



Universiteit
Leiden
The Netherlands

The architecture of the four-īwān building tradition as a representation of paradise and dynastic power aspirations

Paskaleva, E.G.

Citation

Paskaleva, E. G. (2010, September 22). *The architecture of the four-īwān building tradition as a representation of paradise and dynastic power aspirations*. Retrieved from <https://hdl.handle.net/1887/15971>

Version: Not Applicable (or Unknown)

License: [Licence agreement concerning inclusion of doctoral thesis in the Institutional Repository of the University of Leiden](#)

Downloaded from: <https://hdl.handle.net/1887/15971>

Note: To cite this publication please use the final published version (if applicable).

**The Architecture of the Four-Īwān
Building Tradition as a Representation
of Paradise and Dynastic Power
Aspirations**

Elena Paskaleva

Cover illustrations: Collage of Rīgīstān Square, Gūr-i Amīr in Samarqand, Author's photographs, 2006

Cover design and printing: Off Page, Amsterdam

ISBN: 978-90-815655-1-6

© Elena Paskaleva, Leiden

All rights reserved. No part of this publication may be reproduced, stored in or introduced into a retrieval system, or transmitted, in any form or by any means (electronic, mechanical, photocopying, recording or otherwise) without the prior written permission of the author.

The Architecture of the Four-Īwān Building Tradition as a Representation of Paradise and Dynastic Power Aspirations

P R O E F S C H R I F T

ter verkrijging van
de graad van Doctor aan de Universiteit Leiden,
op gezag van Rector Magnificus prof.mr. P.F. van der Heijden,
volgens besluit van het College voor Promoties
te verdedigen op woensdag 22 september 2010
klokke 13.45 uur

door

Elena Georgieva Paskaleva
geboren te Ruse (Bulgarije)
in 1975

Promotiecommissie

Promotor:

Prof.dr. Aart J.J. Mekking

Overige leden:

Prof.dr. Thomas Coomans de Brachène (Katholieke Universiteit Leuven)

Prof.dr. Jan van Alphen (Universiteit Antwerpen/Bozar Brussel)

Prof.dr. Jo van Steenberghe (Rijksuniversiteit Gent)

Prof.dr. Peter J.M. Nas

Prof.dr. Pieter ter Keurs

Dr. Hans Theunissen

Dr. Ellen Raven

Dr. Eric Roose (Fellow of the Amsterdam Institute for Social Science Research)

Table of Contents

Acknowledgements	
I Starting Points	1
I.1 Introduction	1
I.2 Status Quaestionis	5
I.3 Methodology	15
II Architectural Representation of the Hierophany of Paradise	22
II.1 The Hierophany of the Cosmic Cross	22
II.2 The Hierophany of the <i>Axis Mundi</i>	45
II.3 The Hierophany of Paradisus Quadripartitus	53
II.4 The Hierophany of the Gates of Paradise	75
III Physiomorphic Representations of Paradise	81
III.1 Mount Kailas	81
III.1.1 Kailasa Temple (756-773 AD), Ellora	84
III.2 The Mandala	86
III.2.1 The Hindu Temple Based on a Mandala	87
III.2.2 The Jain Temple Based on a Mandala	93
III.2.3 The Buddhist Temple Based on a Mandala	98
III.2.4 Geometrical Similarities between the Mandala and the Four- <i>Īwān</i> Plan	104
III.2.4.a Orthogonal Symmetry	104

III.2.4.b	The Grid	105
III.2.4.c	Central Organisation and Cross Axiality	108
III.2.4.d	Anthropomorphic Organic Unity and Four Directions.....	111
IV	Civitas Dei: Paradise as Urban Representation of Power	114
IV.1	The Hierophanies of the Cosmic Cross and Paradise Used in Urban Plans	114
IV.2	Indian and Chinese Manuscripts on the Construction of Four-fold Urban Entities.....	116
IV.3	Baghdad.....	122
IV.4	Marv.....	125
IV.4.1	Dār al-Imāra (747-748 AD), Marv	129
IV.4.2	The Saljūq Palace (11 th c. AD), Marv.....	131
IV.5	Harāt	133
IV.5.1	Khwaja 'Abd Allah Ansari Funerary Shrine (1425-1427 AD), Gāzurgāh.....	138
IV.6	Khīva.....	142
IV.7	Bukhārā.....	146
IV.7.1	Sāmānid Mausoleum (892-943 AD), Bukhārā	153
IV.7.2	Bahauddin Bliss Bukhari Complex (16 th c. AD), near Bukhārā.....	161
IV.8	Shahr-i Sabz	177
IV.8.1	Āq Sarāy (1380-1404 AD), Shahr-i Sabz.....	178
IV.8.2	Dār al-Siyādat Ensemble (14 th c.-15 th c. AD), Shahr-i Sabz	183
IV.8.2.a	Jahangir's Mausoleum (1375-1404 AD), Shahr-i Sabz.....	183
IV.8.2.b	Tīmūr's Crypt (14 th c.-15 th c. AD), Shahr-i Sabz.....	187

IV.8.3	Dār al-Tilavah Ensemble (14 th c.-15 th c. AD), Shahr-i Sabz.....	192
IV.8.3.a	Ulugh Beg's Congregational Mosque Kōk Gunbad (1435-1436 AD), Shahr-i Sabz	193
IV.8.3.b	Mausoleum of Shaykh Shamsiddin Kulal (1373-1374 AD) and Gumbazi-Sayidon, Mausoleum of Ulugh Beg's Descendants (1437-1438 AD), Shahr-i Sabz	202
IV.9	Samarqand	210
IV.9.1	Urban Changes Commissioned by Tīmūr.....	212
IV.9.2	The Gardens of Tīmūr	213
IV.9.3	The Tīmūrid Rigistān	217
V	The Four- <i>īwān</i> Kosh Principle	219
V.1	The Two-fold <i>Kosh</i> : Madrasa versus Mausoleum	224
V.1.1	Madrasa of Tamghach Bughra Khān (1066 AD) versus the Mausoleum of Quthām b. 'Abbās (11 th c.-14 th c. AD), Samarqand.....	224
V.1.2	Shergazi Khān Madrasa (1718-1726 AD) versus the Pahlavān Mahmūd Mausoleum (14 th c.-16 th c.), Khīva	238
V.2	The Two-fold <i>Kosh</i> : Madrasa versus Congregational Mosque.....	244
V.2.1	Bībī Khānum Congregational Mosque (1398-1405 AD) versus the Saray Malik Khānum Madrasa (1397 AD) and Mausoleum (early 15 th c. AD), Samarqand.....	244
V.2.2	The Kalyān Mosque (completed 1512-1539 AD) versus the Mīr-i 'Arab Madrasa (1535-1536 AD), Bukhārā	268
V.2.2.a	Comparison between the Exterior <i>īwāns</i> of the Bībī Khānum and the Kalyān Mosques	284
V.3	The Two-fold <i>Kosh</i> : Madrasa versus Madrasa	288
V.3.1	Ulugh Beg Madrasa (1417-1420 AD) versus 'Abd al-'Azīz Khān Madrasa (1651-1652 AD), Bukhārā	288

V.3.2	Madār-i Khān Madrasa (1566-1567 AD) versus ‘Abdallāh Khān Madrasa (1588-1590 AD), Bukhārā	302
V.3.3	Qutlugh Murad Inaq Madrasa (1804-1812 AD) versus Allāh Qulī Khān Madrasa (1834-1835 AD), Khīva	318
V.4	The Two-fold <i>Kosh</i> : Madrasa versus <i>Khānaqāh</i>	328
V.4.1	Ulugh Beg Madrasa (1417-1420 AD) and <i>Khānaqāh</i> (1424 AD) on Rigistān Square, Samarqand	328
V.5	The Three-fold <i>Kosh</i> : The <i>Kosh</i> Square	335
V.5.1	Gūr-i Amīr (1400-1404 AD), Samarqand	335
V.5.2	Labi Hauz Square (16 th c.-17 th c. AD), Bukhārā	351
V.5.2.a	Kukeltash Madrasa (1568-1569 AD), Bukhārā	353
V.5.2.b	Nādir Dīvān Beg <i>Khānaqāh</i> (1619-1620 AD), Bukhārā	359
V.5.2.c	Nādir Dīvān Beg Madrasa (1622-1623 AD), Bukhārā	366
V.5.3	Rigistān Square (15 th c.-17 th c.), Samarqand	372
V.5.3.a	Ulugh Beg Madrasa (1417-1420 AD), Samarqand	378
V.5.3.b	Shīr Dār Madrasa (1619-1635/36 AD), Samarqand	386
V.5.3.c	Tilā Kārī Madrasa and Mosque (1646-1660 AD), Samarqand	397
	Major Conclusions	410
	Annex I: <i>Qibla</i> Orientations in Samarqand and Bukhārā	411
	Selected Bibliography	415
	Samenvatting in het Nederlands	425
	Curriculum Vitae	436

Acknowledgements

I would like to thank professor Aart Mekking for his continuous support, inspiring conversations and tender fatherly care during the last seven years in Leiden. Without him this dissertation would have never been completed. His house is the adobe of the *Axis Mundi* of Representation. The four chairs, forming two intersecting axes at the attic table, have always been my most favourite place in his beautiful library-home where we have spent hours of discussing the cosmological and mythological concepts that have become the backbone of my work. My thanks go to Pierre Pesch for his generosity and hospitality and for the best coffee I have ever had. Dr. Eric Roose and En-Yu Huang have contributed considerably to the formation of my ideas and I would like to express my sincere gratitude for the exciting conversations and discussions we have had together over the last couple of years. Here I would also like to express my deepest appreciation to Plamen and Daniela Minchevi who have formed my interest and understanding of mythology from a very early age. Although I met Dr. Laurence Coupe for a relatively brief period of time in Manchester, his class and book on mythology have been an endless inspiration for me. From the bottom of my heart, I would like to thank my mother who have become a frequent flyer during the last three years and have been summoned on several occasions to take care of me and my young children. Her devotion and deep love are touching and I am extremely grateful for all her help. Above all, I would like to thank my husband for his love, patience and unconditional support during periods of intense happiness and sorrow. I dedicate this dissertation to everyone I love.

“Symbols are “dwellings” that enable us to reflect upon such things as divine unity, first Intellect, divine Throne, the science of representation (‘ilm al-tamaththul), God’s wonders (āyāt), and so on.”¹

Ibn ‘Arabī

I Starting Points

I.1 Introduction

The four-*īwān* scheme, marking the four cardinal points by majestic porches surrounding a courtyard, has been traced down to the Parthian palaces of Hatra and Assūr, 2nd c. AD and is associated² with the Sāsānid period (224-637 AD). Originally, the scheme was used as a palace plan representing royal and divine power. Later on, with the advent of Islam and after the 10th c. AD, the four-*īwān* plan was widely adopted for religious compounds such as open-courtyard mosques and madrasas, and centrally-domed mausoleums, tombs and Sufi *khānaqāhs*.

Initially, the *īwān* was associated with a gate or an arch into a sanctuary, going back to the first fire temples from the 5th c. BC; it developed in later times as a sacred passage to a holy site. A passage, related to crossing the border between the sacred and the profane. Although the religious reality of the *īwān* in the four-*īwān* mosque is very different from the Zoroastrian fire temples, the reality of the holy gate, transpositioning the human being from its temporal realm into the divine realm, has remained intact. Similar to other religions, also the religious essence of Islam can be found exactly in the interconnection of those two worlds, which makes the *īwān* the most appropriate choice of an architectural feature to mark the sacred space of the mosque and define it strictly from the profane surroundings of the outside hectic world.

Current architectural theory analyses the existence of the four-*īwān* compounds mostly within the local historical scope. This leads to misinterpretation of the architectural plan, which is associated with local architectural heritage symbolism, limited only to Islam. The building tradition of the four *īwāns* remained virtually unchanged after the 2nd c. AD. No attempts have been made to explain the invariable usage of the four-*īwān* scheme, since the structure has been widely used for palaces, open courtyard mosques, madrasas and caravansarays and

¹ Quoted in Akkach, S.: *Cosmology and Architecture in Premodern Islam*. New York: State University of New York Press, 2005, p.27.

² Ardalan, N. and Bakhtiar, L.: *The Sense of Unity. The Sufi Tradition in Persian Architecture*. Chicago: Chicago University Press, 1973, p.70.

for centrally domed tombs and *khānaqāhs*. Although the debate on their aesthetic appeal is not essential to the meaning of the four-*īwān* plan, aesthetics has been put forward in main stream scholarly architectural analysis by O' Kane³, Golombek and Wilber⁴, Pugachenkova⁵, Ettinghausen, Grabar and Jenkins-Madina⁶.

Godard⁷ explains the ubiquitous utilization of the four-*īwān* plan as a tool for representing Iranian national identity and attributes the origin of the four *īwāns* to the private houses of Khurasan (Fig.5). This justification, used previously by Van Berchem⁸ and Herzfeld⁹, is untenable when applied to sacred buildings such as mosques and madrasas. It does not reflect the deep religious and social changes that lead to the establishment of the four-*īwān* plan.

Although the cosmological aspects of the four-*īwān* structures have been analysed by Hillenbrand¹⁰, Vogt-Göknil¹¹, Ardalan and Bakhtiar¹², they have never been explored in detail. What is more, the relationship between the Sufi tradition and the four-*īwān* plan has never been regarded as a possible explanation for the wide-spread usage of the four-*īwān* *khānaqāhs*, i.e. as a representation of a Sufi reality.

These patterns can be analysed within the frame of the world-wide *Axis Mundi and Cosmic Cross* theme as coined and developed by Mekking¹³, whereby the intersecting cross-axial design represents the four realms of the celestial garden. The mythopoetic concept of recreating Paradise on earth is at the core of the four-*īwān* plan and will be explored throughout the current doctoral thesis. Special emphasis will be put on a comparative analysis between Hindu temples, Buddhist and Islamic learning institutions (respectively the *vihāra* and the madrasa). The analysis will go beyond mere religious differences and will dwell on shared pre-religious mythological and cosmological schemes and realities

³ O'Kane, B.: "Iran and Central Asia". In *The Mosque*, ed. M. Frishman and H. Khan. London: Thames and Hudson, 1994, p.123.

⁴ Golombek, L. and Wilber, D.: *The Timurid Architecture of Iran and Turan*. Volume I. Princeton: Princeton University Press, 1988, p.87.

⁵ Пугаченкова, Г.: *Самарканд, Бухара*. Москва: Издательство Искусство, 1968. (Pugachenkova, G.: *Samarkand, Bukhara*. Moscow: Publishing House of the Arts, 1968.)

⁶ Ettinghausen, R.; Grabar, O. and Jenkins-Madina, M.: *Islamic Art and Architecture 650-1250*. Yale: Yale University Press, 2001, p.145.

⁷ Godard, A.: *Die Kunst des Iran*. Berlin: Grunewald, 1964, p.245.

⁸ Van Berchem, M.: *Matériaux pour un Corpus Inscriptionum Arabicarum, I, Egypte*. Cairo, 1899, pp.265-66.

⁹ Herzfeld, E.: "Damascus". In *Ars Islamica* 9 and 10, 1942 and 1943.

¹⁰ Hillenbrand, R.: *Islamic Architecture. Form, function and meaning*. New York: Columbia University Press, 1994, p.19.

¹¹ Vogt-Göknil, U.: *Die Moschee. Grundformen sakraler Baukunst*. Zürich: Verlag für Architektur Artemis, 1978, pp.41-84.

¹² Ardalan and Bakhtiar: *The Sense of Unity*, 1973, p.71.

¹³ Mekking, A.: "The Architectural Representation of Reality. The Built Environment as the Materialization of a Mental Construct". In *The Global Built Environment as a Representation of Realities*. Pallas Publications, 2009.

representing Paradise. These schemes have been widely used as architectural plans. One of the objectives of this dissertation is to underline the link between the visual representations of Paradise adopted as architectural plans for sacred compounds.

The current dissertation analyses how architecture represents sacred realities. It is an architectural rather than a historical study and is only partially based on historical data. The main focus is on the architecture of the Tīmūrids as an instrument to legitimise extreme and universal power. The four-*īwān* plan is examined as a dynastic architectural tool marking the centre of the world, from which power spreads along the cardinal points to all corners of the macrocosmos. Examples of Tīmūrid mosques, madrasas and tombs are used to illustrate this approach. The main focus is on Tīmūrid architecture. Hereby, the concept of recreating Paradise on earth is further developed in line with dynastic supremacy and the role of the ruler as cosmocrator. To exemplify this concept, the architectural heritage of Tīmūr (1336-1405 AD) (Fig.1), Shāh Rukh Mīrzā (1377-1447 AD) (Fig.2) and his wife Gauhar Shād and son Mīrzā Muhammad Tāregh bin Shāh Rukh (Ulugh Beg) (1393-1449 AD) (Fig.3) will be discussed. Their building activity is analysed in the triad: grandfather (King of the world, i.e. Tīmūr) - pious son (i.e. Shāh Rukh) – grandson (i.e. Ulugh Beg reviving the iconography and aspirations of the grandfather, acting as King of the World). The geographical focus is on Transoxania (present-day Uzbekistan) and partly Khurasan (present-day Afghanistan) (Fig.4).

The Tīmūrid Royal Triad



Fig.1: Tīmūr, forensic facial reconstruction after Gerasimov from 1941

Source: <http://www.humanities.ualberta.ca/ottoman/footnote.htm> [Accessed on 1 April 2010]



Fig.2: Shāh Rukh, forensic facial reconstruction after Gerasimov from 1941

Source: [http://en.wikipedia.org/wiki/Shah_Rukh_\(Timurid_dynasty\)](http://en.wikipedia.org/wiki/Shah_Rukh_(Timurid_dynasty)) [Accessed on 1 April 2010]



Fig.3: Ulugh Beg, forensic facial reconstruction after Gerasimov from 1941

Source: http://en.wikipedia.org/wiki/Ulugh_Beg [Accessed on 1 April 2010]

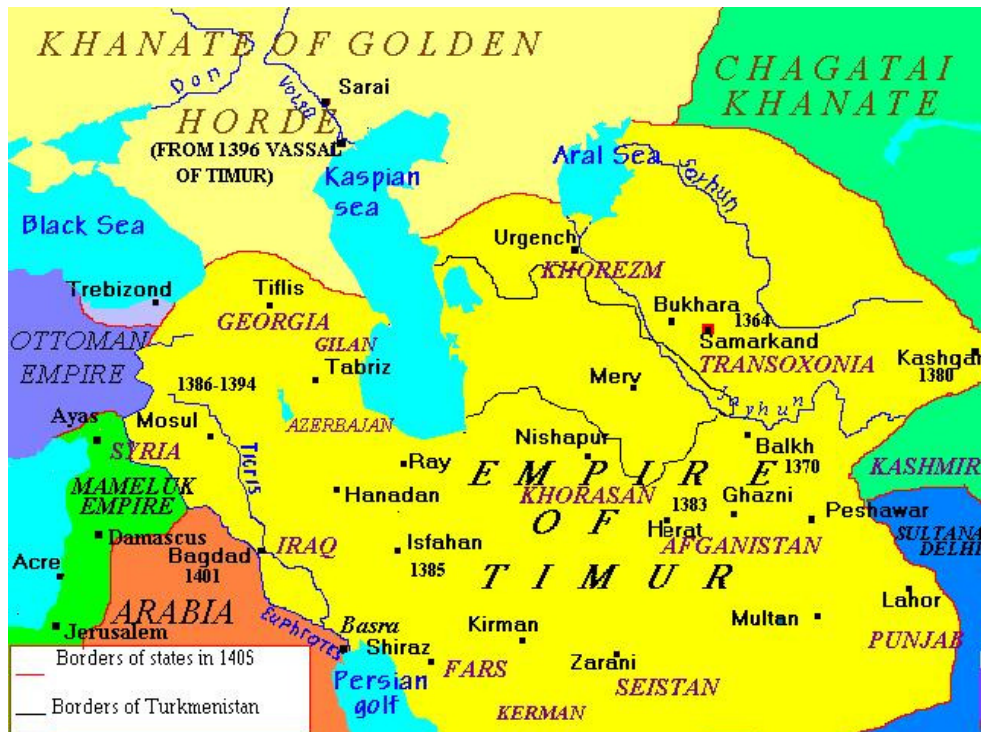


Fig.4: Map of the Tīmūrid Empire

Source: http://www.tamburlane.co.uk/resources/Tīmūr_empire.jpg [Accessed on 1 October 2009]

I.2 Status Quaestionis

Given the fact that the four-*īwān* plan has remained virtually unchanged for almost ten centuries, it is surprising that only a few scholars have made an attempt to find an explanation for its origin and stable geometry. Although there are numerous detailed descriptions of the architecture of the four-*īwān* compounds¹⁴, a handful of authors have tried to trace down the existence of the plan and make suppositions regarding the origin of the four *īwāns*. The opinion of the following scholars will be viewed in four groups below.

The first and widest group considers the aesthetic of the four *īwāns* as the driving force behind the widespread usage of the plan. It covers the work of O' Kane¹⁵, Golombek and Wilber¹⁶, Pugachenkova¹⁷, Ettinghausen, Grabar and Jenkins-Madina¹⁸.

The second group explains the ubiquitous utilization of the four-*īwān* plan as a tool for representing Iranian national identity and attributes the origin of the four *īwāns* to the private houses of eastern Iran. This group includes the theories by Godard¹⁹, Van Berchem²⁰ and Herzfeld²¹.

The third group, represented by Irwin²², Maqrizi, Godard, deals with the existence of the four *īwāns* by discussing their alienation to a particular school of Sunnī jurisprudence.

The fourth and most interesting group analyses the cosmological aspects of the four-*īwān* structures and includes the views of Hillenbrand²³, Vogt-Göknil²⁴, Ardalan and Bakhtiar²⁵.

Each of the above listed theories will be analysed in the following paragraphs.

In his article "Iran and Central Asia" O'Kane²⁶ states that the *īwāns* were meant to secure private spaces for teaching activities and to provide "a suitable processional axis to the

¹⁴ Hillenbrand, Golobek and Wilber, O' Kane

¹⁵ O' Kane, B.: *Iran and Central Asia*, 1994, p.123. and O' Kane, B.: *Timurid Architecture in Khurasan*. Costa Mesa, California, 1987.

¹⁶ Golombek and Wilber: *Timurid Architecture*, 1988, p.87.

¹⁷ Pugachenkova: *Samarkand, Bukhara*, 1968.

¹⁸ Ettinghausen, Grabar and Jenkins-Madina: *Islamic Art and Architecture*, 2001, p.145.

¹⁹ Godard: *Iran*, 1964, p.245.

²⁰ Van Berchem: *Corpus Inscriptionum Arabicarum*, 1899, pp.265-66.

²¹ Herzfeld, E.: "Damascus". In *Ars Islamica* 9 and 10, 1942 and 1943.

²² Irwin, R.: *Islamic Art in Context. Art, Architecture, and the Literary World*. New York: Perspectives, Harry N. Abrams, Inc., Publishers, 1997, p.67.

²³ Hillenbrand: *Islamic Architecture*, 1994, p.19.

²⁴ Vogt-Göknil: *Die Moschee*, 1978, pp.41-84.

²⁵ Ardalan and Bakhtiar: *The Sense of Unity*, 1973, p.71.

domed *maqsura*". This is an attempt to elicit the function of the *īwāns*, which sounds plausible both from a practical (teaching) and religious (stressing the sanctuary) point of view. However, in his conclusions O' Kane stresses only the aesthetics of the *īwāns*:

"We are unlikely to find definite answers to these questions, but for contemporaries the reasons may have been of **little importance** [indentation mine], since the form appeared in numerous mosques where the considerations would not have applied. Perhaps the *īwān's* **aesthetic qualities were paramount** [indentation mine], revealing new possibilities for varying the rhythms of large and small masses and voids, or for decorative schemes on the portal screen and the vaults of the *īwāns*. At any rate the advantages were seen to outweigh any disadvantages, since the form was to remain the classic model for large mosques right up to modern times."

In my view, O'Kane wrongly concludes that the reasons for using the *īwāns* at such a large scale were of "little importance", since the form was used in many other cases, regardless of the function of the buildings. The madrasas were practically schools, the caravansarays were like the equivalent of modern hotels and yet the nature of the *īwān* is not bound to any of those functions. This means that the answer should not be sought in the functionality of the complexes but should be investigated from another more abstract perspective, which goes beyond any utilitarian usage.

In their comprehensive and extremely useful guide to Tīmūrid Architecture, Golombek and Wilber cover an extensive range of buildings, providing descriptions, inscriptions and updated architectural plans²⁷. In the chapter "Concept Design"²⁸, Golombek and Wilber dedicate a special paragraph to the *īwān* and state that:

"Ivans serve as indoor-outdoor spaces, affording protection from the sun, while yet open to the air. As design elements they are extremely important for they create architectural accents. Around a court they define its axes. Placed in the centre of a façade they locate the entrance. They are often the focus of the decoration and a favourite emplacement for historical inscriptions."

