Nasr, Seyyed Hossein. *Science and Civilization in Islam*. Cambridge, MA: Harvard University Press, 1968.
- Pander, Klaus. *Sowjetischer Orient*. Köln: DuMont Buchverlag, 1982.
- Rawkin, Michael. *Russian in Central Asia*. New York: Collier Books, 1963.
- Shabistari, Sa`d al-Din Mahmud. *Gulshan-i-raz* [The Garden of Mystery]. Translated by E. H. Whinfield. London 1880.
- The World Atlas of Architecture*. London: Mitchell Beazley Publishers, 1984.