This pretty condense definition of the *īwāns* is improper for the following reasons: the *īwāns* do not offer sufficient protection from the sun, since in most of the cases they are too shallow to be used as gathering halls. Usually, only the *īwān* to the main sanctuary, housing the *qibla*, is deep enough. Especially, in the case of the open-courtyard Congregational and Friday mosques, the *īwāns* would have been architecturally inadequate to shelter all worshipers during Friday prayers and everyone would have been exposed to the sun. This shows the impracticality of the *īwāns* with regard to sun protection. Although the *īwāns* do

²⁶ O' Kane: *Iran and Central Asia*, 1994, p.123.

²⁷ Most of the previously used architectural plans were first presented by Pugachenkova in the 1950s and 60s and widely copied afterwards by European and American scholars.

²⁸ Golombek and Wilber: *Tīmūrid Architecture*, 1988, p.73.

create architectural accents, Golombek and Wilber do not ask the question why they were chosen to represent these accents. The choice could not have been random, for the four-*īwān* compounds are usually associated with considerable endowments and were commissioned by the most prominent members of society, including the emperor, his viziers, *amīrs*, etc. The *īwāns* represented power aspirations and their grandeur professed the considerable financial means spent on their construction and decoration.

Furthermore, the statement that the *īwāns* locate the entrance on a façade is not quite accurate. The key to the four-*īwān* plan is the fact that the *īwāns* are accessible only from the courtyard. As such, they are open only onto the courtyard. If one observes a four-*īwān* compound from the street, the backsides of the *īwāns* are visible but they do not have the function of entrances, i.e. the façade remains one blank wall in the eyes of the pedestrians. All buildings based on the four-*īwān* plan have only one entrance, which is marked by the usually higher and richly decorated entrance *īwān*²⁹. As such, the *īwāns* can be perceived as “entrances” only when the worshipper has already “entered” the compound and has immersed himself in the atmosphere of divine presence. This fact underlines the argumentation of the current dissertation that the *īwāns* have another more symbolical and philosophical role, rather than being mere entrances on a façade.

In the same chapter under “Madrasa”³⁰, Golombek and Wilber write further:

“Much debate has focused on the number of these ivans, particularly for regions in which a madrasa could be devoted to more than one school of jurisprudence. Theoretically, it has been suggested that certain ivans were assigned to particular schools, but in actuality this practice is confirmed only in a few cases. No evidence for this practice in the Iranian world has come to light. Therefore, the number of ivans in a Persian madrasa probably had more to do with **aesthetics** [indentation mine] and building traditions than with the potential “eclecticism” of the madrasa.”

Quite correctly Golombek and Wilber reject the statement of combining different schools of jurisprudence under the four-*īwān* scheme, a concept that will be dealt with in the following paragraphs. However, their conclusion that the number of *īwāns* can be explained only with aesthetics does not pay tribute to the symbolical importance of the four-*īwān* plan. First of all, the four-*īwān* plan has not been used only in madrasas, but also in mosques, mausoleums, tombs and Sufi *khānaqāhs*. That is why, the authors should have discussed it in more detail given the comprehensive scope of their book. Second of all, the concept of connoisseurs’

²⁹ In some cases the *īwān* housing the *mihrāb* is higher than the entrance *īwān* (e.g. Bībī Khānum Mosque in Samarqand, Kalyān Mosque in Bukhārā)

³⁰ Golombek and Wilber: *Timurid Architecture*, 1988, p.87.

aesthetics is quite Western in its origin³¹ during the age of Enlightenment and its usage regarding the origin of Īl-Khānid and Tīmūrid buildings from the 12th c. AD is unsubstantiated.

Ettinghausen, Grabar and Jenkins-Madina³² dedicate two pages to the origin of the four-*īwān* plan. They conclude that:

“...existing [pre-Islamic] forms [the *īwān*, the court with four *īwāns*] were adapted to the liturgical, functional, and symbolic purposes of a congregational mosque”.

Further, they refer to the historical circumstances, pointing out that four-*īwān* mosques were built in the major centres of the Saljūq rule in the 12th c. AD. However, the problem of the origin of the plan remains unsolved. Similar to O’Kane, Golombek and Wilber, Ettinghausen, Grabar and Jenkins-Madina also resort to aesthetics to summarise the building tradition of the four-*īwān* plan:

“Ultimately, its most important achievement was **aesthetic** [indentation mine].”

We can use the notion of aesthetics to elucidate our own perception and appreciation of the built environment as architectural heritage. However, in scholarly analysis we cannot deduct the origin of Medieval buildings based on philosophical rhetoric from the period of Enlightenment. It only shows the cliché attempt of Western scholars to explain non-Western phenomenon with European paradigms.

The second group of scholars, represented by Godard and earlier by Van Berchem and Herzfeld tries to explain the origin of the four-*īwān* madrasa based on the private houses of Khurasan. This approach, focussing on the madrasa as the prototype of the four-*īwān* plan, was mistakenly suggested by Creswell³³ in 1922, when he concluded that:

“The result of our investigation therefore is that, although the first four-rite madrasa is found in Baghdad, the first madrasa of cruciform plan is found in Cairo; that the cruciform plan was Egyptian in origin and that it is practically unknown outside Egypt. I do not see any reason for supposing that it was due to outside influence, for the cruciform Byzantine church plan is not found in Syria, but is confined to Asia Minor and Constantinople and is invariably covered by a dome, in fact it arose through the exigencies of domed construction, whereas the cruciform madrasa plan has nothing to do with domical construction. Neither is it essential in a madrasa for the four rites; in fact the first four-rite madrasa – the Salahiya – was not cruciform, but consisted as we have seen of a pair of two liwan madrasas divided by a street. The cruciform plan was merely an improved edition of this whereby one court served for all four liwans, which were grouped around it, an Syrian influence can have had nothing to do with it, as this type of madrasa was not known in Syria at that time.”

³¹ Based on Baumgarten’s *Aesthetica* (1750–58) and Kant’s *Critique of Judgment* (1790)

³² Ettinghausen, Grabar, Jenkins-Madina: *Islamic Architecture*, 2001, p.144-145.

³³ Creswell, K.A.C.: “The Origin of the Cruciform Plan of Cairene Madrasas”. In *Bulletin de l’Institut Français d’Archéologie Orientale*, XXI, 1922, pp.43-45.

Obviously Creswell incorrectly pointed Egypt as the birthplace of the four-*īwān* plan and the above conclusion that the plan is “unknown outside Egypt” seems rather awkward nowadays. However, somehow Creswell drew the scholarly attention to the madrasa and it became the favourite prototype of a four-*īwān* compound, which resulted later in the so-called “madrasa theory”³⁴. According to it, the privately funded madrasas prior to the Saljūq rule were accommodated in private houses in Khurasan transformed for this purpose. Yet, nothing has remained of these Iranian madrasas built before the 12th c. AD.

According to Godard the four-*īwān* plan was utilised for the first time³⁵ in the Nisamiye in Chargird (Khargird), accomplished in 1087 AD. Godard³⁶ makes the famous diagram (Fig.5) according to which the private houses of Khurasan are the first buildings with a four-*īwān* plan, which was then adopted by the madrasa and developed later in the mosque and the caravansaray. Nonetheless, Ettinghausen, Grabar and Jenkins-Madina reject this assumption based on the fact that the remains are insufficient to draw such a conclusion. In my view, it is impossible to try to explain the origin of sacred religious buildings based on profane structures, such as houses. Further, the function of the buildings (mosque, madrasa, caravansaray, etc.) is not a suitable criteria for theorising on the origin of the plan, since the plan itself is much older than the attributed function.

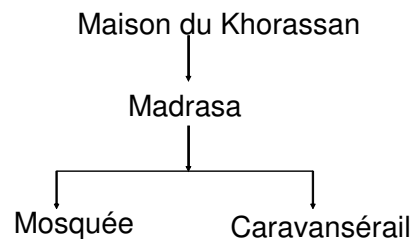


Fig.5: Diagram by Godard on the origin of the four-*īwān* plan
Source: Godard: *The Origin of the Madrasa*, 1951, p.9

³⁴ As formulated by Ettinghausen, Grabar, Jenkins-Madina: *Islamic Architecture*, 2001, p.145.

³⁵ Godard: *Iran*, 1964, p.245.

³⁶ Godard, A.: “L’Origine de la madrasa, de la mosquée et du caravansérail à quatre *īwāns*.” In *Ars Islamica*, XV-XVI, 1951, pp.1-9.

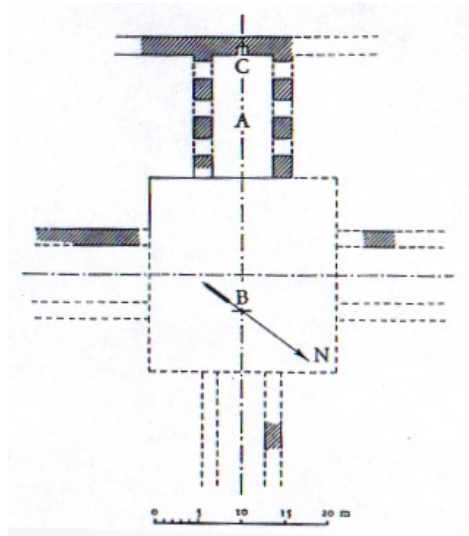


Fig.6: Khargird, plan of the madrasa after Godard
Source: Godard: *Iran*, 1964, p.247, Fig. 201

Yet, Godard³⁷ provides a plausible explanation for the existence of the earliest remaining four-*īwān* mosque in Zavareth, built in 1135-36 AD:

“In der seldschukischen Periode war Iran also im Besitz aller wesentlichen Elemente der großen iranischen Moschee mit zentralem Hof und vier *īwān*en. Man kannte den Tschahar taq, also den weit geöffneten quadratischen Raum mit Kuppelgewölbe, den *īwān*, sowie die Kombination eines *īwān*s mit einem Tschahar taq, je sogar den Hof mit vier *īwān*en. Andererseits lehnte Iran in dieser Periode eines extremen Nationalismus es ab weiterhin Moscheen arabischen Typus zu bauen, und trachtete vielmehr danach, seine eigenen Sakalbauten zu vervollkommen und den großen, gutausgestatteten 'Abbāsiden Moscheen anzugleichen. Man könnte also denken, die große iranische Moschee habe auf **ganz natürlihe Weise** einem glücklichen Zusammenspiel ihrer damals bekannten Elemente entspringen müssen [...].“

There is no natural development (in the words of Godard: ganz natürliche Weise) or chance in the process of architectural evolution. Nothing is created *ex nihilo*³⁸, everything has its prototype and the patron consciously opts for a certain plan that represents exactly the patron's ambitions and programme. The existence of the four-*īwān* plan was developed and used for palaces (2nd c. AD) long before the first four-*īwān* mosques were commissioned in the 12th c. AD.

To sum it up, Godard points out two very important aspects of the development of the four-*īwān* mosque typology. The first one is strictly constructional: the four-*īwān* mosque is based on the Iranian *čahār-tāk*, combined with an *īwān*. The second one is political: the four-*īwān* mosque emerged as an original architectural form, meant to represent the new Iranian religious identity, as opposed to the identity, represented by the Arabic hypostyle mosque.

³⁷ Godard: *Iran*, 1964, pp.241-242.

³⁸ See Mekking: *The Architectural Representation of Reality*, 2009.

However, the theory of Godard does not analyse the hierophanic importance of the *ṭwāns* (respectively their crossaxiality) and the link between the mosque and the palace. With the changing political realities in the 12th c. AD, the ruler started commissioning mosques, since the roles and the functions of the ruler and the caliph were splitting. The ruler was increasingly more often becoming a building patron who through his building projects had to appease the population, solve political or social conflicts between opposing religious movements and had to make a statement about his own religious preferences or dynastic power ambitions. By reviving the four-*ṭwān* plan, which originally had been used in palaces, and using it in mosques or madrasas, the patron related his building activity to earlier grandeur architectural examples (such as former palaces of great rulers) and rekindled well-established examples of Buddhist monasteries (such as the *vihāra*), which were well-known among the population at large, since at that time Buddhism and Islam co-existed on the territories of Transoxania.

The third group, represented by Irwin, opens the debate on the accommodation of the different schools of Sunnī jurisprudence: i.e. *Hanafī*, *Shafī'i*, *Maliki* and *Hanbali* in separate *ṭwāns*. By discussing the madrasas of Sultan al-Salih Najm al-Din Ayyub (1243 AD), Maqrizi³⁹ specifies that each *ṭwān* was allotted to one of the four schools of Sunnī jurisprudence. Being the first in Cairo to accommodate the four schools of law, the madrasas were built in the heart of the Fatimid city and comprised two separate, self-contained courtyard units, parallel in plan, separated by a passage, and having each two large *ṭwāns*.

The madrasa of Sultan al-Nasir Muhammad ibn Qalawun (1295-1303 AD) also accommodates all four of the Sunnī schools of jurisprudence. In total, there are only three madrasas in Cairo which do so. Since the two side *ṭwāns* (*Hanafī* and *Hanbali*) are narrower than the *qibla ṭwān* (*Maliki*) and the one facing it across the courtyard (*Shafī'i*), several stories of inward-looking living units are placed in the corners between the lateral *ṭwāns* and the major ones⁴⁰.

The above listed madrasas in Cairo cannot be used as sole examples to explain the ubiquitous usage of the four-*ṭwān* plan throughout Central Asia, simply because they can be found only in Egypt, which limits extremely the geographical scope of the analysis. Further, Irwin rejects this theory by stating that:

³⁹ al-Maqrizi (1364–1442 AD); Mamluk historian, a Sunnī himself.

⁴⁰ http://archnet.org/library/sites/one-site.jsp?site_id=3365 [Accessed on 10 November 2009]

“In Sunnī Islam there are four major *madhabs* or schools of law, which differ amongst themselves on major and minor issues in religious law and on the details of liturgy, and in the past it has been suggested that each of the four *īwāns* of a *madrassa* was intended to house one of the law schools. This does not seem very likely. For one thing, adherents of the various law schools have never been evenly distributed throughout the Islamic world. Second, it is a matter of common sense that at different times of the day one or the other of the *īwāns* will become uninhabitable when it bears the full brunt of the sun’s rays. It seems more likely, then, that the four-*īwān* structure has more to do with symmetry and the need for shade throughout the day.”

Obviously, the conclusion of Irwin that the number four cannot be explained with the four schools of Sunnī law from the 9th c. AD: *Hanafī*, *Shafī’i*, *Maliki* and *Hanbali* sounds plausible. This assumption was originally made by Godard⁴¹ with a reference to the origin of the four-*īwān* *madrassa*. Yet, even Godard was careful when formulating it:

“[...]doch muß man sich hüten, die Frage nach ihrem Ursprung mit dem Problem der Vereinigung der vier Riten im gleichen Gebäude zu verknüpfen.“

On the other hand, the suggestion of Irwin that the *īwāns* were merely structures to protect the worshippers from the sun during prayer sounds rather superficial. As pointed above, almost all of the four-*īwān* mosques were Friday or Congregational mosques, which means that they were the largest and most representative mosques in their urban settings and that they would have attracted a huge number of worshippers during Friday prayers. Thus, the main gathering place would have been the courtyard of the mosque and everyone would have been exposed to the sun and the space in the *īwāns* would have been absolutely inadequate to shelter all worshippers.

The *īwāns* were indeed used as lecturing spaces in the *madrassas* but there is no record of any problems with their lay out or insulation. On the contrary, the whole compound is regarded as a holy site, i.e. the microcosmic creation of God and hardly anyone would have dared to criticise God’s work with regard to functionality. Herewith, we can conclude that the statement of Irwin does not deal with the spiritual importance of the four-*īwān* mosque at all.

The fourth group of scholarly theory analyses the cosmological aspects of the four-*īwān* compounds. While discussing the city of Baghdad as *imago mundi*, Hillenbrand⁴² mentions very briefly the “domed audience hall at the meeting point of four *īwāns* facing the cardinal points and in cruciform disposition” and stresses the symbolism of the ruler as cosmocrator. This symbolism of the emperor as King of the World, with regard to the architecture of Tīmūr, Shāh Rukh and Ulugh Beg, will be further analysed in the current dissertation.

⁴¹ Godard: *Iran*, 1964, p.243.

⁴² Hillenbrand: *Islamic Architecture*, 1994, p.19.

Ardalan and Bakhtiar⁴³ reflect upon the spiritual and more metaphysical characteristics of the *īwān* as they put it in their seminal book “The Sense of Unity”:

“The *īwān*, is then the “way” or the transitional space between the temporal and terrestrial worlds. Metaphysically, the *īwān* can be viewed as the locus of the soul moving between the garden or court, taken as spirit, and the room, seen as body. Its bisected form leaves it an incomplete form, capable of attaining completion only by uniting man to the Universal Spirit and thereby accomplishing the *īwān*’s own reabsorption.”

The only author who has attempted to discuss the cosmological semantics of the *īwāns* is Vogt-Göknil⁴⁴. She tries to compare the courtyard of the four-*īwān* mosque with the *čahār-bahr* garden. Vogt-Göknil regards the open courtyard as architectural space, which combines both the functions of the exterior and the interior⁴⁵. The inner space is metaphorical and its hypothetical ceiling is the sky itself. Furthermore, the sky, open to the humans, is seen as the lowest of the seven spheres of Paradise. The sky is also regarded as the domain of the divine and the openness of the courtyard is related to the omnipotence of God, whose presence cannot be fixed within confined spaces. By praying in the open courtyard, the believers have direct access to the sky as a divine realm. In this sense, the prayer takes place within the compound of the mosque, which is definitely separated from the urban fabric and yet open to the sky. The interior feature of the courtyard is determined by its position within the mosque itself but it has also exterior nature as it is revealed to the elements.

Furthermore, the sky is reflected into the open water pool in the centre of the courtyard. Thus, the sky is mirrored on the ground by creating a two-fold projection and communication channels: between the deity communicating with the believers in an up-bottom fashion by supplying them with an open visual access to his divine realms and in a bottom-up fashion by receiving their prayers and allowing them to flow unhindered in the open courtyard space.

However, even Vogt-Göknil does not place the four-*īwān* plan in relation to other temples and world religions which represent the ideal imagery of Paradise. This is an attempt that will be made in the current thesis. Below I will examine Hindu, Buddhist and Jain temples that utilise the hierophanies of the Cosmic Cross and the *Axis Mundi* and their architectural representations (e.g. four doorways along the cardinal or intercardinal points i.e. the Cosmic Cross, centred around a water pool i.e. the *Axis Mundi*). Some examples will be provided of four-*īwān* compounds combining Buddhist monastic elements such as cruciform stupas. This

⁴³ Ardalan and Bakhtiar: *The Sense of Unity*, 1973, p.71.

⁴⁴ Vogt-Göknil: *Die Moschee*, 1978, pp.41-84.

⁴⁵ *Ibid.*, p.82.

is to show that the four-*īwān* plan coexisted with other religious monuments prior to and during the early centuries of Islam.

Although the functionality of the four-*īwān* compounds is put forward in the existing analysis of their origin, the current dissertation rejects this approach with the simple argument that the function attributed to these structures was a later phenomenon that does not rectify the origin of the plan and its hierophanic quintessence.

What is more, this dissertation stresses the fact that the four-*īwān* plan was used long before the advent of Islam and rejects the evolutionary scholarly analyses that describe the four-*īwān* compounds only in terms of Islamic iconography. I argue that the four-*īwān* plan is an architectural representation of the hierophanies of the Cosmic Cross and the *Axis Mundi*, which precede religious thought.

I.3 Methodology

The methodological approach in the current thesis is based on the representational theory by Mekking⁴⁶. Further parallels are drawn with existing architectural theories with regard to the usage of cosmological schemes and realities as discussed by Snodgrass⁴⁷, Koch⁴⁸, Ardelan and Bakhtiar⁴⁹.

As an architectural historian, Mekking describes and explains architecture by conceiving the built environment as a representation of reality. One of the paramount characteristics of architecture as a representational medium is that the building itself becomes a communication channel between the patron and the politico-religious system within which the building has been commissioned. The patron reveals his or her agenda by means of reusing or altering existing architectural plans, structural and decorative details. Thus, the building itself becomes the most reliable source that entails the coded message of the commissioner without resorting to rationalisation or verbalisation.

“[...] a building always represents a *present* reality by way of referring to *earlier* built representations through a specific *transformation* of one or more of the latter's building elements as found suitable by the commissioner.”⁵⁰

Furthermore Mekking argues against the usage of the concepts of “style” and “context”. Style should not be seen as a complex of objective criteria, but as possible building elements that are being reused in different periods and transformed in new buildings. Since the term style has been introduced in the 19th c. AD by mainly Western scholars, it is highly unsuitable for the interpretation of the built environment dating prior to that period and pertaining to non-Western architectural examples. What is more, the relevance of a certain architectural feature to the patron cannot be described by the term style, superimposed by art and architectural historians at a later stage. Context is also not suited for architectural analysis since it boils down to stereotype notions such as “the Islamic world-view” or “non-Western society”, which are used only to label buildings and to prevent proper in-depth analysis. In Mekking's view, the formation of each building must be analysed as a specific constellation of building elements in a specific context, whereby the particular architectural choices of the commissioner(s) should be studied to understand their intentions.

⁴⁶ Mekking: *The Architectural Representation of Reality*, 2009, pp.23-49.

⁴⁷ Snodgrass: *The Stupa*. New York: Cornell Southeast Asia Program, 1985.

⁴⁸ Koch, E.: *Mughal Architecture. An Outline of Its History and Development*. Oxford: Oxford University Press, 2002.

⁴⁹ Ardelan and Bakhtiar: *The Sense of Unity*, 1973.

⁵⁰ Roose, E. in an interview with Mekking. “Breaking Boundaries: Towards a Global Theory of Architectural Representation”. In *The Global Built Environment as a Representation of Realities*. Pallas Publications, 2009, p.15.

Mekking's approach⁵¹ is characterised by the fundamental statement that nothing new is a '*creatio ex nihilo*'. As such, basic representational themes reoccur or disappear throughout different periods, cutting across certain geographical or historical boundaries. In this way, all architectural representation uses already existing elements and is rooted in a specific architectural tradition.

Attempting to compare the architectural representations of reality from different cultures and religions, Mekking develops a system of long and shorter-cycle primary traditions that can be used as an instrument for everyday research and analysis. The long-cycle traditions comprise three main clusters: the *Anthropomorphic*, the *Physiomorphic* and the *Sociomorphic*. The *Anthropomorphic traditions* are the most important ones since they are based on the human body, such as the head, the navel, the limbs and their spatial coordinates. As Mekking⁵² puts it "one's own body is the bearer of what any place in time means to each builder and inhabitant". The *Physiomorphic traditions* can be explained with the projection of the human body onto the surrounding nature and they are related to the macro-micro cosmos paradigms. The *Sociomorphic traditions* represent the relations between individuals and groups. The above three traditions can be seen as constructs of the mind in an attempt to understand the surrounding world. They entail universal meanings and are not related to any specific context.

Mekking distinguishes further the secondary mental construct of the shorter-cycle traditions, which belong to a more contextual stratum of meaning used by the human mind to comprehend and structure the architectural landscape. This shorter cycle is organized along the following five clusters: *Axis Mundi and Cosmic Cross*, *Horizons of Life*, *Boasting Façades*, *Including and Excluding Structures*, *Holy and Unholy zones*. The above representational clusters can be seen as a tool to be used by architectural researchers in their attempts to map and analyse the built environment.

The long-cycle *Anthropomorphic traditions* and the cluster *Axis Mundi and Cosmic Cross* are of pivotal importance to the current thesis and will be explored in detail. For, they stand essentially for the relation between Man and God: a channel between the earth and the Heavenly Realm, denoting the divine origins of power. The other clusters will be noted when applicable, whereby, in most of the cases several clusters will be discussed simultaneously.

⁵¹ Mekking: *The Architectural Representation of Reality*, 2009, p.24.

⁵² Mekking: *The Architectural Representation of Reality*, 2009, p.36.

The text will not provide lengthy descriptions of the architectural settings which will be analysed. This has been previously done⁵³ and the purpose of the current thesis is to go beyond the art of description and sheer aesthetics. For the sake of clarity, every analysed building will be supplied with bibliographical notes where the reader can find a full description of its architecture.

The chosen approach is based on comparison and parallels between pre-religious cosmological principles and relevant dynastic power aspirations. Actually, the dissertation is meant to counteract the widely-spread descriptive approach in architecture and to offer an alternative methodology based on the representational theory by Mekking. By shifting the focus of scholarly research from the locally-bound scope onto the universally applicable clusters of tradition – the anthropomorphic, the physiomorphic and the sociomorphic, the analysis will not answer questions but will provide hypotheses for the origin and the widespread usage of the four-*īwān* plan.

The innovative approach in the current dissertation lies in the diachronic comparison among different building traditions, namely the Hindu, the Buddhist and the Islamic. The main focus is on the parallels between the architectural heritage of different religions, whereby the cosmological similarities with regard to recreating a paradisiacal reality on earth, are explored. In this respect, the analysis distinguishes between a *hierophanic palimpsest* and an *architectural palimpsest*, two terms coined by the author. The *hierophanic palimpsest* can be understood as all hierophanic beliefs, including pagan and religious deities, cosmological concepts and representations of Paradise. The hierophanies of the four cardinal points, of the four rivers of Paradise, of the omphalos, of the *Axis Mundi*, of the world centre, of the Cosmic Cross, etc. are interpreted in overlapping layers throughout time with connection to architectural representations. The *architectural palimpsest* focuses on the development of the basic architectural forms of the square (i.e. the cube) and the circle (i.e. the dome) also as built representations of Paradise on earth (Fig.7,8). The dissertation explores how the different cosmologies and religions operate with these basic tectonic elements to recreate a built reality based on the square as a representation of the earth and the dome as a representation of the heavenly sphere. The square and the cube (based on the square), covered by a dome are regarded as a replica of the heavenly home of the royals or as a communication channel between the earth and the Heavens.

⁵³ Golombek and Wilber, Hillenbrand, Blair, Koch, O’Kane.

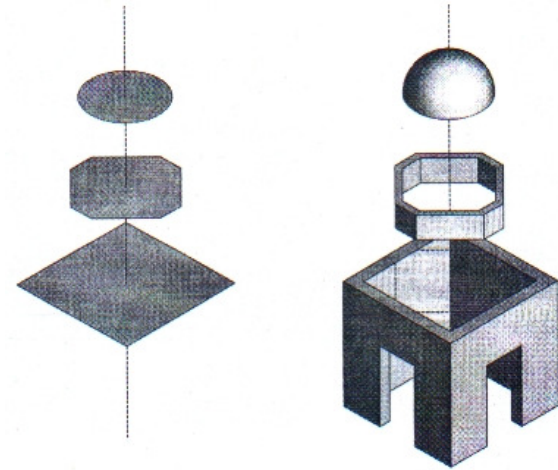


Fig.7: The *Axis Mundi* across the cube and the dome after Akkach
Source: Akkach: *Cosmology and Architecture*, 2005, p.155, Fig.4.3

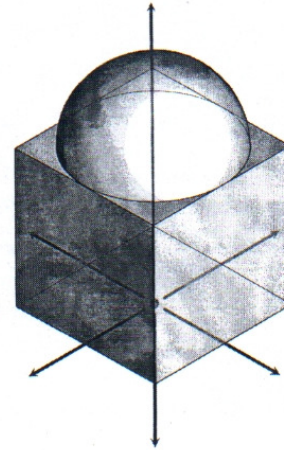


Fig.8: The *Axis Mundi* (the vertical axis) running across the cube and the dome as basic architectural representations of the Earth (the cube) and the Heavens (the dome) and the Cosmic Cross denoting the four corners of the world after Akkach
Source: Akkach: *Cosmology and Architecture*, 2005, p.153, Fig.4.2

In this respect, the four-*īwān* compound can be seen as a product of the spatial *architectural palimpsest*, representing the atemporal hierophanies of the *Axis Mundi* and the Cosmic Cross as being reused in a *hierophanic palimpsest* to recreate a new built reality subject to the religious purposes and laws of Islam.

Furthermore, the representational iconography of Paradise is analysed in view of dynastical power ambitions by the Tīmūrīds. The role of the emperor as a cosmocrator, staging his authority on the backdrop of a paradisiacal setting, such as a palace, a mosque or a tomb, is reinterpreted.

Another novelty presented in the dissertation is the evaluation of the Sufi influence on the spread of the four-*īwān* complexes. The architectural plan of the four-*īwān khānaqāhs* is analysed in view of Sufi cosmology. The spread of Sufism across Central Asia and the increasing influence of the *Naqšbandiyya* order, in particular, is related to the construction of four-*īwān khānaqāhs* as a representation of a Sufi reality. The figure of the Sufi shaykh is metaphorically compared to the figure of the emperor, whereby both are regarded as a representation of the *Axis Mundi* in a paradisiacal architectural setting as a representation of the hierophany of the Cosmic Cross. Descriptions of Paradise, epitomised in the Sufi cosmology are also compared to the Paradise locus, as promised by the '*ulamā*'.

By using the terminology of the *hierophanic palimpsest*, we can try to describe Sufism as a cluster of sacred beliefs – hierophanies, whose origin can be found in the pagan cosmologies, which are similar in all world mythologies. These beliefs co-existed with

religious thought and were often prosecuted by the proponents of the official religions. However, their impact and attractiveness for the masses never changed. That is why, they survive throughout time and further develop by readopting an extra layer of the respective religion in which they are being reused. In this aspect, although Sufism is a clearly Islamic phenomenon, it can be related to a much broader and older than Islam mythopoetic cluster of metaphysic thought. The Sufi proponents gained administrative and religious power in the course of time after the 12th c. AD, which transformed the Sufi shaykhs into building patrons and the Sufi compounds into diverse religious complexes and prolific pilgrimage sites. The fact that the four-*īwān* plan was used for Sufi buildings (e.g. in the domed four-*īwān khānaqāhs*) shows that Sufism was accepted by the ruling dynasties who attached considerable importance to this mystic movement. The four-*īwān* plan, which was primarily utilised as a representation of religious, political and economic power by the main ruling dynasties, was gradually also utilised by the Sufi patrons. For, the ruling dynasties and the powerful Sufi shaykhs coexisted peacefully in a symbiotic relationship: the pious rulers needed the support of the multi-cultured population in order to avoid unrest, as well as the support of the economically influential Sufi shaykhs in order to secure the booming trade and its revenues and the support of the *‘ulamā* in order to promote their political ideology.

In order to avoid superfluous theological debates on the religious affiliation of the patrons of four-*īwān* compounds to Shī’a or Sunnī Islam, the dissertation will not discuss the four-*īwān* plan in terms of these denominations. It will suffice to say that both of them utilised the four-*īwān* plan. As for example, one of the holiest Shī’a shrines in Mashhad, enlarged by Shāh Rukh and his wife Gauhar Shād, is based on the four-*īwān* plan, whereas the Uzbek tribes are *Hanafī* Sunnīs and the four-*īwān* madrasas in Samarqand and Bukhārā were thus Sunnī. Although Tīmūr was a Sunnī himself, he was not disrespectful of the Shī’ites and allowed Shī’ite aristocracy to retain their influence and lands, provided they became his vassals. When the Mongols invaded the Islamic world in 1220 AD, their large-scale destruction of Islamic buildings was devastating for Sunnī Islam. However, Shī’a Islam was mostly unaffected by the Īl-Khānid invasion. The Īl-Khānids were primarily shamanistic or Buddhists, as a result they treated Sunnī and Shī’a Muslims identically⁵⁴. This meant that the Shī’ites were considerably less persecuted under the non-Muslim Mongols than they had been under the rule of the Sunnī Saljūq Turks, who overtly suppressed them.

⁵⁴ Hooker, R.: *Early and Medieval Shi’ah*. <http://www.wsu.edu:8080/~dee/SHI’AH/EARLY.HTM> [Accessed on 19 August 2009].

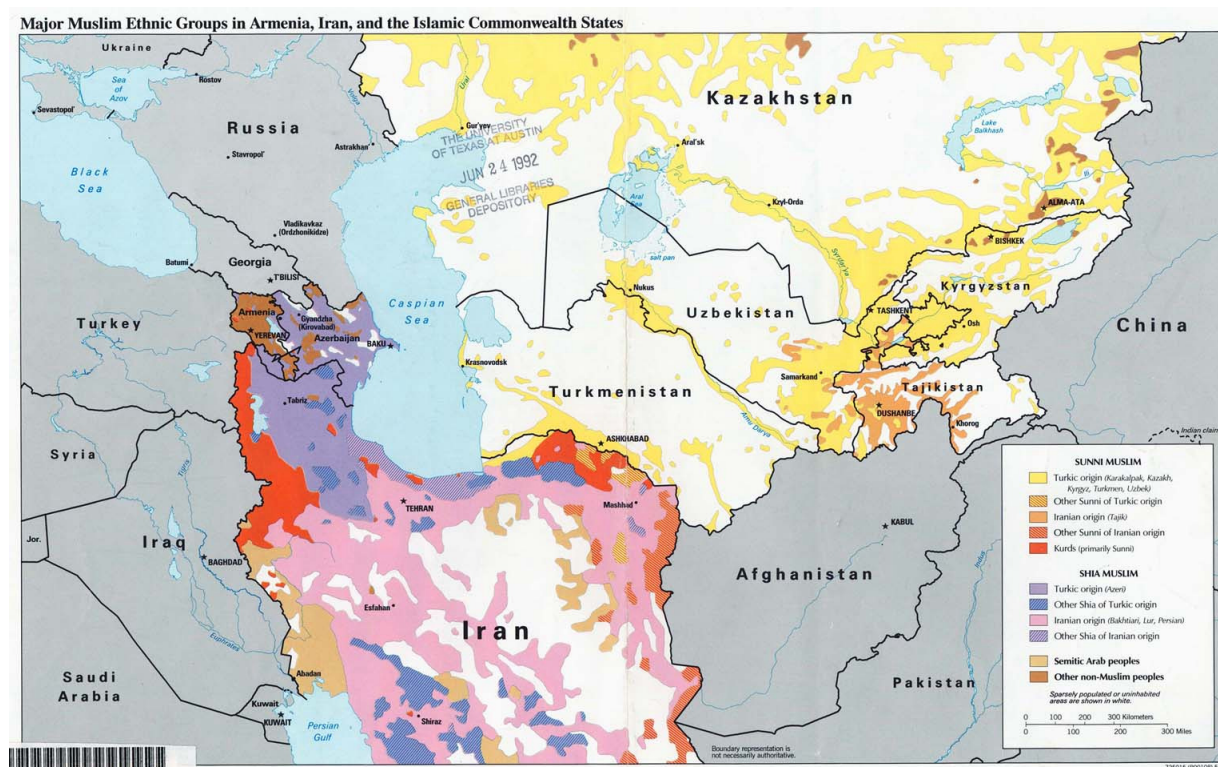


Fig.9: Map of the major religious ethnic groups in Central Asia, Sunnī and Shī'a

Source: http://www.globalsecurity.org/military/world/afghanistan/images/muslim_ethnic_group_asia.jpg [Accessed on 1 November 2009]

Considerable part of the conclusions drawn in the thesis is based on compass measurements carried out in the Uzbek cities of Tashkent, Bukhārā, Samarqand and Khīva in September 2006. The geographical position of the *īwāns* and the *qiblas* (*mihrābs*) have been measured in the majority of the four-*īwān* compounds in those cities. All major results are organised in a table, provided in Annex I.

At the end of each chapter, there is a short conclusion, summarising the main finds in the respective chapter. The conclusions at the end of the dissertation present only the major points of discussions.

All Arabic, Persian and Turkish terms are transcribed as rendered in the Glossary & Index of Technical Terms of the Encyclopaedia of Islam⁵⁵, compiled by Van Lent and edited by Bearman. All names of individuals and civilizations are transcribed as rendered in the edition The Islamic Dynasties⁵⁶ by Bosworth. The Koranic citations are based on the Oxford edition of the Koran in the series Oxford World's Classics⁵⁷, translated by Arberry. The Biblical

⁵⁵ *The Encyclopaedia of Islam*, Glossary & Index of Technical Terms to Volumes I-VIII. Compiled by J. van Lent, edited by P.J. Bearman. Leiden: Brill, 1997.

⁵⁶ Bosworth, C.E.: *The Islamic Dynasties*. Islamic Surveys 5. Edinburgh: University Press, 1967.

⁵⁷ *The Koran*. Translated with an Introduction by Arthur J. Arberry. Oxford: Oxford University Press, 2008.

citations follow the Latin text of the Bible - *Vulgata biblia sacra*⁵⁸, in order to avoid any confusion or misinterpretation in the rendering of the text if based on later English translations. All Buddhist and Hindu terms are transcribed according to the publication of Volwahren⁵⁹ on Indian architecture.

An overview of all references is provided in the Bibliography. All English, German, Dutch and French titles are given in the original language. Throughout the text of the dissertation, the Russian titles are transcribed with Cyrillic letters; an English translation of the respective titles is offered in brackets. For the sake of conformity, only the English translations of the Russian titles are given in the Bibliography.

Most of the pictures were taken by the author in September 2006 in Uzbekistan. If different, all other sources are provided under each photograph, including the name of the author and providing a link to the relevant website, noting the date of access.

⁵⁸ *Vulgata biblia sacra*. Stuttgart, 1969.

⁵⁹ Volwahren, A.: *Indien. Bauten der Hindus, Buddhisten und Jains*. Fribourg: Office du Livre, 1968.

II Architectural Representation of the Hierophany of Paradise

II.1 The Hierophany of the Cosmic Cross

The concept of the hierophany⁶⁰ was used to differentiate between the elements of sacred⁶¹ order (the ideal world believed to be created by the primordial God) and the items of profane experience (the perception of the real world as seen by man). Further, the hierophanies were the means of man to construct a “sense of cosmic harmony” as Coupe⁶² formulates it. This cosmic harmony is opposed to the experience of profane time according to Eliade⁶³, whereby the sacred and the profane are dichotomously interrelated. So, the hierophany is a tool to experience sacred order in a profane reality. Via the hierophany, the human transcends time and space and is transpositioned into the *illo tempore*⁶⁴, the mythical time when the world was created. In a way, the hierophany in itself is a microcosmic *Axis Mundi*, a sacred channel that assures man’s access to the realm of God’s creation. The visual representation of the hierophany is a mimetic process that denotes either a certain aspect of God (manifestation of the sacred) or an element of God’s creation (sacred rivers and mountains, the cosmic ocean, etc.). The process of hierophanic visualisation can be thus regarded as an attempt to reproduce God’s creation on earth by profane means and in a profane environment. Once the visualised hierophany is perceived by man, it acquires the status of a sacred entity and the previously profane environment is also attributed qualities of the sacred.

The basic hierophany of the four elements, combined with a central element, can be found in all mythologies and religions of the world. The most prominent representations are related to the four cardinal points (the Cosmic Cross) and the *Axis Mundi*. The hierophany of the four has anthropomorphic origin that can be explained with the symmetry of the human body and its position and orientation in the horizon⁶⁵. Furthermore, the number four derives from the symmetry of the human body, which suggests a four-partite division of the horizon: a front and a back, left and right side. It might have been an attempt to describe the “unknown” world in a manner closer to man in order to understand the primordial world and to come to terms with the fears and the calamities related to the powers of nature. The hierophany of the

⁶⁰ Manifestation of the sacred, termed coined by Eliade

⁶¹ In the current thesis the word “sacred” is used to refer to Islamic architecture. The Arabic term for “sacred” is *muqaddas*, denoting “purity”. In premodern Islamic texts it signified proximity to the primordial nature (*fitra*). For further discussion on the usage of the term, please refer to Akkach: *Cosmology and Architecture*, 2005, p.164.

⁶² Coupe, L.: *Myth*. London: Routledge, 1997, p.62.

⁶³ Eliade, M.: *The Myth of the Eternal Return: Or, Cosmos and History*. Princeton: Princeton University Press, 1971.

⁶⁴ “In that time”, termed coined by Eliade

⁶⁵ Mekking, A.J.J.: “Een kruis van kerken rond Koenraads hart”. In *Utrecht Kruispunt van de middeleeuwse kerk*. Utrecht: De Walburg Pers, 1988, pp.21-53.

four can be further interpreted within the long-cycle *Anthropomorphic traditions* and short-cycle theme of the *Axis Mundi and the Cosmic Cross*, developed by Mekking⁶⁶ to analyse the built environment.

There is no doubt that the marking of the surrounding horizon with four cardinal points and the idea of the azimuth were widespread long before any religious organisations existed. Not to mention the fact that the words “azimuth”, meaning “way, direction”, “zenith”, referring to the highest point in the Heavens, directly above the observer, and figuratively also to the greatest development of perfection and “nadir”, the opposite of the “zenith”, all three have Arabic origins⁶⁷ and are part of the long-cycle *Anthropomorphic tradition*.

In the mythological thought, the hierophany of the four can be found in the representations of the four winds, the four seasons, the four elements⁶⁸ (fire, air, water, earth, metal), the four humours of the human body (gall, blood, phlegm, bile), the four regents of the world, four giants holding the world, etc.

In the polytheistic thought, the hierophany of the four evolved in the representation of the four major deities plus one omnipotent central deity, e.g. the four castes; the four Vedas (in Hinduism), etc.

Upon the ascend of monotheistic beliefs, the hierophany of the four developed further as a representation of the four evangelists (Christianity)⁶⁹ (Fig.11-15) and the four pillars (angels) holding the Throne of God (Christianity, Islam) (Fig.17-19). Further examples are the four cherubim and the four “divini currus rotae” (Ezekiel 1:1-28), the four “animalia” and the four major prophets. In the New Testament, there are the four evangelists and the four Gospels that spread across the world, the four mysteria Christi, the four cardinal virtues and the vision of the Throned Being amid the four living creatures (Revelation 4 “et in circuitu sedis sedilia viginti quattuor et super thronos viginti quattuor seniores sedentes circumamictos vestimentis albis et in capitibus eorum coronas aureas”).

The symbols of the evangelists come from the prophecies of Ezekiel 1:10 (“Similitudo autem vultus eorum, facies hominis et facies leonis a dextris ipsorum quatuor, facies autem bovis a

⁶⁶ See Mekking: *The Architectural Representation of Reality*, 2009, pp.23-51.

⁶⁷ *Oxford English Dictionary*. Oxford: Oxford University Press, 2008.

⁶⁸ The exact denotation of the four elements is different in the respective mythologies, however, they all note four major elements plus one central element.

⁶⁹ For a detailed overview of the hierophany of the Four Evangelists please refer to Esmeijer, A.C.: *Divina Quaternitas, a preliminary study in the method and application of visual exegesis*. Assen: Gorcum, 1978.

sinistris ipsorum quatuor, et facies aquilæ desuper ipsorum quatuor”). The visual representations of the four evangelists have been described in various combinations, but since the time of St. Jerome the symbols are: (upper left) a man - St. Matthew, (upper right) a lion - St. Mark, (lower left) a calf - St. Luke, and (lower right) an eagle - St. John (Fig.11-15). In his homilies on Ezekiel, St. Gregory explained the symbols as the four stages of the life of Christ: He was a man at his birth, a sacrificial ox at his death, a lion in his resurrection and an eagle at his ascension. These symbolic figures suggest Ezekiel’s vision, while he was living with the captives exiled in Babylon (ca. 593 BC) beside the river Shobar. The four living creatures with the faces of a man, a lion, a bull and an eagle, express a totality i.e. Ezekiel 1:6 (“Quatuor facies uni, et quatuor pennæ uni”).

In Revelation 4:6,7 (“Et in conspectu sedis tamquam mare vitreum simile crystallo: et in medio sedis, et in circuitu sedis quatuor animalia plena oculis ante et retro. Et animal primum simile leoni, et secundum animal simile vitulo, et tertium animal habens faciem quasi hominis, et quartum animal simile aquilæ volanti.”) the four beasts around the Throne of God in Christianity have the same visual representations of a man, calf, an eagle and a lion. These visual representations of the four bearers of the Throne of God have been adopted by the Islamic exegesis. According to the Islamic doctrine the bearers appear in the four forms of a man and a bull (who intercede in favour of men and beasts of burden), an eagle and a lion (interceding for birds and wild animals) (Fig.17-19). They were also examples of the four cardinal constellations of the zodiac (Fig.20).

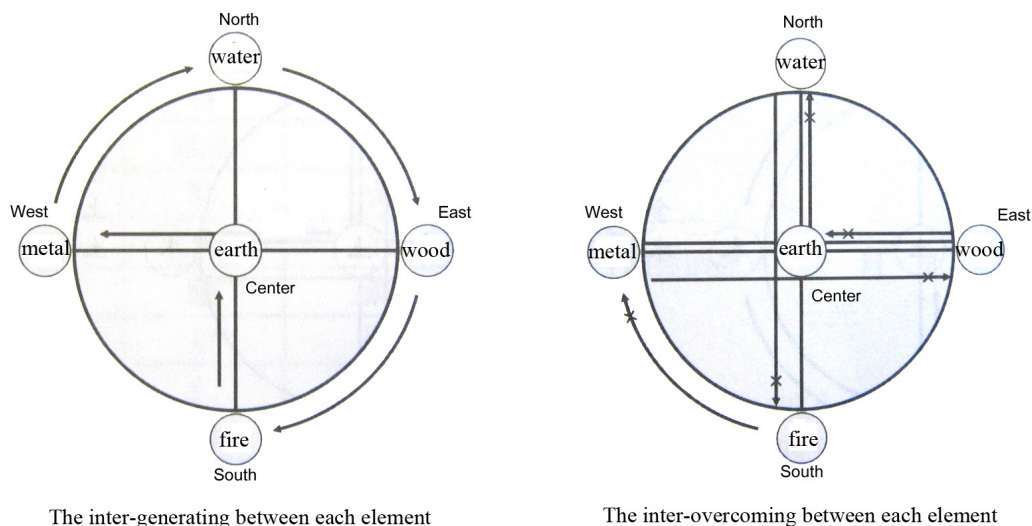


Fig.10: Visual representation of the four elements and the centre in Chinese mythology
Source: Diagram by En-Yu Huang



Fig.11: Four Evangelists after the Book of Armagh, 9th c. AD
Source: <http://www.uni-due.de/DI/Manuscripts.htm>
[Accessed on 1 April 2010]



Fig.12: Four evangelists after the Book of Kells, 800 AD
Source: <http://www.uni-due.de/DI/Manuscripts.htm>
[Accessed on 1 April 2010]



Fig.13: Four evangelists and Agnus Dei, probably 9th c. AD, German or North Italian
Source: <http://gwydir.demon.co.uk/jo/gospels/index.htm>
[Accessed on 1 April 2010]



Fig.14: Four evangelists after the Book of Kells, folio 129v, 800 AD
Source: Book of Kells - Trinity College, Dublin.
<http://www.katapi.org.uk/BibleMSS/Kells4Evangelists.htm>
[Accessed on 1 April 2010]

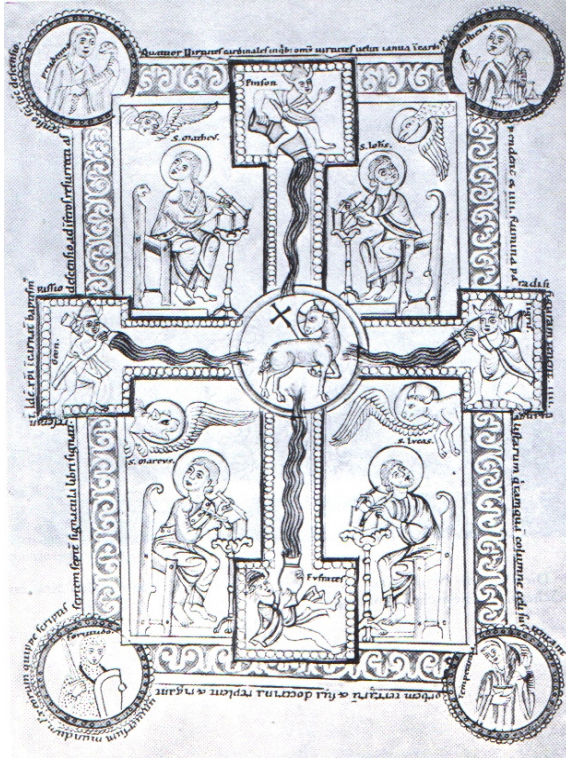


Fig.15: Paradise quaternity, fol. 10r., Stuttgart, Landesbibliothek, Brevier, 128
Source: Esmeijer: *Divina Quaternitas*, 1978, Fig.58b



Fig.16: Four winds diagram, Austrian from ca. 1300 AD
Source:
http://blog.metmuseum.org/penandparchment/exhibition-images/cat320r7_49e/ [Accessed on 1 April 2010]



Fig.17: Four angels supporting the Throne of God from "Illustrated Guide to Mecca and the Hereafter", MS Pers. d. 29, fol. 66r (photo: Bodleian Library) after Begley
Source: Begley: *Taj Mahal*, 1979, p.23



Fig.18: Four angels surround the Throne of God. Al-Qazwini, 1475 AD, British library, Persian 178, fol. 57A
The angels are in the form of a man, a bull, an eagle and a lion.
Source: Rustomji: *The Garden*, 2009, p.137, Fig.7.4



Fig.19: Detail of the four-headed angel who encounters Muhammad during the *miraj*, fol. 32 v⁰, *Mir'ajnama*, 1425-1450 AD. The angel has four heads: of a man, a lion, an eagle and a bull.
Source: Séguy: *Mirāj Nāmeḥ*, 1977, plate 30



Fig.20. Painting from the Horoscope of Iskandar-Sultan ibn Umar Shaykh, Shiraz, 18 April 1411 AD, fol.18b-19a
Source: Lentz and Lowry: *Timur*, 1989, pp.146-147

The direct relation between the hierophany of the four and Paradise are of course the four rivers of Paradise in the Old Testament, emanating from one source i.e. Genesis 2:10 (“et fluvius egrediebatur de loco voluptatis ad inrigandum paradysum qui inde dividitur in quattuor capita”). The hierophany of the Paradisus Quadripartitus will be analysed in Chapter II.3.

The fifth epistle of the Ikhwān al-Safā⁷⁰, explains that “God has created in his wisdom this universe engendered with morality in squares (or fours) consisting of compatible and opposing (or incompatible) pairs. The secrets of which are only known to their Creator”⁷¹. The Koran also supports this phenomenon: “And heaven – We built it with might, and We extend it wide. And the earth – We spread it forth; O excellent Smoothers! And of everything created We two kinds; haply you will remember.” (Sūra 51: 44-49) El-Said and Parman discuss the above category of the four and compare it with other quadripartite phenomena in Islamic thought: “It has been proposed, for example, that one of each of the four seasons of the year, of the four quarters of the day, of the lunar month, of the Zodiac signs, of the four directions of the compass and the four winds from these directions, of the four elements and the four physical properties, of the four humours, the four ages, moralities and behaviours of man, of the four types of sensations, of smell, and of taste, of the four preferences for colour and musical sounds, and of the four strings of the lute, one of each of these fall into the same category; thus ‘all living beings and the objects in this world fall into four categories’⁷². All of these phenomena are based on the hierophany of the four.

In the mystical beliefs that accompanied monotheistic thought such as Manichaeism (Christianity), Sufism (Islam), the hierophany of the four remained constant and acquired extra imagery such as for example “*The Universal Tree and the Four Birds*” discussed in a treatise by Ibn ‘Arabī⁷³. In Sufi cosmology, the fortification of the four world directions has cosmic dimensions, whereby the four spiritual masters (*awtād*, “pegs” or “pillars”) are related to the east, west, north and south⁷⁴. Ibn ‘Arabī postulates that God preserves one pillar for every direction and one central “pole”, *al-qutb*, which can be interpreted as the cosmic axis (in terms of the representational themes, the equivalent of the hierophany of the *Axis Mundi*). Along the central axis, humans can transcend through the three *Cosmic Zones*: starting from the underworld, *the Unholy Zone* (as in the case of tombs, in which the sarcophagus is placed underground, as for example in Ishrat Khāneh in Samarqand), experiencing the

⁷⁰ El-Said, I.; Parman, A.: *Geometric Concepts in Islamic Art*. London: World of Islam Festival Publishing Company Ltd, 1976, p.125.

⁷¹ Ikhwān al-Safā, Vol.1, *Rasā'il* (Epistles), edn Beirut, 1957, pp.229-232 quoted by El-Said and Parman.

⁷² Ibid.

⁷³ Ibn ‘Arabī: *The Universal Tree and the Four Birds*. Translated by A. Jaffray. Oxford: Anqa Publishing, 2006.

⁷⁴ Akkach: *Cosmology and Architecture*, 2005, p.95.

horizontality of the earthly world, the first *Holy Zone*, where the earth meets the Heavens (i.e. the building itself, the intersecting axes of the four *īwāns* marking its centre), and proceeding to the verticality of the Heavens, the second or heavenly *Holy Zone* (which can be associated with the dome, rising above the point of the intersecting axes as in the Sufi *khānaqāhs*). Akkach⁷⁵ argues that the verticality in Sufi teachings (the representation of the hierophany of the *Axis Mundi*) is an expression of human uniqueness, while the stressing of the geographical directions (i.e. the representation of the Cosmic Cross in terms of the terminology used in this dissertation) stands for the comprehensiveness of human reality. This proves again that the representation of the cosmos is based on the long-cycle *Anthropomorphic tradition* and can be interpreted in terms of the *Holy and Unholy Zones* shorter-cycle theme as proposed by Mekking⁷⁶.

This brief overview of hierophanic beliefs shows exactly the process in which the *hierophanic palimpsest* was formed: one basic hierophany i.e. of the four elements acquired different layers of mythological and later religious meaning (poly and monotheistic) and respective visual and spatial representations. Yet, the basic essence of the hierophany of the four elements (the Cosmic Cross) and the central element (the *Axis Mundi*) remained unchanged and is ubiquitous worldwide.

Since the origin of the hierophany of the four is related to the spatial orientation of man in the world, it acquired spatial, strictly geometrical representations that were adopted in the construction of quadripartite cities. These *urbs dei* like the New Jerusalem (Fig.21), a square compound based on a grid of two pairs of three intersecting axes or the Chinese royal city (Fig.22) comprising seven squares with three gates on each side or the Ezekiel's temple based on a reconstruction⁷⁷ after the Book of Ezekiel 40-47 (Fig.23,24) had orthogonal boundaries and gates along the intersecting axes.

The palaces and the temples at the centre of these quadripartite cities were also based on an orthogonal hierophanic grid and were oriented along the cardinal or intercardinal points. To mention only one example, the palace of Shapur I at Bishpur, 3rd c. AD (Fig.25,26) has a strictly quadripartite structure oriented along the intercardinal points. The Buddhist stupas, the Hindu temples⁷⁸, the Christian cruciform churches and martyria⁷⁹ (Fig.27-30), and the

⁷⁵ Ibid., p.95.

⁷⁶ Mekking: *The Architectural Representation of Reality*, 2009, p.42-43.

⁷⁷ Although this reconstruction is not based on strictly scientific sources, its similarity with the four-*īwān* plan is striking.

⁷⁸ Will be discussed in detail in Chapter III.2 on the Mandala.

⁷⁹ Are only mentioned here because they are based on the hierophanic orthogonal grid. However, they are not discussed in detail in the current dissertation.

Islamic four-*īwān* mosques (Fig.32) and Sufi domed four-*īwān khānaqāhs*, etc. are also all based on an orthogonal hierophanic grid with cardinal or intercardinal orientation. The tombs and the gardens (e.g. *čahār-bahrs*) followed the same quadripartite hierophanic plan (Fig.33,34). All these architectural and landscape sites had clear rectangular boundaries, defined by two intersecting orthogonal axes marking the four corners of the world. The geometrical principles of symmetry were applied everywhere to create a representation of the built environment as similar as possible to the creation of the world by God. The geometrical organisation of space (as attributed to God) is opposed to the chaos of the profane, unorganised space (in opposition to God's perfection). Creating order in the chaos by means of symmetry is regarded as an ideal topography, the only one that fully represents order and is subject only to God's rules of perfection.



Fig.21: *The New Jerusalem*, from *The Trinity College Apocalypse*, London c.1255-60 AD, Cambridge, Trinity College MS R 16 2

Source:

http://henrycorbinproject.blogspot.com/2008_08_01_archive.html [Accessed on 1 April 2010]

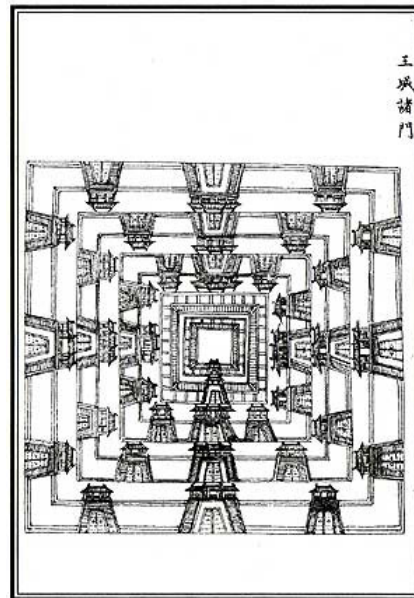


Fig.22: 'The many gates of the royal city' (Wangcheng zhumen), an illustration without attribution from the voluminous Ming dynasty encyclopaedic collection of Chinese writings *Yongle dadian*. Reproduced in: Chen Tongbin et al ed., *Illustrations of ancient Chinese architecture* (Zhongguo gudai jianzhu da tujian), Beijing: Jinri Zhongguo Chubanshe, 1996, vol. 2, p.1185

Source: www.chinaheritagequarterly.org [Accessed on 1 April 2010]

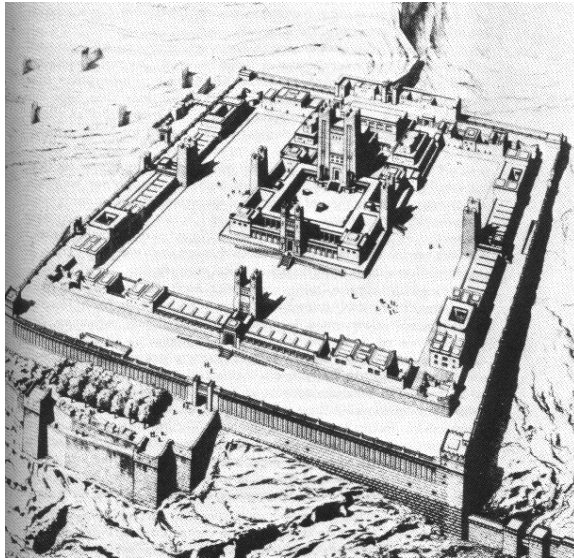


Fig.23: Ezekiel's temple, reconstruction after Book of Ezekiel (40-47)
Source: <http://lavisiondeltemplo.com/ezekiel40.aspx>
[Accessed on 1 April 2010]

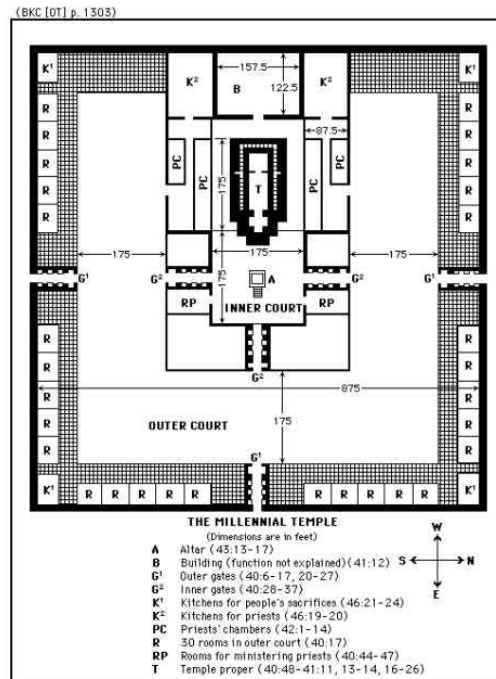


Fig.24: Ezekiel's temple, reconstruction after Book of Ezekiel (40-47)
Source: <http://lavisiondeltemplo.com/ezekiel40.aspx>
[Accessed on 1 April 2010]

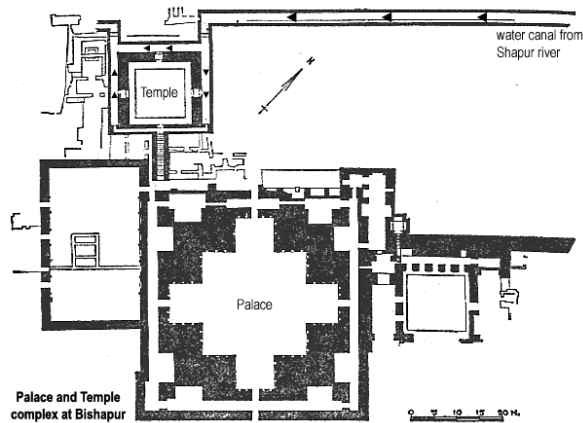


Fig.25: Plan of the palace of Shapur I at Bishpur, 3rd c. AD
Source: <http://www.vohuman.org/SlideShow/Anahita%20Bishapur/AnahitaBishapur00.htm> [Accessed on 1 April 2010]



Fig.26: Palace of Shapur I at Bishpur, aerial view, 3rd c. AD
Source: http://www.alltemples.net/aya-sophia_topic16668_page2.html [Accessed on 1 April 2010]

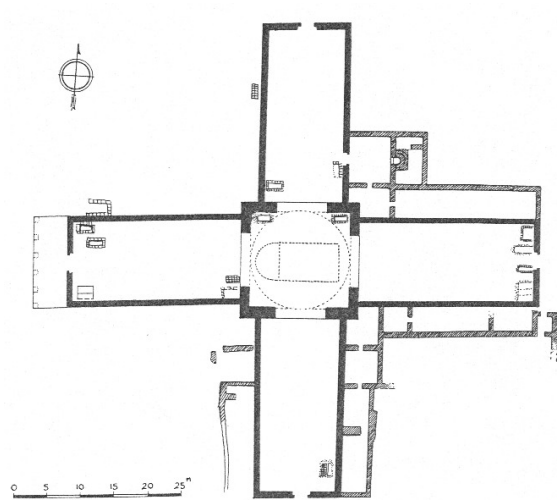


Fig.27: Antioch, Kaouissie, plan of the church, martyrium of St. Babylas (250 AD), built 381-387 AD
Source: Author's drawing

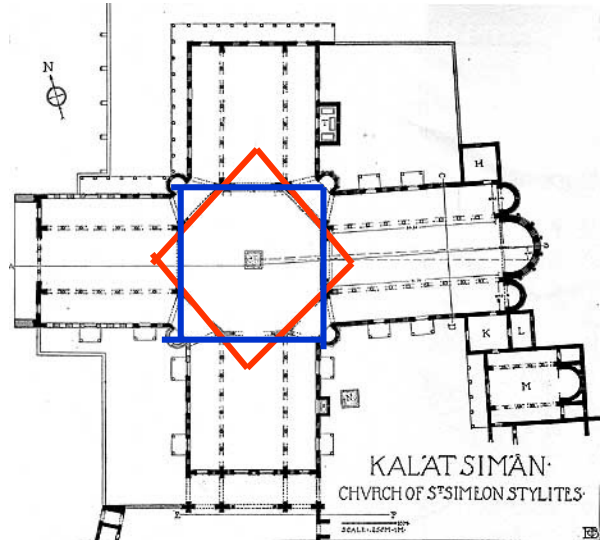


Fig.28: Qalat Siman, plan of the church, martyrium of St. Simeon Stylites (382-459 AD), built 460-490 AD
Source: Author's drawing

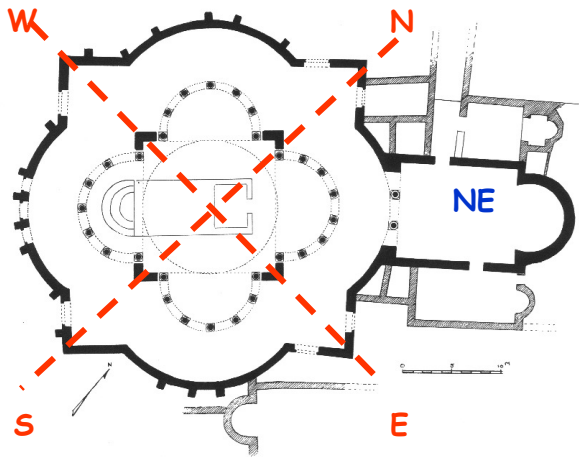


Fig.29: Antioch, Seleucia Peria, plan of the church with axial orientation, 5th c. AD
Source: Author's drawing

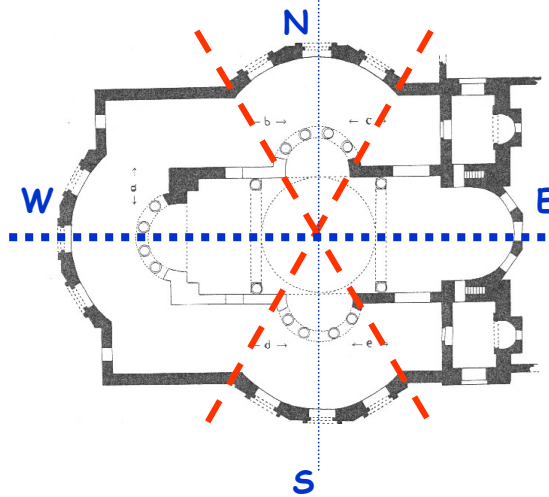


Fig.30: Rusafa, plan of the church with axial orientation, 518-527 AD
Source: Author's drawing

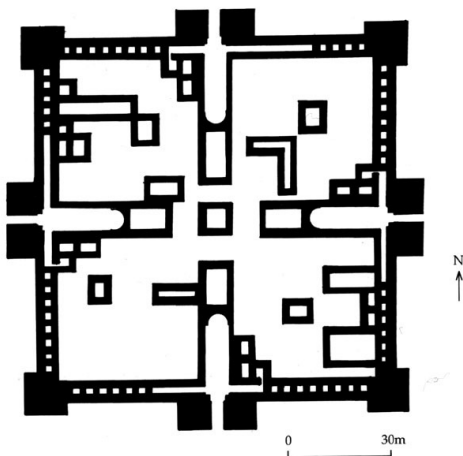


Fig.31: Heraqlah, plan, 8th-9th c. AD
Source: Creswell: *Early Muslim Architecture*, 1969, p.271

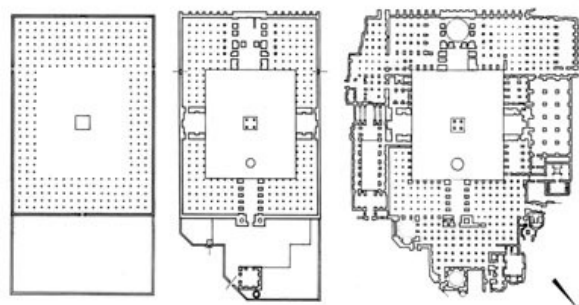


Fig.32: Isfahān, development of the plan of the Friday Mosque, 8th-18th c. AD
Source: <http://bks.tu-graz.ac.at>[Accessed on 1 April 2010]



Fig.33: Akbar's Tomb, aerial view
Source: Google Earth [Accessed on 1 April 2010]



Fig.34: Taj Mahal, aerial view
Source: Google Earth [Accessed on 1 April 2010]

The hierophany of the central element, be it the tree of life, Mount Meru, the omphalos, the linga, etc. remained also constant and is used to describe the axis along which the vertical worlds (the Underworld, the world of the humans and the Heavens) are organised (Fig.35,36). The *Axis Mundi* holds together different levels of existence and thus creates a stable overall image of the world in its utmost totality. The omnipotent deity (e.g. Hermes, Mercury, Brahma, Osiris, etc.) that is represented at the centre of the two orthogonal axes is a mediator between these three worlds and the upholder of the cosmogenesis. In the current dissertation, I refer to all these representations of the centre as the *Axis Mundi*, since in my view, this term describes best the essence of the hierophany. The hierophany of the *Axis Mundi* will be analysed in more detail in the following Chapter II.2.

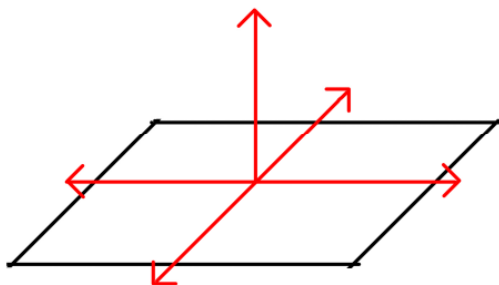


Fig.35: Spatial orientation of the hierophany of the four and the *Axis Mundi*
Source: Diagram by En-Yu Huang

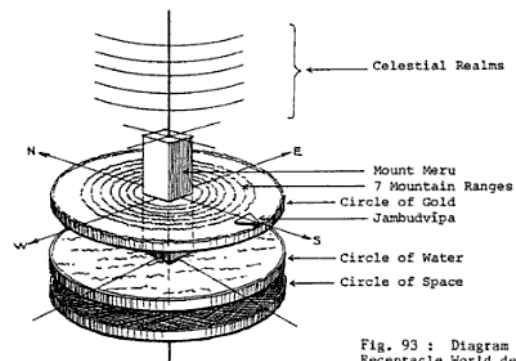


Fig. 93 : Diagram of the Receptacle World described in the *Abhidharmakośa*.

Fig.36: Representation of the *Axis Mundi* after Snodgrass
Source: Snodgrass: *The Stupa*, 1985, p. 159, Fig. 93

I argue that the four-*īwān* plan with the four gates (*īwāns*), ideally denoting the four cardinal points, is a visual representation of the hierophany of the four (the Cosmic Cross) and the hierophany of the *Axis Mundi*. As I have shown above, the hierophany of the four is very complex and includes many different visual representations, which have evolved in a *hierophanic palimpsest* throughout time and beyond mythological and religious thought. In their sacred essence, the four *īwāns* are not more different than for example the four pillars supporting the Throne of God in Islam. That is why, to analyse the existence and the quintessence of the four-*īwān* plan in terms of only Islamic iconography and architectural morphology is a mistake, which deprives the epitome of the hierophany of the four of its extremely broader and complex meaning.

The construction of the four-*īwān* compound can be regarded as a sacred act, repeating the creation of the world by God. Eliade⁸⁰ describes the process of construction as a divine, cosmogonic act, in which the centre of the building is consecrated and coincides with the centre of the world, i.e. the *Axis Mundi*.

“To assure the reality and the enduringness of a construction, there is a repetition of the divine act of perfect construction: the Creation of the worlds and of man. As the first step, the “reality” of the site is secured through consecration of the ground, i.e., through its transformation into a center; then the validity of the act of construction is confirmed by repetition of the divine sacrifice. Naturally, the consecration of the center occurs in a space qualitatively different from profane space. Through the paradox of rite, every consecrated space coincides with the center of the world, just as the time of any ritual coincides with the mythical time of the “beginning.” Through repetition of the cosmogonic act, concrete time, in which the construction takes place, is projected into mythical time, *in illo tempore* when the foundation of the world occurred. Thus the reality and the enduringness of a construction are assured not only by the transformation of profane space into a transcendent space (the center) but also by the transformation of concrete time into mythical time. Any ritual whatever as we shall see later, unfolds not only in a consecrated space (i.e., one different in essence from profane space) but also in a “sacred time,” “once upon a time” (*in illo tempore, ab origine*), that is, when the ritual was performed for the first time by a god, an ancestor, or a hero.”

Similar to the above description by Eliade, Akkach⁸¹ also provides evidence about the mosques at al-Basr and al-Kūfa, which were laid out by shooting arrows towards the four cardinal directions from the central water basin (*al-sahn*). It might be possible that the four-*īwān* compounds were erected also in a similar manner. There is at least evidence that the foundations of Bībī Khānum and the Tīmūrid *čahār-bahr* gardens were laid under auspicious ascendants⁸².

⁸⁰ Eliade, M.: *Cosmos and History: The Myth of the Eternal Return*. New York: Harper, 1959, p.20.

⁸¹ Akkach: *Cosmology and Architecture*, 2005, p.169.

⁸² Thackston: *Zafarnama*, 1989, p.85.

Together with the liturgical alignment with the *qibla*, the spatial alignment with the cardinal and intercardinal directions, as marked by the sun's trajectory in its diurnal and annual journeys, places the four-*Īwān* compound in an architectural tradition organised by ancient cosmological practice, much older than Islam. The essence of the four-*Īwān* plan is that it represents on a microcosmic scale the organisation of the macrocosmic world. The four *Īwāns* denote the four cardinal points or the intercardinal points and are thus visual representation of the whole world as created by God in the *illo tempore*.

In Egypt, for example, the number four was related to the concept of totality and universal thought. The four cardinal points are depicted in a representation of the God Osiris from the Ptolemaic Period (305-30 BC) standing on nine bows (a derivative of 3x3) within the confines of a temple scriptorium (Fig.37). The structure has four entrances, each oriented towards the cardinal points and labelled with the hieroglyphic notations for north, south, east and west. At the four corners, the names of four deities are also written⁸³. This Egyptian example only shows that the hierophany of four (i.e. the Cosmic Cross), represented by gates to a sanctuary and the hierophany of the *Axis Mundi* (i.e. Osiris⁸⁴ in the geometrical centre of the temple) is at least about nine centuries older than Islam.

Another example is the Parthian temple (temenos) of Dedoplis-Mindori in Georgia from 115 BC (Fig.38), in which behind each of the four proto-*Īwāns*, there is a temple. The main sanctuary to the south has been identified as a fire temple probably dedicated to the goddess Anahita⁸⁵. The temple at Dedoplis-Mindori is strictly symmetrical along the main north-south axis and all gates are oriented along the cardinal points. It might be possible that at an earlier stage the four gates that evolved later into the four-*Īwān* plan were simply gates to four separate temples as is the case at Dedopolis-Mindori (Fig.38). Throughout time and with the advent of monotheism, these temples were probably reduced only to the gate (i.e. *Īwān*) that acquired a sacred function. The four-*Īwān* plan might have developed from these polytheistic structures, whereby the reduction of the temples can be explained with the transition from polytheism to monotheism. However, the main hierophany of the Cosmic Cross (i.e. the four gates) remained unchanged.

⁸³ Wilkonson, R.: *Symbol and Magic in Egyptian Art*. London: Thames and Hudson, 1994, p.144.

⁸⁴ There are also depictions of Osiris as a column, the hierophanic equivalent of the *Axis Mundi*.

⁸⁵ Akhvlediani, E. and KhimShi'ahshvili, K.: "Impact of the Achaemenian on Iberian Architecture". In *CAIS, the Circle of Ancient Iranian Studies*. Electronic edition: http://www.cais-soas.com/CAIS/Architecture/achamenid_architecture_georgia.htm [Accessed on 1 April 2010].

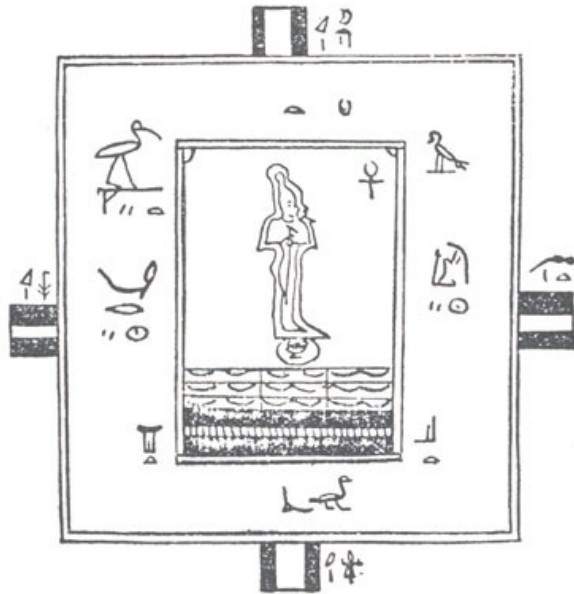


Fig.37: Osiris within a temple scriptorium. Papyrus Salt 825. Ptolemaic Period (305-30 BC), British Museum
Source: Wilkinson: *Symbol and Magic in Egyptian Art*, 1994, p.144

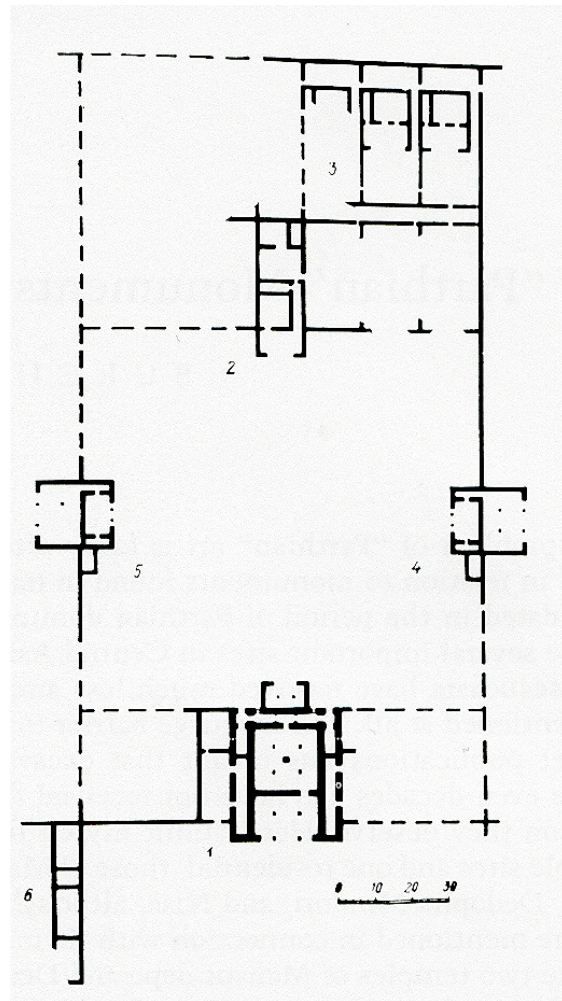


Fig.38: The temple of Dedoplis-Mindori, Georgia after Gagosidze, 115 BC
Source: Gagosidze, *Kavkaz i srednaja Azija*, pl. 1.
http://www.cais-soas.com/CAIS/Architecture/parthian_monuments.htm
[Accessed on 1 April 2010]

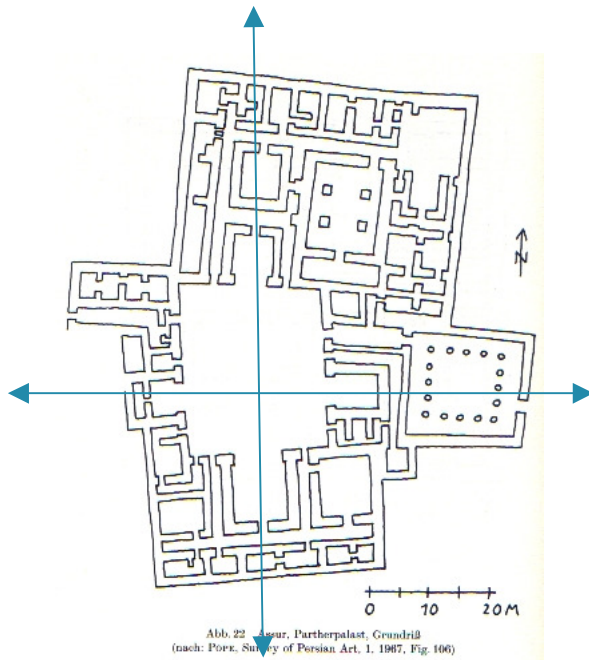


Fig.39: Assūr, first known four-īwān usage, Parthian palace 2nd c. AD, plan after Kleiss
Source: Kleiss: *Palästen und palastartigen Wohnbauten in Iran*, 1989, Fig.22

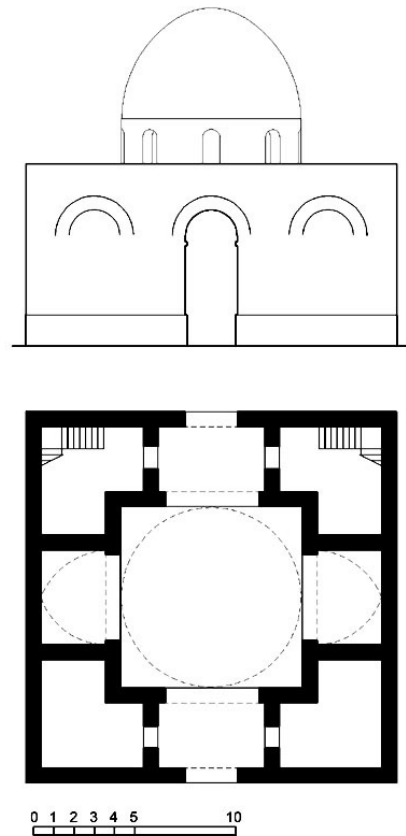


Fig.40: Amman, Umayyad Palace, audience hall, 724-743 AD
Source: Archnet [Accessed on 1 April 2010]



Fig.41: Termez, aerial view of the Kirk-Kiz palace, 9th c. AD
Source: Google Earth [Accessed on 1 April 2010]

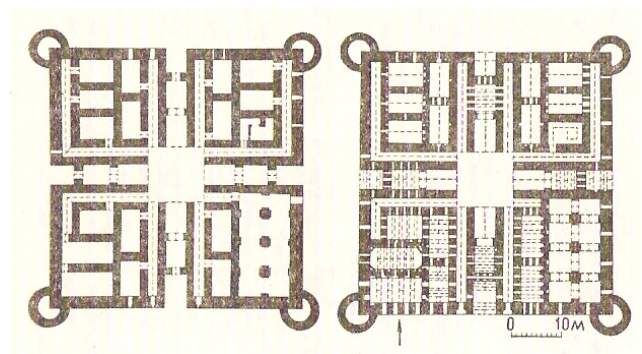


Fig.42: Termez, plan of the Kirk-Kiz palace, 9th c. AD
Source: Baranov et al: *Encyclopaedia*, 1969, p.206, Fig.7

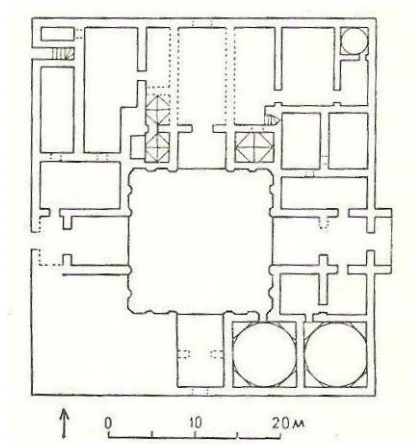


Fig.43: Marv, plan of the Saljūq palace, 11th c. AD
Source: Baranov et al: *Encyclopaedia*, 1969, p.225, Fig.5

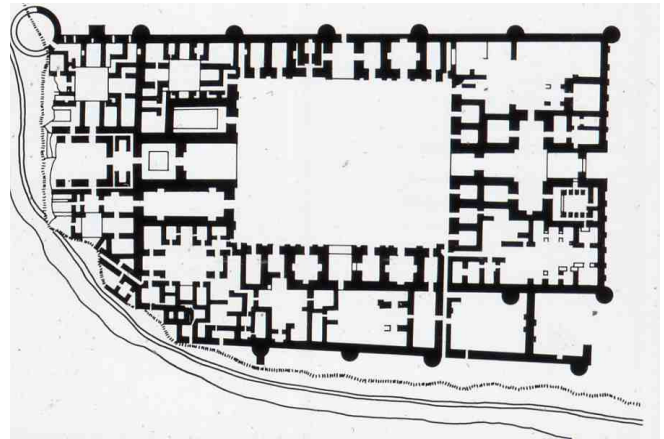


Fig.44: Lashkar-i Bāzār, plan of the Southern Palace 10th-12th c. AD
Source: <http://web.mit.edu/4.611/www/L7.html> [Accessed on 1 April 2010]

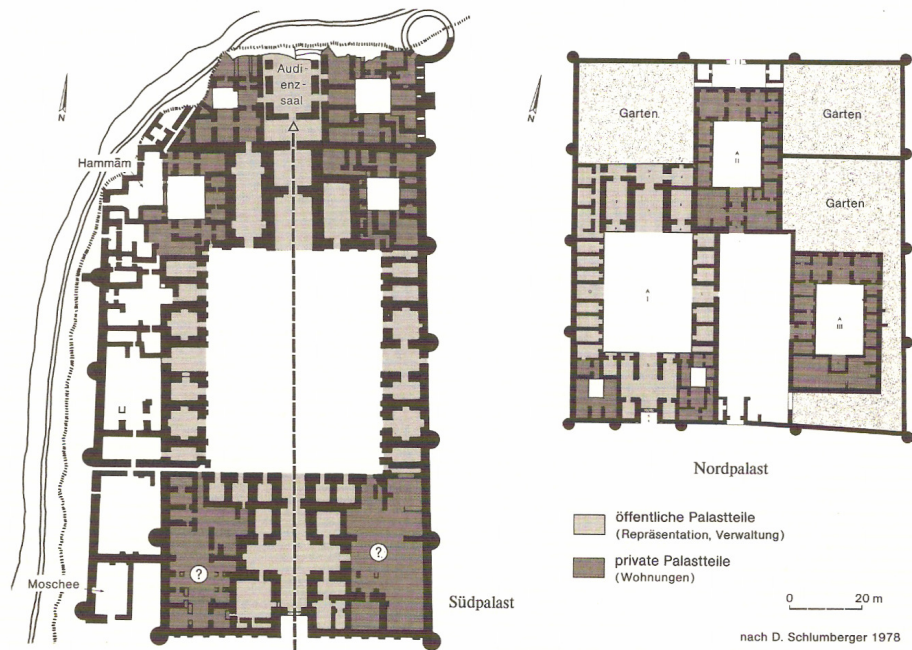


Fig. 25: Lashkar-i Bāzār (Afghanistan). Die beiden großen Paläste

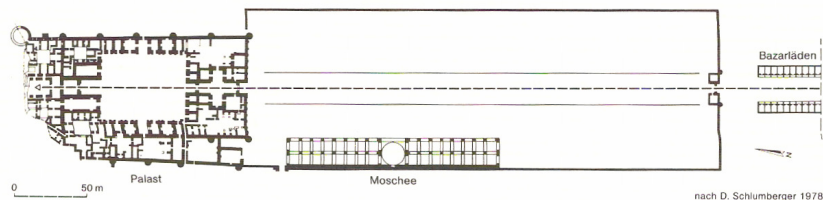


Fig. 26: Achsenzentrierung in Lashkar-i Bāzār (Afghanistan)

Fig.45: Lashkar-i Bāzār, plan of the Southern and the Northern Palaces
Source: Wirth: *Orientalische Stadt*, 2001, p.46, Fig.25-26

Further, the oldest existing four-*Īwān* compound is the palace in Assūr (Fig.39) that dates back to the 2nd c. AD; it was built five centuries before the advent of Islam. It is a fact that some of the earliest examples of Islamic four-*Īwān* compounds are all palaces: the Umayyad palace at Amman⁸⁶ from 8th c. AD (Fig.40), the palace Kirk-Kiz (Fig.41,42) from the 9th c. AD in Termez, the palace at Lashkar-i Bāzār⁸⁷ (Fig.41,42) from 10th-12th c. AD, the Saljūq palace in Marv (Fig.43) from the 11th c. AD and the palace in Termez⁸⁸ from the 11th-12th c. AD. Most certainly there are other examples of Islamic four-*Īwān* palaces⁸⁹ that are not listed in this dissertation; the majority might have been, though, destroyed and have not survived the present day. This can be explained with the *architectural palimpsest*, during which especially the palace (as the main domain of the ruler) has been destroyed in order to free the site (which of course has sacred connotations) for another building project patronised by the subsequent ruler or ruling dynasty. In this process, the architectural substance is partially destroyed and some of the building material might have been reutilised for the next building project. The continuity in the four-*Īwān* palace complexes is a subject for further analysis.

One of the meanings of the term *Īwān*, also spelled *ayvān*, is a palace⁹⁰. According to the electronic version of Encyclopaedia Iranica: "In classical Persian or Arabic texts, *ayvān* refers most of the time to a palatial function, either a whole palace or the most important and formal part of a palace. By extension, it can mean the most official or impressive part of any building. It has been suggested that the word derives from Old Persian *apadāna*⁹¹, but this derivation is no longer securely established." The palace as the domain of the supreme ruler is a representation of the house of God on earth, since the ruler (his throne being at the centre of the palace) is acting as God on earth and as *Axis Mundi* (in terms of the current dissertation). That is why, the four-*Īwān* plan with its geometrical organisation of two

⁸⁶ Godard refers to the same palace as Persian Sasanid palace marking the period prior to the advent of Islam, see Godard: *L'Origine de la madrasa*, 1951, p.6.

⁸⁷ For a description of the architecture of Lashkar-i Bāzār please refer to Hillenbrand: *Islamic Architecture*, 1994, pp.413-414, p.488, p.579. and Schlumberger, D.; Le Berre, M.; Garcin, J.C. and Casal, G.: *Lashkari Bazar: Une Résidence Royale Ghaznevide et Ghoride*. Paris: Diffusion de Boccard, 1A. 1963.

Kazimee and Rahmani define Lashkar-i Bāzār as "the earliest surviving, datable representation of such a building form in Eastern Islam". See Kazimee, B.A.; Rahmani, A.B.: "Place, meaning, and form in the architecture and urban structure of eastern Islamic cities". In *Mellen Studies in Architecture*, Volume 11. Lewiston: Mellen Press, 2003, p.140.

⁸⁸ Baranov et al: *Encyclopaedia*, 1969, p.225.

⁸⁹ Also the function of the building, as determined by modern researchers, is not a paramount criteria. It might be possible that the four-*Īwān* compounds had an interchanging functions of palaces, mosques and madrasas, especially in the early centuries of Islam. Some other examples of the earliest four-*Īwān* structures are the presumable mosque at the Varakhsha citadel from the 10th c. AD and the structure at the Sayat village in Shaartuz (South Tajikistan) from the 11th c. AD.

⁹⁰ Entry on the *Īwān* in the Electronic edition of *Encyclopaedia Iranica* <http://www.iranica.com/newsite/> [Accessed on 25 Jan 2010].

⁹¹ q.v.; W. B. Henning, "Brāhman," TPS, 1944, p. 109 n. 1 = Acta Iranica 6, p. 195; W. Eilers, in Camb. Hist. Iran III, p. 495

orthogonal axes denoting the four cardinal points (i.e. the Cosmic Cross) is the most suitable plan for a palace, representing the domain of God, i.e. the world as a whole.

As far as the orientation is concerned, the hierophany of the four in its essence presupposes orientation along the cardinal points. Yet, only a few four-*īwān* compounds, mainly palaces, are indeed oriented along the ideal four compass directions. I suggest that although the four-*īwān* plan is based on the hierophany of the Cosmic Cross and the *Axis Mundi*, the compounds were rotated either to face Mecca (which is not the case of the measured *qiblas* in this dissertation) or to face some other major Islamic cities as for example Baghdad (which might have been the case of some monuments built by Tīmūr⁹²) or Jerusalem, which have been depicted for centuries as the centre of the world prior to and at the beginning of Islam. These orientations, however, did not change the orthogonal plan with two intersecting axes that define the four-*īwān* compound. The original hierophanic structure of four main gates remained constant until the 19th c. AD.

It is impossible to name the first Islamic compound that adopted the four-*īwān* plan since many buildings have been lost for posterity. However, based on the existing building substance, we can suggest that the four-*īwān* plan developed simultaneously with other religious temples based on the same hierophany of the Cosmic Cross and the *Axis Mundi*.

Here, we are obliged to mention the Buddhist monastery at Adzhina Tēpa⁹³ (Fig.46-49) from the 7th-8th c. AD in present-day Tajikistan⁹⁴, which consists of two four *īwān* courtyards, oriented along the intercardinal points. The main sanctuary has a cross axial stupa in the centre of the four-*īwān* courtyard (Fig.48) and two smaller votive cross-axial stupa's (Fig.49) in two side chambers. The smaller four-*īwān* courtyard had a residential function and accommodated Buddhist monks. The *īwāns* in Adzhina Tēpa are situated exactly in the middle of the respective walls and the two courtyards are perfect squares. Adzhina Tēpa is essential for the history of the four-*īwān* plan since it brings forward two major arguments: a) the four-*īwān* plan co-existed with cruciform Buddhist stupas based on the hierophany of the Cosmic Cross and the *Axis Mundi* as late as the 7th-8th c. AD and b) the four-*īwān* plan might have had an Eastern origin related to Buddhism or Hinduism. Given the problematic proximity of the four staircases of the main stupa to the *īwāns* in the temple (Fig.48), we can also suggest that the four-*īwān* courtyard preceded the construction of the stupa. Still the orientation of the stupas followed perfectly the orientation of the *īwāns* and the staircases of

⁹² See the Chapter V on the *Kosh* Principle.

⁹³ Meaning "Devil's Hill".

⁹⁴ Used to be the eastern part of the Bukhārā Khānate.

the main stupa were exactly in the main axes defining the four *īwāns* in the main sanctuary of Adzhina Tepa.

Litvinsky and Zeymal⁹⁵ argue that the four-*īwān* plan existed in Buddhist sanctuaries in Southern Central Asia as early as the 6th-7th c. AD. The two authors try to derive the origin of the four-*īwān* courtyard from the *vedikā*, the fence of the stupa, and interpret the four-*īwān* plan of the main sanctuary at Adzhina Tepa as a fence that runs along the central stupa. Further, they relate the four-*īwān* courtyard to the Sanskrit term *parayana*, as part of the *vihāra*^{96,97}, which is described as “a courtyard, surrounding walls” in the Sanskrit-Chinese lexicon.

Barthold⁹⁸ was probably the first scholar to link the four-*īwān madrasa* to the Buddhist *vihāra*, which flourished in eastern Iran and Central Asia⁹⁹ right before the Muslim conquest of the area. The structure was a communal one, combining worship, education and burial practices. The *vihāra* consists of several elements and the ones discovered have a four-*īwān* plan overlooking a courtyard. Barthold¹⁰⁰ explains further that Islam underwent the influence of Buddhism and the original home of the madrasa may have been the region lying on either side of the Amu-Darya and bordering on Balkh, where Buddhism was paramount before the Muslim conquest. Further, with regard to Sufism, Barthold¹⁰¹ points out that during the Mongol period in Central Asia dervishes belonging to various orders existed beside the learned theologians and representatives of the orthodoxy. Their *khānaqāhs* were built “everywhere” but especially in the regions bordering the steppe – Bukhārā, Kwarazm and the Sir-Darya. From all these places the dervish shaykhs could spread their beliefs among the nomads, who, for “unknown reason”, as put by Barthold, were more open to their influence than to the learned Muslim scholarship. According to Litvinsky and Zeymal¹⁰² the archaeological data and the architectural analysis “tend to corroborate Barthold’s idea that the madrasas first arose in the Tukhāristān possessions of the Samanids”.

⁹⁵ Литвинский, Б.А. Зеймаль, Т.И.: *Аджина-Тепе*. Москва: Искусство, 1971. (Litvinsky, B.A.; Zeymal, T.I.: *Adzhina Tepa*. Moscow: Publishing House of the Arts, 1971, p.51)

⁹⁶ Meaning a Buddhist monastery in Sanskrit.

⁹⁷ Compareti quotes a Bactrian document studied by Sims-Williams, which clearly testifies to the use of a specific terminology for the temples of Bactria-Tokharistan: *βαυαπο* (*vihara*) was employed only for Buddhist holy places while *βαγολαγγο* was a generic sanctuary.

⁹⁸ Barthold: *Four Studies, Volume II, Ulugh Beg*, 1958, p. 8.

⁹⁹ For a detailed overview of Buddhist art in Sogdia, please refer to Compareti, M.: “Traces of Buddhist Art in Sogdia”. In *Sino-Platonic Papers*. Number 181. Philadelphia: University of Pennsylvania, 2008. (Electronic edition: http://www.sino-platonic.org/complete/spp181_buddhist_art_sogdiana.pdf [Accessed on 1 April 2010])

¹⁰⁰ Barthold: *Four Studies, Volume II, Ulugh Beg*, 1958, p.5.

¹⁰¹ Ibid., p.7.

¹⁰² Litvinsky and Zeymal: *Adzhina Tepa*, 1971, p.225.

Litvinsky and Zeymal¹⁰³ relate the origin of Adzhina Tepa as a two-fold four *īwān* compound, combining the *vihāra* and *sanghārāma* to the composition of Takhti Bakhi from the 2nd c. AD, the Bagh Gai monastery at Hadda¹⁰⁴ (a two-fold courtyard compound with a sanctuary in the centre of the southern courtyard), the *sanghārāma* of Sang-Hao (also a two-fold courtyard temple with a stupa in the centre of the sanctuary) and the monastery in the vicinity of Kunduz. According to the authors, Adzhina Tepa is the ultimate expression of this pattern, which crystallised around the 3rd-5th c. AD and combined the functions of the *vihāra* with the stupa. Yet, none of these “related” to Adzhina Tepa temples had four *īwāns*. In their evolutionary theory and comparisons, Litvinsky and Zeymal focussed on the stupa in the centre of a courtyard but somehow missed the more essential fact, namely, that the two courtyards had four *īwāns*. In my view, the plan of Adzhina Tepa can be best explained with the hierophany of the Cosmic Cross and the *Axis Mundi*. It is not quite correct to minimise the *īwāns* to a mere fence surrounding the stupa. The axial organisation of the two courtyards stresses the symmetry of the *īwāns* and the staircases of the stupa, which represent the perfection of God’s creation on earth. The hierophany of the Cosmic Cross and the *Axis Mundi* is sacred, that is why it is most suitable for sacred compounds such as temples and monasteries.

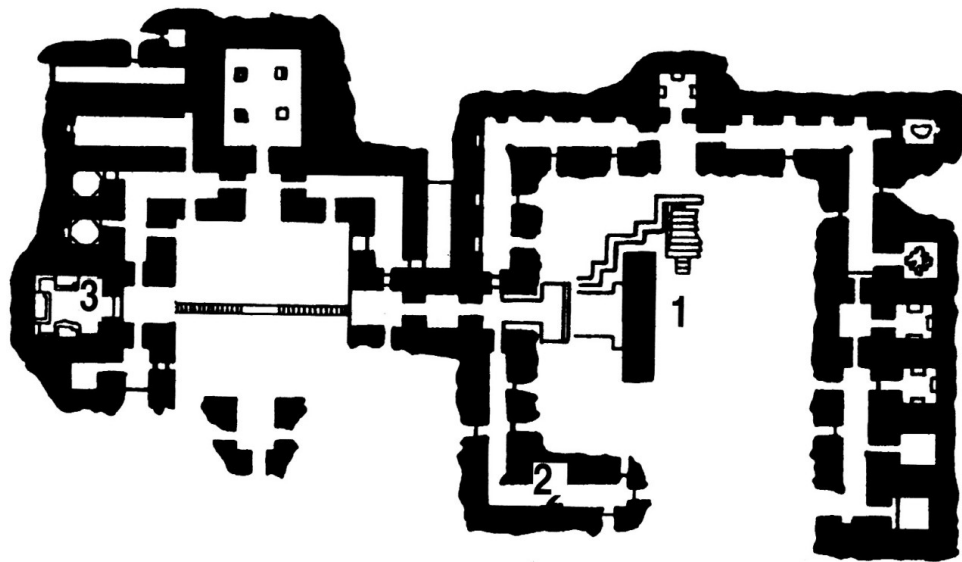


Fig.46: Adzhina Tepa, plan of the two courtyards: the monastery to the south-east (to the left) and the main sanctuary with the cross-axial stupa to the northwest (to the right) after Pander
Source: Pander: *Zentralsasien*, 1966, p.42

¹⁰³ Ibid., p.225.

¹⁰⁴ Close to Jalalabad, Afghanistan.

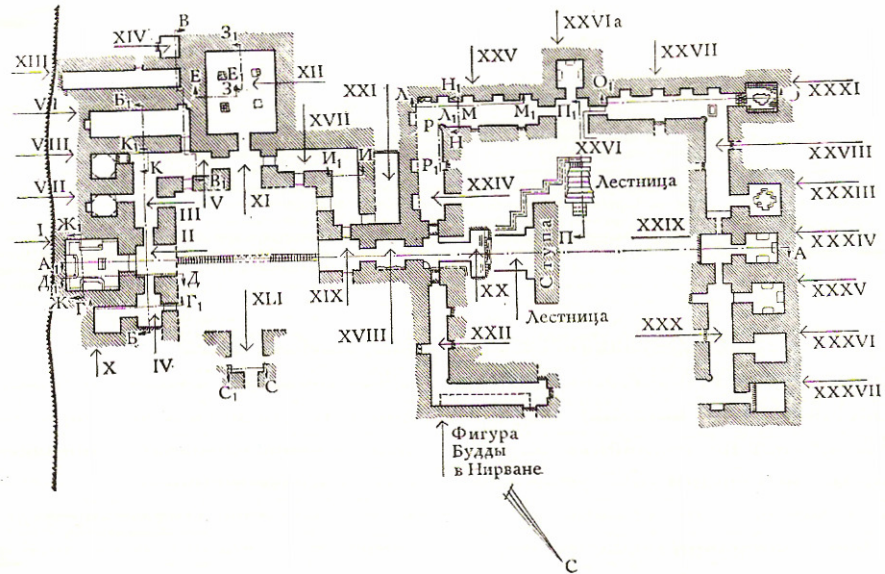


Fig.47: Adzhina Tepa, plan of the two courtyards: the monastery to the south-east (to the left) and the main sanctuary with the cross-axial stupa to the northwest (to the right) after Litvinsky and Zeymal
Source: Litvinsky and Zeymal: *Adzhina Tepa*, 1971, p.15

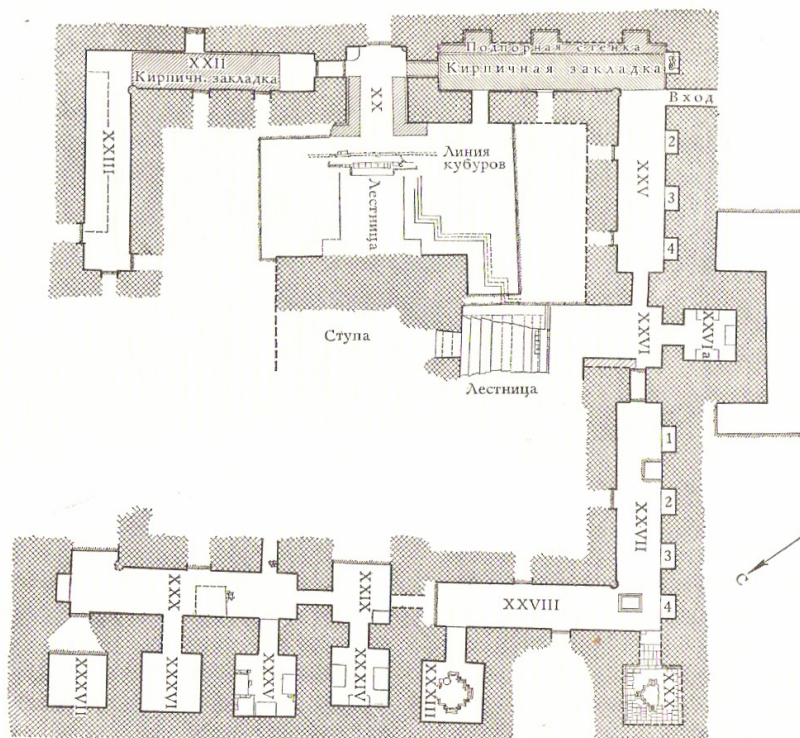


Fig.48: Adzhina Tepa, plan of the main sanctuary with the cross-axial stupa after Litvinsky and Zeymal
Source: Litvinsky and Zeymal: *Adzhina Tepa*, 1971, p.27

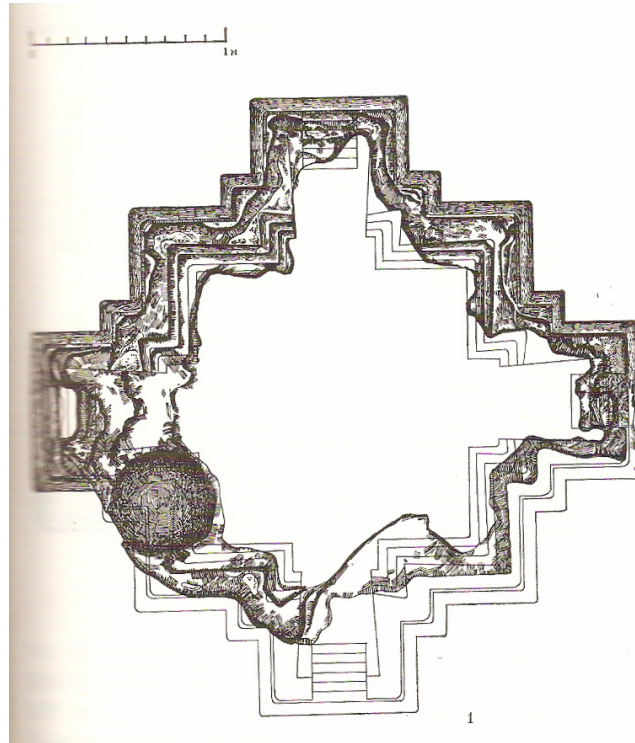


Fig.49: Adzhina Tepa, plan of the cross-axial votive stupa in the XXXIII room after Litvinsky and Zeymal
Source: Litvinsky and Zeymal: *Adzhina Tepa*, 1971, p.45

The Buddhist monastery at Adzhina Tepa is very important for the history of the four-*īwān* plan since it underlines the coexistence of Buddhist and Islamic architectural iconography as late as the 7th-8th c. AD. The influence of Buddhism in the territories of Western Turkistan has been also studied by Litvinsky and Zeymal¹⁰⁵ and they conclude that:

“In the course of more than 500 years, from the 1st-2nd centuries to the 7th-8th centuries A.D., Buddhism and the related elements of secular culture were a major component of the life of Western Turkistan society. Its impact did not stop with the Arab conquest and the introduction of Islam. The origin and content of many phenomena of medieval (“Muslim”) spiritual and material culture should be sought in Buddhism.”¹⁰⁶

Further analysis of the coexistence of Buddhism, Zoroastrism and Islam in Transoxiana should shed more light on the development of the four-*īwān* plan. It will be crucial to study monuments that have developed in the frame of the *architectural palimpsest* and that share a cross-axial design with four doorways along the intersecting axes. The concept of the *hierophanic palimpsest*, presented above, only stresses the obvious parallels between the Buddhist, Hindu and Islamic orthogonal compounds and opens the debate on the hierophanic essence of their architectural plans.

¹⁰⁵ Litvinsky and Zeymal: *Adzhina Tepa*, 1971, pp.238-243.

¹⁰⁶ *Ibid.*, p.242-243.

II.2 The Hierophany of the *Axis Mundi*

The *Axis Mundi* is a mythopoetic concept that is visualised and instrumentalised as an architectural representational tool in the frame of the *Axis Mundi and Cosmic Cross* shorter-cycle tradition as suggested by Mekking¹⁰⁷. This tool can be applied to represent most of the cosmic realities in any built environment, regardless of their religious character. The most characteristic aspect of the hierophany of the *Axis Mundi* is that it marks the centre of the world. By designing a building, based on the *Axis Mundi*, the whole compound - both the building and the site - represents sacred connotations.

The ubiquitous characteristics of the hierophany lie in the fact that the central architectural space is vertically accentuated, which creates an invisible bridge between the higher realm, usually associated with Paradise, the earth and the Underworld; the *Axis Mundi* thus becomes a passage to the Heavens, and in particular to Paradise, which can be further analysed within the shorter-cycle cluster *Holy and Unholy Zones* developed by Mekking¹⁰⁸.

The vertical aspect of the hierophany of the *Axis Mundi* coincides with the geometrical centre of the compound and creates a representation of cosmogenic creation: the single point of all creation (as static dimension). The axes, radiating from the centre as a Cosmic Cross, mark the created world in its totality; they can be analysed as cosmogenic evolution (Fig.51). The hierophany of the *Axis Mundi* can be, thus, interpreted as a clear spatio-temporal representation of the built environment as it defines space, vertically emanating from the centre and spreading along the horizontal axes of the hierophany of the Cosmic Cross.

Since, the geometric centre is atemporal and defined by the intersecting axes, it can be ubiquitous, without any direct reference to a certain point in time or space. As such, the centre, i.e. the *Axis Mundi* is identified with the primordial unity of the creation¹⁰⁹. On the other hand, the radiating axes from the centre represent the multiplicity and plurality of the world as a divine, time-governed manifestation by using the human coordinates as an architectural tool. Such building traditions are part of the long-cycle *Anthropomorphic* representational theme as proposed by Mekking.¹¹⁰ The anthropomorphic architectural elements - the geometric centre and the radiating axes - define the world in its conceivable totality. In the frame of the shorter-cycle cluster *Axis Mundi and Cosmic Cross*; they represent, as such, the divine creation on earth in its multiple manifestations. The vertical

¹⁰⁷ Mekking: *The Architectural Representation of Reality*, 2009, pp.23-51.

¹⁰⁸ Mekking: *The Architectural Representation of Reality*, 2009, pp.23-51.

¹⁰⁹ Snodgrass: *The Stupa*, 1985, p.22.

¹¹⁰ Mekking: *The Architectural Representation of Reality*, 2009, p.36.

axis, i.e. the *Axis Mundi*, linking the three cosmological realities, defines the connection between the *Holy and Unholy Zones*: the Underworld, the tangible world as we perceive it (the Earth) and the intangible realm of paradisiacal perfection (the Heavenly realm).

In Sufism, every external form is complemented by an inner reality which is its hidden, internal essence. The *zāhir* is the sensible form, which is most readily comprehensible, such as the shape of a building. The *batīn* is the essential or qualitative aspect, which all things possess. In order to know a thing in its completeness, one must not only seek its outward, ephemeral reality (the *zāhir*) but also its essential, inward reality (the *batīn*).¹¹¹

These concepts of inward and outward expression, i.e. as a representation of internal reality, go back to a deeper spiritual significance of man's verticality, which is regarded as a spatial representation of the eternal presence of man as an *Axis Mundi*. The 9th c. AD Sufi Sahl al-Tusturī¹¹² refers to the creation of man by divine light and explains:

"When it [man] reached the veil of the Majesty (*hijāb al-'azama*) it bowed in prostration before God. God created from its prostration (*sajda*) a mighty column (*'āmūd*) like crystal glass (*zuḡāḡ*) of light that is outwardly (*zāhir*) and inwardly (*batīn*) translucent."

Apart from cosmological representations, Sufism introduced another aspect of personal experience during time of prayer, which attributes the individual with a special position while communicating with God. By canonising the *al-waqt*¹¹³, seen as spatial and temporal exercises, Ibn 'Arabī argues that they are meaningful only with reference to man's centrality in the world and his own perception of the sun's movements:¹¹⁴

"But when God designated in the atlas sphere the twelve divisions, which were precisely timed, and called them "signs" (*burūj*)..., set an individual standing [in the centre] about whom this sphere revolved..."

The unique verticality of man and his spiritual essence, derived from the close connection with God (in order to create Muhammad, God projected his own light), is opposed in Sufi tradition to the existence of human reality on earth. The notion of a "column of light" represents the vertical axis and denotes its close relation with the creation of man. Man, in his spatial manifestation, is represented as an *Axis Mundi*, as a divine creation who mitigates between the two worlds of Paradise and earthly existence. In other words, man is the primordial representation of the microcosmos which connects the earthly life with the overworldly macrocosmos. As such, man carries within himself the two complementarities:

¹¹¹ Ardalan and Bakhtiar: *Sense of Unity*, 1973, p.5.

¹¹² Quoted by Akkach: *Cosmology and Architecture*, 2005, p.93.

¹¹³ Occuring of Islamic prayers at certain times.

¹¹⁴ Quoted by Akkach: *Cosmology and Architecture*, 2005, p.172-173.

the *zāhir* and the *batīn*. Man inhabits the divine world and perceives it in its tangible three-dimensionality (the *zāhir*); at the same time, he attributes to this world a new rendering of personalised meaning, which is qualitative and mystic (the *batīn*).

Furthermore, the centre evokes movement in twofold complimentary directions: spreading from the centre to the axes (centrifugal) and radiating from the axes to the centre (centripetal) (Fig.50). In this way, the unity spreads towards multiplicity and the outward turns back to the inward. These two movements¹¹⁵ play a crucial role in the perception and definition of interior and exterior in a building or architectural compound, analysed as a built representation of any reality.

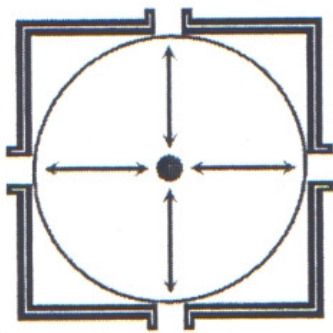


Fig.50: Centrifugal and centripetal movement after Akkach
Source: Akkach: *Cosmology and Architecture*, 2005, p.152

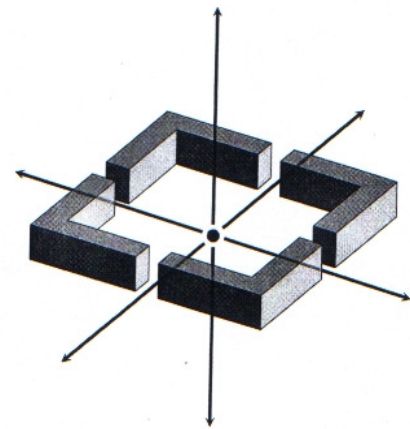
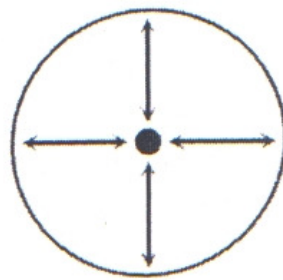


Fig.51: Geometrical centre-radiating axes after Akkach
Source: Akkach: *Cosmology and Architecture*, 2005, p.156

The two intersecting axes define the created world in its totality. This aspect is underlined when the axes mark the four cardinal points. In this case, gates (e.g. *īwāns*), wall openings or staircases (e.g. in Buddhist stupas or Mexican pyramids) are located exactly along the axes and face the geographical directions north, south, east and west. The architectural principle of denoting the world directions can be further underlined by stressing the intercardinal points.¹¹⁶

The ultimate *Axis Mundi* in the Islamic cultural tradition is of course the Ka'ba. The Ka'ba was evoked as a powerful image of the Islamic *Axis Mundi* because Muhammad had an inner

¹¹⁵ Akkach discusses these two movements, which were initially defined by Ardalan and Bakhtiar: *Sense of Unity*, 1973, p.88 on the chapter on Baghdad.

¹¹⁶ As in the case of Zoroastrian fire temples or Hindu temples, where the corners of the building face the cardinal points and wall openings are placed in the half cardinal points. However, these architectural examples are not covered in the current dissertation.

desire for a new sacred centre (*qibla*), other than Jerusalem. Akkach¹¹⁷ concludes, somewhat hastily: “Since this event all mosques have been oriented toward the Ka’ba, the divinely chosen centre of the Islamic world.” The Ka’ba is indeed the centre of the Islamic religious beliefs, however, not all mosques are oriented towards it. The measurements presented in this dissertation, carried out in Samarqand, Bukhārā and Khīva prove this statement¹¹⁸. The Ka’ba is an architectural representation of the *Axis Mundi* in Islam. Yet, it did not have an omnipotent power to stretch its geographical and monotheistic importance to all corners of the Islamic world. The Ka’ba is a “staged” centre adopting older hierophanies of the Cosmic Cross and the *Axis Mundi* in its plan and orientation. For, until Islamic religious thought centred on Mecca, Jerusalem was represented as the centre of the world.

One very interesting point, with regard to the representation of Paradise on earth and the utilisation of the *īwāns* as sacred gates to Paradise, can be found in the comparison between two Tīmūrid plates: one from the *Mi’rajnama* from 1425-1450 AD, in which the gate to Paradise is depicted as an *īwān* (Fig.52) and a representation of Mecca from 1410-1411 AD (Fig.53) in which the Black Stone at the eastern corner of the Ka’ba is situated within a similar *īwān* setting, used to depict the gate to Paradise in the *Mi’rajnama*. One can dare make the hypothesis that Mecca is seen as the centre of the world and the Ka’ba, in particular, the Black Stone, acts as a gate to Paradise. The pilgrimage to Mecca assures each worshipper direct access to Paradise. The Ka’ba acts as an *Axis Mundi* that connects the world of the believers and the world of God. The fact that the gate of Paradise (Fig.52), which transpositions the human being (Muhammad) into the divine realm, is in the form of an *īwān* only stresses the suitability of the *īwān* iconography to mark the sacred passage to Heaven. On the other hand, the worshipper in Mecca gains access to the holy realm also through touching the Black Stone, incorporated into a similar “gate to Paradise”. This imagery of an *īwān*, topped by a Koranic inscription in Kufic script of the *shahada*, is a representation of the Oneness of God. Similar “Paradise” *īwāns* with the same Kufic inscriptions are also used as entrance *īwāns* in the major Tīmūrid four-*īwān* monuments as will be discussed later in this dissertation.

¹¹⁷ Akkach: *Cosmology and Architecture*, 2005, p.170.

¹¹⁸ Please consult the table in Annex I.



Fig.52: "Arrival in Paradise", the door that leads to Paradise, Muhammad during the *miraj*, fol. 47 v⁰, *Mir'ajnama*, 1425-1450 AD
Source: Séguy: *Mir'aj Nâme*, 1977, plate 40

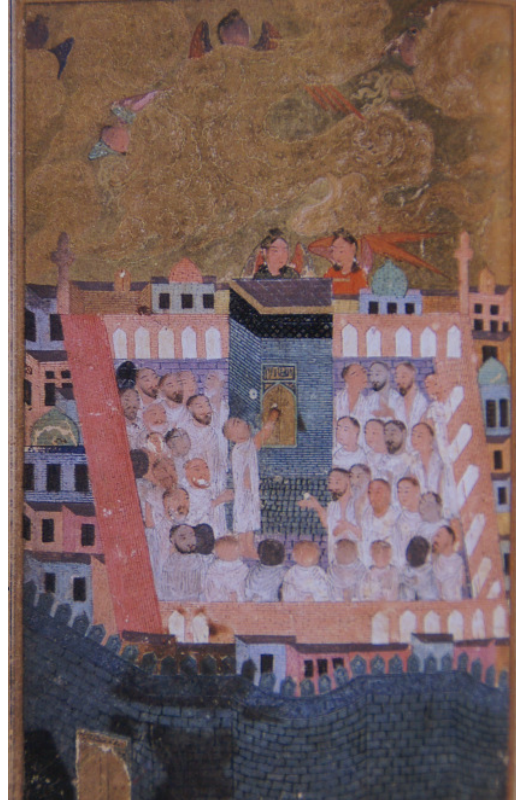


Fig.53: "View of Mecca and Pilgrims" from *Anthology*, Shiraz, 1410-1411 AD, fol. 362b-363a
Source: Lentz and Lowry: *Timur*, 1989, p.118

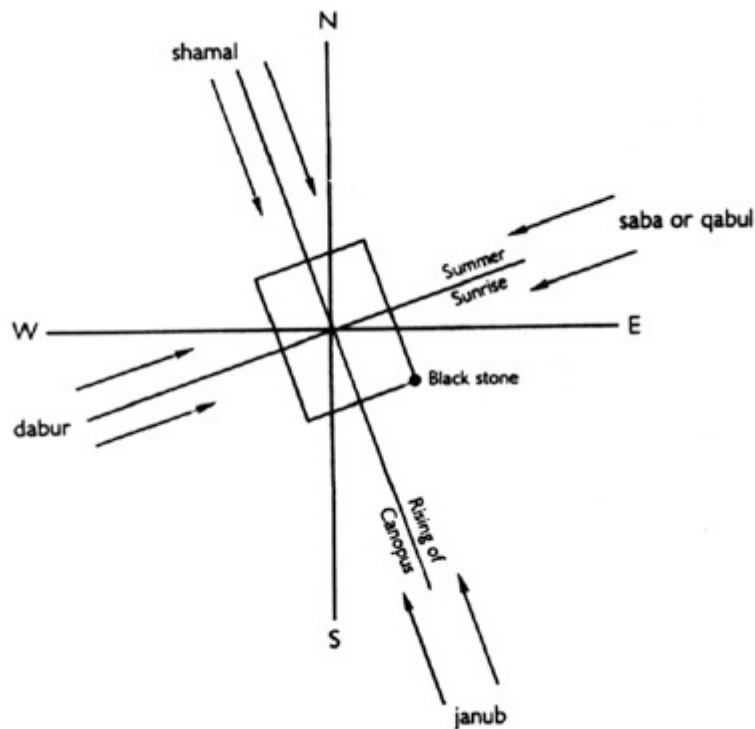


Fig.54: The orientation of the rectangular base of the Ka'ba towards the rising of Canopus and the summer solstice, as recorded in various medieval sources, the earliest dating from the 7thc. AD. The rising point of Canopus is accurate to within 2°.
Source: http://www.islamic-awareness.org/History/Islam/Dome_Of_The_Rock/qibla.html [Accessed on 1 October 2009]

The Ka'ba (Fig.54) has a rectangular base. Its major axis points at the local rising point of the star Canopus, its minor axis is aligned exactly to the farthest southerly setting point of the new moon at the winter solstice. According to King¹¹⁹ the axes of the Ka'ba are based on the directions of the four main winds (*shamāl, sabā, janūb and dabūr*) in the pagan Arab tradition. The earliest recorded reference to these winds and their relation to the orientation of the Ka'ba can be traced down to Ibn 'Abbās (619-687/8 AD)¹²⁰, the companion of the Prophet Muhammad. Further, King points out that the relation between the winds and the sides of the Ka'ba is mentioned for the first time by al-Hasa al-Basrī (642-728 AD). These traditional beliefs appear in lexicographical works, treatise on folk astronomy and the genre of books *kutub al-'azama*, which discuss God's greatness as represented by His creation on earth. King¹²¹ concludes that the Arab wind schemes form an independent meteorological tradition, different from the classical traditions of Aristotle and Theophrastus, whose works were translated into Arabic in the 8th and 10th c. AD. In terms of the current dissertation, the four winds can be also regarded within the hierophany of the four, as a representation of the Cosmic Cross, whereby, the Ka'ba is the representation of the *Axis Mundi*.

The relationship between the geometrical centre and the radiating axes, represented in the Ka'ba can be also metaphorically regarded as a microcosmic representation of the macrocosmos. The microcosmos of the architectural site gains the status of a macrocosmos, as the marking of sacred territory stretches to all corners of the world along the intersecting axes, based on the long-cycle *Anthropomorphic tradition*. Furthermore, the individual perception of architectural scale, defining the microcosmos as a human being, automatically acquires divine dimensions when the individual inhabits the centre of the site.

¹¹⁹ King, D.A.: In Synchrony with the Heavens. Studies in Astronomical Timekeeping and Instrumentation in Medieval Islamic Civilization. Studies I-IX. Volume One. The Call of the Muezzin. Leiden: Brill, 2004, pp.814-819.

¹²⁰ This might be the same Quthām b. 'Abbās, who is presumably buried in Samarqand, the issue will be discussed in Chapter V.I.1. on the *Kosh* Principle.

¹²¹ Ibid., p.812.



Fig.55: To the west of Agra, Fathepur Sikri, the column holding the throne of Akbar in the *Diwān-i Khass*
Source: Volwahren: *Islamisches Indien*, 1969, pp.46-47



Fig.56: To the west of Agra, Fathepur Sikri, View of the *Diwān-i Khass*
Source: <http://www.indianetzone.com/41/diwān-i-khas.htm> [Accessed on 1 April 2010]



Fig.57: To the west of Agra, Fathepur Sikri, the column holding the throne of Akbar in the *Diwān-i Khass*
Source: Volwahren: *Islamisches Indien*, 1969, pp.46-47

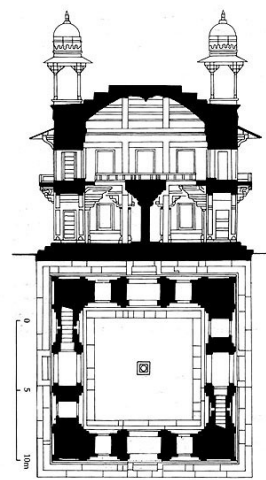


Fig.58: To the west of Agra, Fathepur Sikri, cross section of the *Diwān-i Khass*, the *Axis Mundi* - the column holding the throne of Akbar
Source: Volwahren: *Islamisches Indien*, 1969, pp.46-47



Fig.59: Agra, Taj Mahal, aerial view

Source: <http://www.indovacations.net/english/Kumbh-mela-haridwar.htm> [Accessed on 1 April 2010]

This principle of “staging” oneself in the centre of the world can be observed in every built environment where the divine origin of power is represented by using anthropomorphic coordinates. Therefore, it is most widely used in tombs (e.g. Taj Mahal) (Fig.59), palaces (e.g. Fatehpur Sikri) (Fig.55-58) or royal capitals as a representation of political connotations. By representing one’s ruling domain according to cosmological models of two intersecting axes and by staging one’s authority and hegemony in the centre of the communal life, the dwelling of the ruler represents the divine nature of his power. In this setting, the ruler acts as a mediator between the material world and the divine world. When sitting on the crossing of the two intersecting axes along the four cardinal points, representing the macrocosmos, the ruler acts as a cosmic column that connects the Underworld, the earth and the Upper world. By placing his throne in the centre of the compound (Fig.55,57), the ruler asserts his divine and hegemonic authority while connecting the three levels of the cosmos. The ruler himself becomes the *Axis Mundi* and his omnipotent power stretches along each corner of the world, a representation of the Cosmic Cross.

II.3 The Hierophany of Paradisus Quadripartitus

The hierophany of Paradisus Quadripartitus has been formed as a *hierophanic palimpsest*, in which the basic hierophany of the four¹²² (i.e. the four cardinal points, the Cosmic Cross) is combined with the hierophany of the centre (i.e. the *Axis Mundi*). Paradisus Quadripartitus can be interpreted as a later theophanic layer (religious representation) within this *hierophanic palimpsest*.

The representation of Paradise¹²³ as an enclosed rectangular garden with four rivers is universal in the worlds' mythologies and religions. However, this enclosed quadripartite structure, mainly represented by the rivers, extends to a whole range of other hierophanies based on an extenuated centre with an orthogonal or diagonal systems of axes such as for example the Persian *čahār-bahr* garden and the four-*īwān* compound.

Persian ceramics dating back 6000 years show the world divided into four sections, with a pool or spring of life at the centre. The Persian concept of a garden as Paradise may also be that old, but the earliest recorded Persian gardens that we know of date from around the 6th c. BC¹²⁴. The Persian garden is artificially contrived and man-made, based on geometric arrangements of nature without any attempt at a "natural" look. The Persian *čahār-bahr* – “four gardens” is a rectangular walled garden quartered by two streams intersecting at right angles (Fig.60-63). According to Pinder-Wilson¹²⁵: “the word *čahār-bahr* may ultimately derive from the Sogdian *s`r`b`gh* “tower”/ Sogdian, a Middle Iranian dialect, spoken in the area of which Marakand (Samarqand) was the chief city, the original meaning of the word had been lost.” The term “tower” might be also related to the *Axis Mundi*, so the garden of Paradise is staged at the centre of the world.

¹²² Discussed in the previous two sub-chapters.

¹²³ The Avestan word *pairidaēza-*, Old Persian **paridaida-*, Median **paridaiza-* (walled-around, i.e., a walled garden), was transliterated into Greek *paradeisoi*, then rendered into the Latin *paradisus*, and from there entered into European languages, e.g., French *paradis*, German *Paradies*, and English *Paradise*. The word entered Semitic languages as well: Akkadian *pardesu*, Hebrew *pardes*, and Arabic *firdaws*.

¹²⁴ Ruggles, D. F.: “Humayun’s Tomb and Garden: Typologies and Visual Order”. In *Gardens in the Time of the Great Muslim Empires: Theory and Design*, ed. A. Petruccioli. Leiden, New York: E. J. Brill, 1997, p.174.

¹²⁵ Pinder-Wilson, R.: “The Persian Garden: Bagh and Chahar Bagh”. In *The Islamic Garden*, ed. E. MacDougal and R. Ettinghausen. Dumbarton Oaks Colloquia on the History of Landscape Architecture, 4. Washington, 1976, p.74.



Fig.60: Bābur supervising the making of his favourite garden, the *Bagh-i-Wafa* "Garden of Fidelity" in Kabul, 1508-1509 AD
Source: <http://instruct1.cit.cornell.edu/lanar524/IslamicImages.html> [Accessed on 1 April 2010]

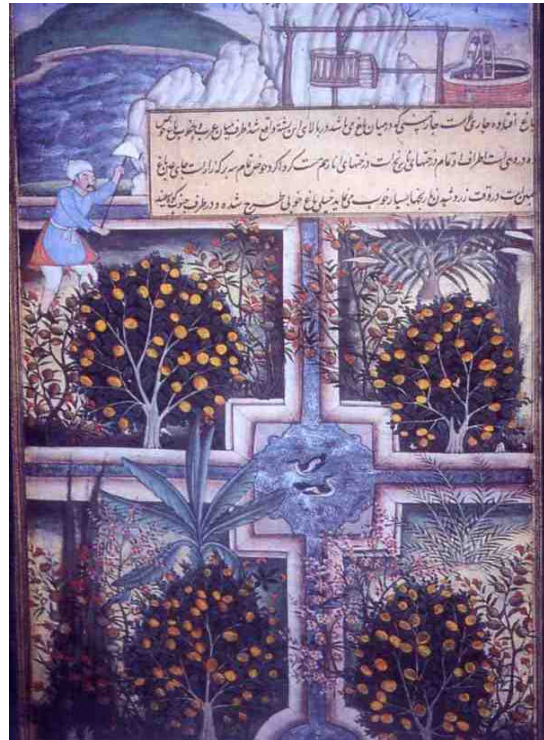


Fig.61: Mughal ideal representation of the *čahār-bahr* garden
Source: <http://web.mit.edu/4.611/www/L14.html>
[Accessed on 1 April 2010]



Fig.62: Mughal Garden, the *Bagh-i-Wafa* "Garden of Fidelity" in Kabul, 1508-1509 AD
Source: http://www.learn.columbia.edu/indianart/ppts/Bābur_JainPaint_Transitions14-16thC.ppt#269,13,Dia 13 [Accessed on 1 April 2010]

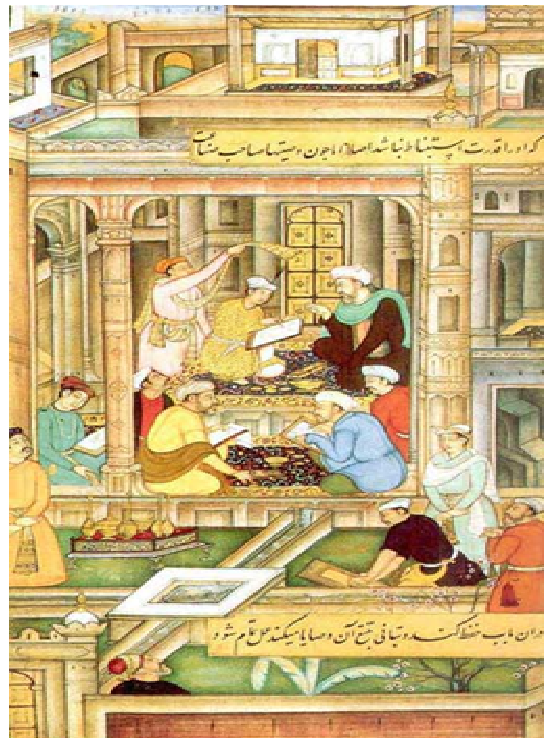


Fig.63: Mughal Garden from the *Akhlaq-i-Nasiri* of Nasir ud-Din Tusi, circa 1590–1595 AD (Prince Sadruddin Aga Khan Collection)
Source: <http://www.exoticindiaart.com/article/mughal/>
[Accessed on 1 April 2010]

Although, it is widely acknowledged that four rivers sprang from the centre of the Christian Paradise, the location of these rivers has not been clearly identified. Two of the rivers have been geographically identified as the Tigris (in Hebrew *Hiddekel*), running along the eastern side of Assyria and the Euphrates (in Hebrew *Prat*), on which Babylon was situated. The other two rivers: the Pishon and the Gihon have not been convincingly matched with existing rivers. The most widely spread rendering, suggested by the Jewish historian Flavius Josephus¹²⁶ (1st c. AD) identifies the Pishon with the Ganges and the Gihon with the Nile. Scafi¹²⁷ quotes other scholars, such as Hippolytus of Rome, 3rd c. AD, who identified the Gihon with the Indus. Further, Ephrem the Syrian, 4th c. AD and Severian of Gabala, 5th c. AD matched the Pishon with the Danube.

As Scafi has pointed out, almost all Christian commentators of the Bible until the Reformation based their work on the Vulgate (Clementine Vulgate), the standard and authoritative Latin version of the Bible, compiled by Jerome in the early 5th c. AD which describes the four rivers as follows:

“8 Plantaverat autem Dominus Deus paradisum voluptatis a principio, in quo posuit hominem quem formaverat. 9 Produxitque Dominus Deus de humo omne lignum pulchrum visu, et ad vescendum suave lignum etiam vitæ in medio paradisi, lignumque scientiæ boni et mali. 10 Et fluvius egrediebatur de loco voluptatis ad irrigandum paradisum, qui inde dividitur in quatuor capita. 11 Nomen uni Phison: ipse est qui circuit omnem terram Hevilath, ubi nascitur aurum: 12 et aurum terræ illius optimum est; ibi invenitur bdellium, et lapis onychinus. 13 Et nomen fluvii secundi Gehon; ipse est qui circumit omnem terram Æthiopiæ. 14 Nomen vero fluminis tertii, Tigris: ipse vadit contra Assyrios. Fluvius autem quartus, ipse est Euphrates. 15 Tulit ergo Dominus Deus hominem, et posuit eum in paradiso voluptatis, ut operaretur, et custodiret illum:”

Further, the symbol of the four rivers emanating from a single source is used as a pictogram for Paradise in medieval maps of the world.

¹²⁶ Josephus, F.: *Jewish Antiquities*, I.37-9. quoted by Scafi, p.35.

¹²⁷ Scafi, A.: *Mapping Paradise. A History of Heaven on Earth*. Chicago: The University of Chicago Press, 2006, p.33.



Fig.64: Mappa Mundi, from the Apocalypse of Saint Sever (Bibliothèque Nationale, MS lat. 8878, fol. 45 v^o and 46 r)

Source: http://nl.wikipedia.org/wiki/Commentaar_op_de_Apocalyps_van_Johannes [Accessed on 4 April 2010]

The Medieval Christian maps represented Paradise as an enclosed rectangular at the top of the maps¹²⁸ (Fig.64-66), since the earthly Paradise was situated at the beginning of human history. Delumeau¹²⁹ further points out that Jerusalem was placed at the centre of the maps so that the faithful had to focus on “the place of their redemption”.

This can be explained with the fact that the medieval sacred geography placed the east at the top of the map i.e. Paradise, different from the Arabic maps, in which either the north or the south are at the top. On a world map dated 1109 AD (Fig.65), dedicated to Eutherus, bishop of Osma, the earthly Paradise is situated between the Caucasus, Assyria, Persia, Chaldea and India. Adam and Eve are placed in an enclosed square at the top of the map denoting Paradise. The world is rectangular and is surrounded by the world ocean. Jerusalem is placed at the centre of the map.

¹²⁸ Delumeau, J.: *History of Paradise. The Garden of Eden in Myth & Tradition*. Chicago: University of Illinois Press, 2000, p.56.

¹²⁹ Ibid., p.56.

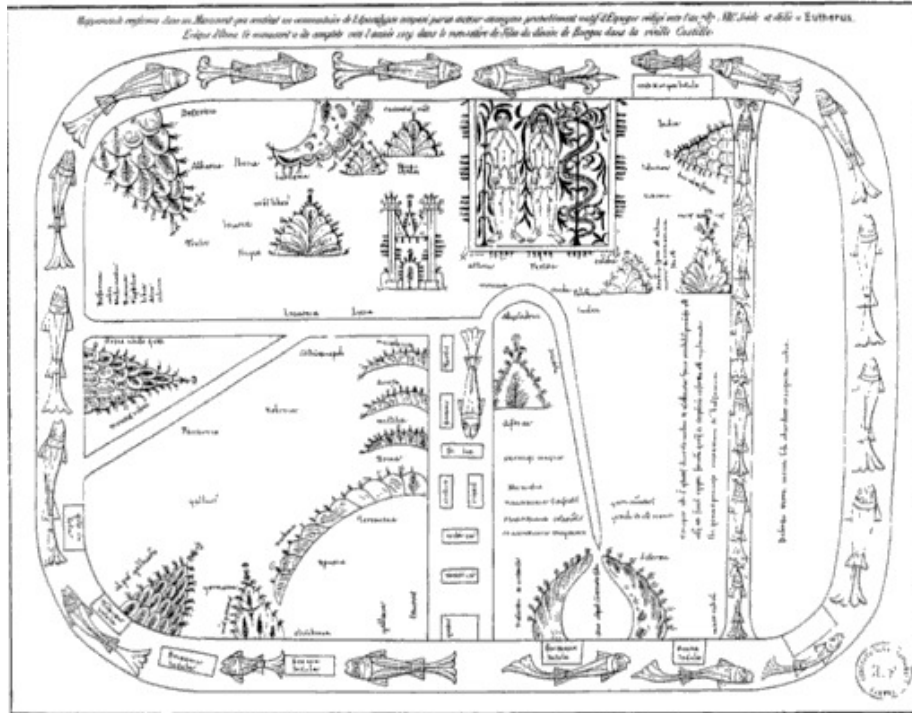


Fig.65: A world map dated 1109 AD, dedicated to Eutherus, bishop of Osma
Source: Delumeau: *The Garden*, 2000, p.57, Map 2

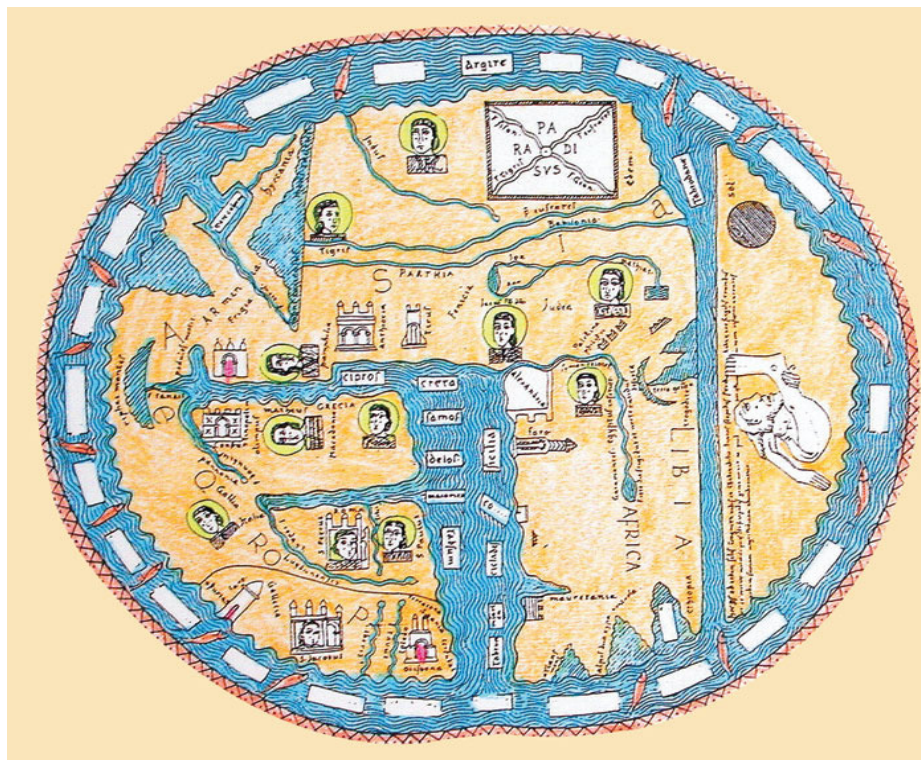


Fig.66: "Beatus" map of Paradise, 1086 AD
Source: <http://www.saudiaramcoworld.com/issue/200504/monsoons.i.mude.i.and.gold.htm> [Accessed on 1 April 2010]

Another early world map from a manuscript of Beatus of Liébana's *In Apocalypsin* (Fig.66) from 1086 AD depicts the expansion of the Church of Christ over the whole earth. This is

illustrated by the portrayal of the heads of the apostles, who evangelized different parts of the known world. Paradise is also placed at the top of the map and depicted as a rectangular with four rivers running along the diagonals. Jerusalem is at the centre of the map.

In a map by Zakariya Ibn Muhammad al-Qazwini (1203-1283 AD) (Fig.67) from his treatise *Athar al-bilad* [Monuments of the lands], the south is represented at the top. “The map depicts the Islamic world, centring upon the Indian Ocean. As in most Islamic maps, the south is placed at the top. The Indian Ocean is represented as enclosed by an eastern extension of Africa, a notion descended from Ptolemy. Near the irregular and misunderstood peninsula of India clusters a group of islands. The circular bulge represents Arabia with the twin rivers of Mesopotamia nearby illustrating a non-existent connection between the Arabian Gulf and the Mediterranean Sea. This latter sea is much constricted and distorted. It tapers sharply toward the west, where it is inscribed, Gulf of the West. The eastern reach of the Mediterranean is labelled Sea of Egypt, and into it flows the great Nile with its many-branched sources.”¹³⁰

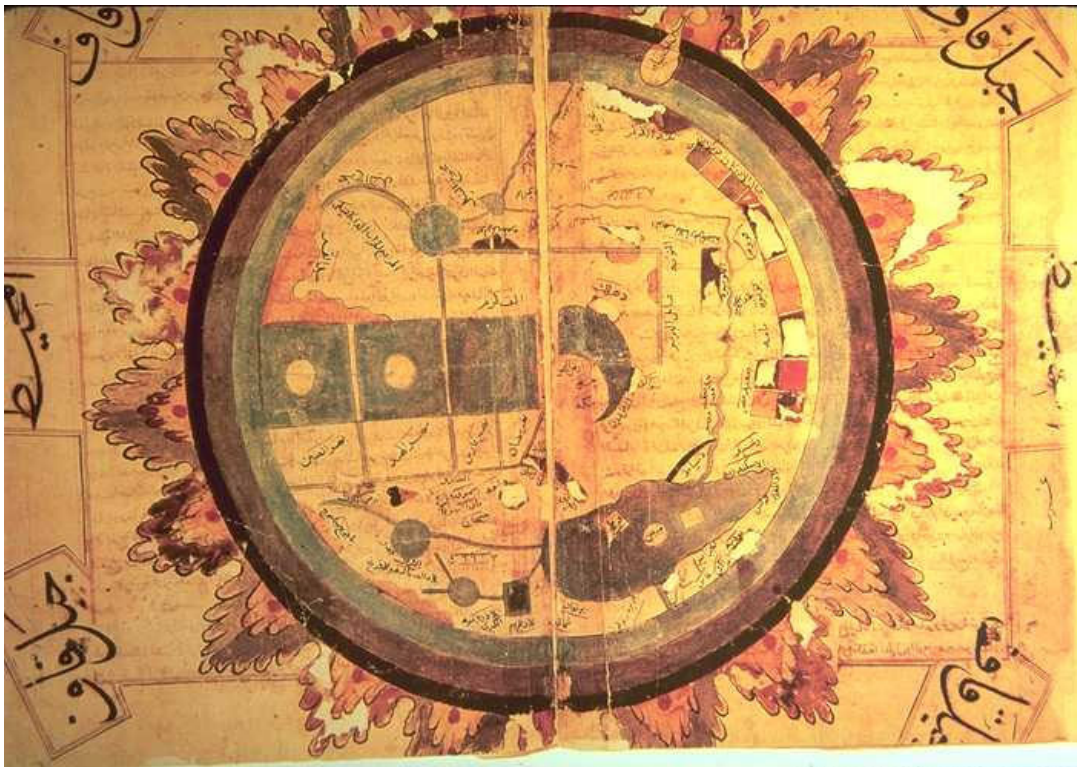


Fig.67: Al-Qazwini world map, Walters Art Gallery on fol. 52vo-53r, south is at the top
Source: <http://www.henry-davis.com/MAPS/EMwebpages/222.html> [Accessed on 1 April 2010]

¹³⁰ <http://www.henry-davis.com/MAPS/EMwebpages/222mono.html> [Accessed on 1 April 2010]

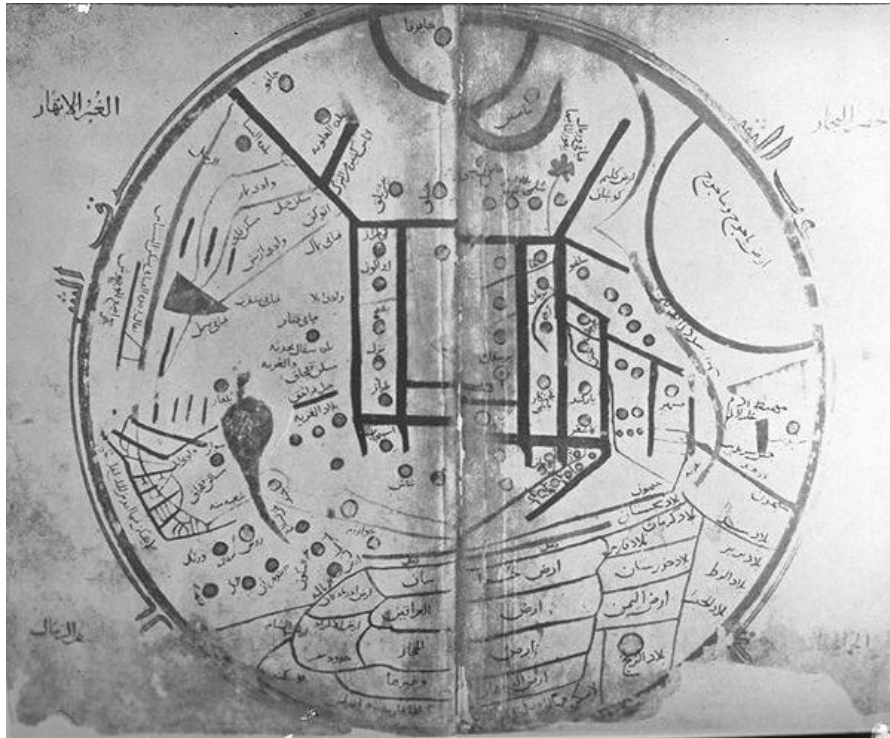


Fig.68: World Map of al-Kashghari, from the *Diwān lughat al-Turk*, 1076 AD, The Millet Genel Kütüphanesi, Ali Emiri 4189, Istanbul, east at the top

Source: <http://www.henry-davis.com/MAPS/EMwebpages/214.html> [Accessed on 1 April 2010]

The world map of al-Kashghari's *Diwān lughat al-Turk* from 1076 AD (Fig.68) is oriented with east at the top. This map is interesting because it is centred on the Turkish-speaking areas of Central Asia, with other countries receding from them toward the circumference of the world circle. Turkestan is magnified in the centre.

One of the oldest surviving Tīmūrīd world maps (Fig.69) comes from a scientific manuscript executed for Iskandar-Sultan ibn Umar Shaykh in Isfahān from 1413 AD. The map is part of a large compendium preserved at the Topkapi Sarayi Library in Istanbul. It depicts oceans, mountains and important cities at the time of Iskandar-Sultan ibn Umar Shaykh.

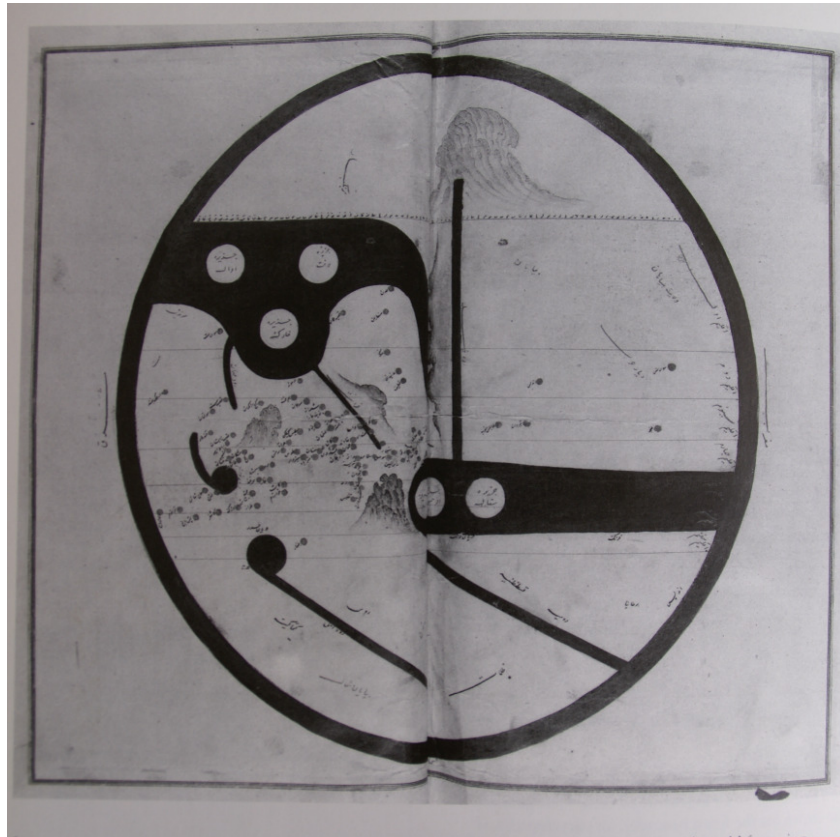


Fig.69: Circular map of the Tīmūrīd world from a scientific manuscript executed for Iskandar-Sultan ibn Umar Shaykh, Isfahān, c.1413 AD. Istanbul, Topkapi Sarayi Library, B.411, fol. 141b-142a
Source: Lentz and Lowry: *Timur*, 1989, p.150

The Muslim Paradise is a continuation of the basic Judeo-Christian Paradise. Paradise is conceived as the reward for the Muslim faithful. The pre-Islamic tradition of a royal garden and the “arid ecology of the birthplace of Islam”¹³¹ are represented by the concept of Paradise with bountiful water and foliage. All senses, sounds and tastes are profoundly represented in the Islamic Paradise by the images of gushing fountains, lush greenery, the elixir called *ma’ al- tasnim* “water of the ascended to heaven”, the beverage of the blessed in Paradise, giving everlasting life. There are golden thrones on which the blessed could rest, silk couches and cushions, exquisite carpets. In Paradise there is excellent food, wine that does not give you a hang over, exotic fruit, etc. The spatial organisation of Paradise is defined by the four rivers of wine, milk, honey and water; the bricks are made of gold and silver, the pebbles have pearls and rubies and the soil is saffron¹³².

Paradise is called “Gardens of Eden, underneath which rivers flow”, (Sūra 98:9) or “gardens underneath which rivers flow” (Sūra 9:71) or the believers are promised “goodly dwelling-places in the Gardens of Eden” (Sūra 9:72). But Eden is also the dwelling place of Adam, the

¹³¹ http://www.cliffordawright.com/caw/food/entries/display.php/topic_id/29/id/53/ [Accessed on 1 April 2010]

¹³² Rustomji: *The Garden*: Introduction, 2009.

primordial garden. Commentators usually distinguish between these two gardens, but in other connections Eden is explained as a part of the all-embracing Paradise at the end of time¹³³. In her article “The Celestial Garden in Islam”, Schimmel¹³⁴ makes a distinction between three words for Paradise: *Illiyun* (“the book of the pious is in Illiyun; and what shall teach thee what is Illiyun”, Sūra 83:19), *jannat al-khuld* (“Say: `Is that better, or the Garden of Eternity, that is promised to the godfearing, and is their recompense and homecoming? Therein they shall have what they will dwelling forever’, Sūra 25:15), *firdaus* (“But those who believe, and do deeds of righteousness-the Gardens of Paradise shall be their hospitality, therein to dwell forever, desiring no removal out of them”, Sūra 18:107, “Those are the inheritors who shall inherit Paradise therein dwelling forever”, Sūra 23:11). The most widely used term for Paradise is *firdaus*, i.e. denoting exactly the Gardens of Paradise, in this sense, the Gardens are synonymous to Paradise.

Paradise seems rather an enclosed garden¹³⁵, as were the gardens in the East: surrounded by God’s greatness, the garden becomes, so to speak, in mystical interpretation the *Weltinnenraum*, the inner aspect of creation. There must be walls around it, for the Koran mentions its gates (“Then those that feared their Lord shall be driven in companies into Paradise, till, when they have come thither, and its gates are opened”, Sūra 39:73).

The representation of the hierophany of the four cardinal points by the *īwāns* as part of the representation of the Celestial garden can be also referred to the four rivers of Paradise, i.e. the four rivers of esoteric knowledge in terms of Sufism. These rivers include the following: the river of unchanging Water (*mā` ghayr āsin*), representing the science of life (*‘ilm al-hayāt*); the river of Wine (*khamr*), representing the science of the spiritual states (*‘ilm al-ahwal*); the river of Honey (*‘asal*), representing the science of the divine revelation (*‘ilm al-wahī*) and the river of Milk (*laban*), representing the science of the secrets (*‘ilm al-asrār*), the essence of all science, revealed by God only to those, who devote themselves entirely to him.

In the mysticism of Ibn `Arabī, this fourfold pattern of sciences, related to the hierophany of the four rivers of Paradise is connected to the tripartite structure of the human (sensible, spiritual and imaginary) and together they generate twelve different types of Sufi knowledge. In architectural terms, these four rivers of Sufi esoteric knowledge can be represented by the

¹³³ Schimmel, A. “The Celestial Garden in Islam”. In *The Islamic Garden*, p.19.

¹³⁴ Ibid., p.20.

¹³⁵ Ibid., p.16.

four arched recesses in the Sufi tombs or with the four *īwāns* of Sufi *khānaqāhs*, e.g. the *khānaqāh* of Bahauddin in Bukhārā¹³⁶.

The earliest precise description of a garden design is Rashid ad-din's account of the Golden Horde which Ghazan Khān laid out at Ujan near Tabriz (1302 AD)¹³⁷.

In Islamic culture, Paradise is directly depicted in the literary sources. The Mir Haydar's *Mi'rajnāma* (Book of the ascension, Bibliothèque Nationale, Paris)¹³⁸, a 15th c. AD poetic description of the Prophet's mystical journey to Heaven and Hell is probably one of the best known examples, since it takes much of its imagery of Paradise directly from highly descriptive scriptural passages of the Koran. The most famous illustrated manuscript of the poem, created for Shāh Rukh in Harāt in 1425-1450 AD written in Uighur¹³⁹ and Arabic scripts, consists of 61 illuminations¹⁴⁰ that show clear Buddhist iconography and represents the coexistence of Buddhism and Islam across the vast territories of the Tīmūrīd Empire.

The *Mi'rajnāma* depicts a Paradise "with triple gates (Fig.72), four flowing rivers of water, milk, wine, and honey (Fig.73), and flowering trees, among which the *houris* engage in games and provide refreshments"¹⁴¹ (Fig.70,71). At the foot of the tree with emerald branches (Fig.73), Muhammad experiences the four rivers of Paradise that spring from it: two above ground and two below. Of the first two, one is the Nile which flows through Egypt (Misr), the other the Euphrates, whose course passes through the city of Kūfa. Of the other two subterranean rivers, one is the Selsebil that flows into Paradise, the other empties into the Kawthar. The tree beside a spring usually symbolises creation. It also reminds one of the Genesis 2:9-10 which describes the tree of life in the middle of Paradise, encircled by a river, divided into four branches.

Further in the *Mi'rajnāma*, Gabriel shows the Prophet the wonders of Paradise and leads him to the shore of the Kawthar. Beside the water, there are the three gateways to Paradise with domes of pearl, red hyacinth and emerald (Fig.72). The depiction of these gateways is strictly architectural with three clear arched recesses topped with domes. This visual representation of Paradise is crucial for the understanding of the four-*īwān* plan. The position of the Kawthar

¹³⁶ Please see Chapter IV.7.3.

¹³⁷ Pinder-Wilson, R.: "The Persian Garden: Bagh and Chahar Bagh". In *The Islamic Garden*, p.76.

¹³⁸ Pics: <http://dome.mit.edu/handle/1721.3/11443>

Text: <http://www.bentibbetts.com/pictures/show/139>

¹³⁹ The Uighur script, derived from an old Aramaic alphabet, was spread through Central Asia by Manichean missionaries who came from Sogdiana. For many centuries it served as medium for the first literary works in the Turkish language.

¹⁴⁰ Séguy: *Mirāj Nāmeḥ*, 1977.

¹⁴¹ <http://science.jrank.org/pages/10606/Paradise-on-Earth-Islamic-Art-Literature.html> [Accessed on 1 April 2010]

can be associated with the central position of the water pool in the four-*īwān* courtyard. The three domed gateways can be analysed as the three courtyard *īwāns* with domed structures, as is the case with the Bībī Khānum Mosque in Samarqand, which has three domed courtyard mosques, the fourth *īwān* being the backside of the entrance *īwān*. The central dome in the Paradise depiction in the *Mi'rajnama* (Fig.72) is made of gold and is clearly the vertical geometrical centre (the *Axis Mundi*) of the architectural composition. In a similar way, the main sanctuary of the Bībī Khānum Mosque is attributed the greatest importance within the compound, it contains the *qibla* with the *mihrāb* and its dome has a remarkable span. This analysis shows that the *īwāns* of the Bībī Khānum Mosque can be interpreted as an architectural representation of the gateways of Paradise par excellence.



Fig.70: The *houris* during the *miraj*, fol. 49 , *Mi'rajnama*, 1425-1450 AD.
Source: Séguy: *Mirāj Nāmeḥ*, 1977, plate 41



Fig.71: Amusement of the *houris* during the *miraj*, fol. 49 v^o, *Mi'rajnama*, 1425-1450 AD.
Source: Séguy: *Mirāj Nāmeḥ*, 1977, plate 42



Fig.72: To the gardens of Paradise during the *miraj*, fol. 45 v^o, *Mi'rajnama*, 1425-1450 AD.
Source: Séguy: *Mirâj Nâmeh*, 1977, plate 39



Fig.73: At the foot of the tree with emerald branches during the *miraj*, detail, fol. 34, *Mi'rajnama*, 1425-1450 AD.
Source: Séguy: *Mirâj Nâmeh*, 1977, plate 31

The hierophany of the Cosmic Cross and the *Axis Mundi* can be also used to explain the ascension of Muhammad to Paradise¹⁴². Islam is probably the only monotheistic religion in which the main human prophet personally witnesses Paradise. In the earliest descriptions of that event, Muhammad ascends after he has lead the prayer for Abraham, Moses and Jesus in the Temple of Jerusalem (Fig.75). So, on the one hand, Muhammad is placed along the Biblical prophets and is the fourth element in their company (which forms a Cosmic Cross) and on the other hand, only Muhammad rises to Heaven and experiences Paradise. We can associate Muhammad with the *Axis Mundi*, the cosmic axis, along which Paradise can be approached. Traditional Islamic accounts of the *miraj* show often Muhammad climbing the steps of a luminous ladder rising up from the Temple of Jerusalem, from the stone of Isaac. to Heaven. Furthermore, Muhammad as a human being is attributed God-like qualities, since only God and the angels can access Paradise. In this way, Muhammad adds an anthropomorphic connotation to the hierophany of the *Axis Mundi*.

Muhammad visits the different levels of Heaven, guarded by Biblical prophets. The Heavens have seven levels, which can be explained with the hierophany of the four or the Cosmic Cross plus the hierophany of the *Axis Mundi*, which connects the three vertical worlds (so four plus three is seven). The number seven is a sacred number and it should be analysed not in terms of realistic spatial organisation but in terms of hierophanic importance and as a

¹⁴² The theme of the ascension is also known from the Bible, in which Jacob sees a ladder in his dream, which rests on the earth and reaches up to the Heavens (Genesis 28:10-16).

representation of the cosmos in its totality (four cardinal points that stretch along the three vertical worlds).

It is reported that during the prayer prior to the ascension, Muhammad acts as an imam to the Biblical prophets, which immediately puts Islam in a superior position to Judaism and Christianity. While visiting the levels of the Heavens and thus of Paradise, each level is also associated with the Biblical prophetic representations, whereby Abraham is at the top. Muhammad associates himself with Abraham being the father of all Arabs.

Although, the exact place of the ascension is not very clear, there are various representations of it. In a manuscript entitled *Khamseh*, by Nezami from 1494/5 AD, Muhammad is depicted exactly above the Ka'ba in Mecca (Fig.74), which immediately places Mecca at the centre of the world, from which Muhammad ascends to Heaven. According to other sources¹⁴³, Muhammad ascends from Jerusalem, since he last met the Biblical prophets there, prior to the ascensions (Fig.75). Jerusalem is represented at the centre of the world in almost all Medieval maps representing Paradise as well (Fig.65,66). So, we might conclude that probably in the earlier stages of Islamic religious thought, it was believed that Muhammad ascended from Jerusalem. While later, with the increasingly more important role of Mecca, the actual place was transformed to the new "centre" of the Islamic world, i.e. Mecca. The new anthropomorphic *Axis Mundi* (i.e. Muhammad during the *miraḡ*) stretched from the Ka'ba to Paradise, by connecting the world of the mortals with Heaven. When the pilgrims pray at the Ka'ba they also create contact with the Heavens (Fig.53) and in a spiritual way by prayer repeat the ascension of the Prophet. As such, each Muslim pilgrim at Mecca recreates the visit to Paradise and becomes a microcosmic *Axis Mundi*.

¹⁴³ The earliest recording of Muhammad's visions of the Heavens is done in Ibn Ishaq's *Sira*, in which Ibn Ishaq used several variations, recorded by companions of the Prophet and compiled them in one story. See Rustomji: *The Garden*, 2009, pp. 28-39.



Fig.74: Muhammad flying over Mecca, at the beginning of his "Night Journey." The square building in the centre is the Ka'ba. From the manuscript entitled *Khamseh*, by Nezami, 1494-5. Currently in the British Museum.
Source:
<http://dhushara.freehosting.net/book/upd/jun01/islam/time.htm> [Accessed on 1 April 2010]



Fig.75: Muhammad ascending (presumably) above Jerusalem, with the Biblical prophets Abraham, Moses and Jesus in the Temple of Jerusalem, unknown origin.
Source: <http://upfromtheslime.blogspot.com/> [Accessed on 1 April 2010]



Fig.76: Detail of Muhammad astride the *Burāq*, mid-1500s. From a miniature made to illustrate a copy of the poems of Nezami, called Nezami's *Khamseh* (Five Poems). Tabriz, Persia, 1539-43. Currently housed in the British Library. Source: http://zombietime.com/mohammed_image_archive/islamic_mo_face_hidden/ [Accessed on 1 April 2010]



Fig.77: Muhammad on *Burāq*, detail from the plate To the Third Heaven, fol. 15v⁰, *Mi'rajnama*, 1425-1450 AD.

Source: Séguy: *Mirāj Nāmeḥ*, 1977, plate 14



Fig.78: Allegorical scene of Muhammad riding *Burāq* during his "Night Voyage." Origin unknown.

Source: http://zombietime.com/mohammed_image_archive/islamic_mo_face_hidden/ [Accessed on 1 April 2010]

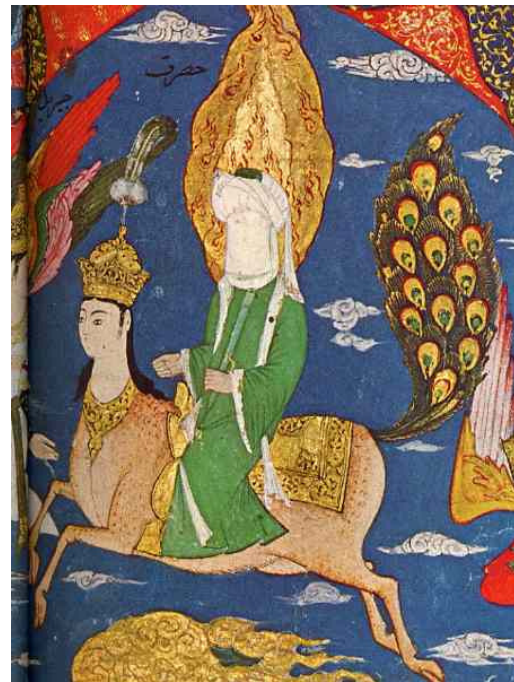


Fig.79: Muhammad on *Burāq* from the 16th c. AD Manuscript *The Progress of the Prophet*, from Turkey.

Source: http://zombietime.com/mohammed_image_archive/islamic_mo_face_hidden/ [Accessed on 1 April 2010]

In the visual representations of the *miraj*, Muhammad is depicted riding the magical creature *Burāq* (Fig.74-79), which adopts different Paradisiacal and Shamanistic iconography. The *Burāq* is also a product of a *Paradisiacal palimpsest*, since it is represented as a horse with wings, with a female head and a peacock's tail. In the representations from the *Mi'rajnama* the female head is topped by a Mongol crown (Fig.77). The horse is a psychopomp (from Greek ψυχοπομπός, "guide of souls") in all mythologies and carries the main mythological protagonists through the spheres of the Heavens¹⁴⁴. The horse is also a chthonic creature that brings the souls of the dead into the afterlife. Further, the horse helps the hero to kill the dragon (the chthonic forces), so that the forces of the sun and light (associated with the rider/hero) can win the battle against the chaos of the Underworld. The figure of Muhammad adopts features of the mediator-shaman who can transcend the worlds on a horse. The peacock (Fig.79) is a clear Paradisiacal animal, associated with the solar symbolism. The human head of the *Burāq* can be explained with an imagery typical of Central Asia¹⁴⁵, in which the horse and the rider exchange their essences and compliment each other so that the soul of the hero can have an easier access to the chthonic world, i.e. the original domain of the horse.

In some depictions of the *miraj* Muhammad is represented with a veil (Fig.76,78,79), in others, his face can be clearly seen (Fig.70-75). According to the Koranic tradition, any representations of the human figure, in general, are a punishable act since they re-evoked the creation, an act that is carried out only by Allah as the supreme Creator. That is why, the face of the Prophet was rarely portrayed, because he had received the Koranic revelations not only covered by a mantle, but with his face veiled. Shukurov¹⁴⁶ explains that fact with the two methods of Islamic theology attributed to Muhammad, namely the assertive method (the *tashbih*), in which the features of Muhammad can be seen and the negating method (the *tanzih*), in which the characteristics of the face are substituted by the symbol of the veil. The fuller meaning of *tashbih* is 'affirming similarity', i.e. affirming Allah's nearness to humanity. This concept is eternally juxtaposed with Allah's *tanzih* (transcendence, or 'declaring incompatibility'). The two, opposing aspects affect every aspect of a Muslim's belief, action

¹⁴⁴ In the Altaic world, horses are attributed the power of flying up into the sky. In the 13th c. AD, the grand shaman of Ghingiz Khān mounted into the sky on a grey horse. In India, the ability to fly to the sky is part of the magic powers of the *arhat* in Hinduism and Buddhism.

¹⁴⁵ Entry on the "horse" in the Chevalier, J.; Gheerbrant, A.: *Dictionnaire des symboles*. Paris: Laffont S.A., 1991.

¹⁴⁶ Shukurov, Sh.: "On the Depiction of the Image of the Prophet Muhammad and the Problem of Concealment of His Image in the Medieval Islamic Culture". In *Sufism in the Context of Islamic Culture*. Moscow: Science Publishing House, 1989, pp.252-267. (Russian edition)

and relationship with Allah. *Tashbih* is associated with Allah's Right Hand (mercy) in contrast to *tanzih* being associated with his Left Hand (wrath)¹⁴⁷.

In the Islamic iconography, the spatial orientation of Paradise and Hell are not clearly defined. Muhammad uses *Burāq* to ascend to the Heavens, however, on his way at the lower levels he meets the sinners and their souls which will never enter Paradise. While in the Christian iconography Paradise is “up” and Hell is “down”, in the description of the *miraj*, Muhammad is only going up and transcends the worlds of both the blessed and the sinners, so Muhammad travels not only to the Paradisiacal garden, at the top of the Heavens, but he also visits the Hereafter in which the souls have already received their punishment.

The riding of the *Burāq*, which is one of the most commonly represented events of Muhammad's life, has been also a source of inspiration for pilgrims who aspire a spiritual ascent to Paradise. In this way, the pilgrims identify with Muhammad, who went to Paradise as a human being in his lifetime.

Further on, it can be said that the characteristic Islamic garden, with its division into four parts was reinforced by the Prophet Muhammad's descriptions of Paradise. Muhammad himself describes Paradise as being watered by four rivers:

“What, is he who is upon a clear sign from his Lord like unto such a one unto whom his evil deeds have been decked out fair, and they have followed their caprices? This is the similitude of Paradise which the godfearing have been promised: therein are rivers of water unstaling, rivers of milk unchanging in flavour, and rivers of wine -- a delight to the drinkers, rivers, too, of honey purified; and therein for them is every fruit, and forgiveness from their Lord -- Are they as he who dwells forever in the Fire, such as are given to drink boiling water, that tears their bowels asunder?” (Sūra 47:15-17)

That is why, traditional Islamic gardens are usually divided by four channels of water, often with a pool or fountain at their juncture (Fig.60-63).

Also during the ascension to the Heavens, Muhammad provides a detailed spatial description of the architecture of the garden of Paradise. Al-Samarqandi and al-Qadi¹⁴⁸ describe the origins of the rivers of Paradise:

“The prophet [Muhammad] asks Gabriel from where the rivers of water, milk, wine, and honey (47:15) emanate and where the rivers flow. Gabriel tells him that they go to the basin of *kawthar*. Muhammad is taken to a tree where there is a dome of white pearl with a door of

¹⁴⁷ <http://en.wikipedia.org/wiki/Tashbih> [Accessed on 1 April 2010]

¹⁴⁸ Quoted by Rustumji: *The Garden*, 2009, p.116.

green corundum and a lock of red gold. Four rivers flow from under the dome. After walking away, Gabriel commands him to open the door with the phrase *Bismillah al-Rahman al-Rahim* (In the name of God the Compassionate and the Merciful). Muhammad utters the words, and then inside the dome an angel shows him the four corners of the dome on which *Bismillah al-Rahman al-Rahim* is inscribed. Water comes from the letter *mim* of *Bismillah*, the river of milk from the letter *ha* of *Allah*, the wine from the *mim* of *Rahman*, and the honey from the *mim* of *Rahim*.”

It is very remarkable that in the above description the tree Tuba and the dome are related and situated close to each other. Of course, the tree is the representation of the hierophany of the *Axis Mundi* and the Heavenly dome is the architectural representation of this hierophany par excellence. The dome spans across the firmament similar to God, who encompasses the world in its totality. Also the branches of the tree are connected to the leg of the Throne, while its other branches are in the nearest Heaven¹⁴⁹. The Throne of God, as the greatest monument in Paradise, bears also the semantics of the hierophany of the *Axis Mundi*. So, we can summarise that the visions of the Islamic Paradise provide a concentration of hierophanies, all associated with the hierophany of the *Axis Mundi* (the tree, the dome, the Throne of God).

Furthermore, the hierophany of the *Axis Mundi* is enlarged by the hierophany of the Cosmic Cross, represented by the four rivers. The *hierophanic palimpsest* is created by the four rivers of Paradise, corresponding to the major geographical rivers of the world; the *palimpsest* is enlarged by the four rivers of milk, honey, wine and water. The rivers are in turn related to the Arabic alphabet, which is a sacred representation of the cosmos as a whole. It is the Arabic language and alphabet that attribute Islamic connotations to the otherwise ubiquitous hierophany of the four, found in all other major mythologies and religions.

In the current dissertation, I argue that the four-*īwān* plan with its also enclosed quadripartite plan, symmetrical organisation and clear denotation of the four cardinal points by the four *īwāns*, is a representation of Paradise on earth. The spread of the four-*īwān* compounds around 12th c. AD coincides with the development of the imagery of the Islamic Paradise, which also by the 12th c. AD adopted a more definite representation with a constant “set of themes and motifs”¹⁵⁰. Also during the 12th c. AD, the four *īwān* plan was increasingly used throughout Central Asia - in mosques in western Iran (Zavāra (Fig.81), Ardestān (Fig.80), Bersīān, Isfahān), in caravansarays along the main silk trading routes, in madrasas and *khānaqāhs*, whereby previously it has been used only in palaces as discussed above.

¹⁴⁹ Ibid., p.117.

¹⁵⁰ Ibid., p.124.

The religious link between the construction of Islamic prayer institutions using and repeating the imagery of Paradise can be also explained with the fact that it was in Paradise, the higher Heaven, where Muhammad reached Allah and received the injunction to pray. There, in *al-janna*, Muhammad negotiates five prayers a day as opposed to the Allah's original command of fifty¹⁵¹. So, Paradise is directly associated with Islamic prayer and it is in Paradise, where the human Muhammad reaches Allah. In a similar way, the human worshipper, who will never visit the real Paradise in his/her lifetime, can reach Allah only in prayer, in a setting, similar to the domain of Allah, e.g. Paradise. So, the four-*īwān* plan based on the four rivers of Paradise seems to be the most suitable setting for prayer that presupposes and allows for direct contact with Allah.

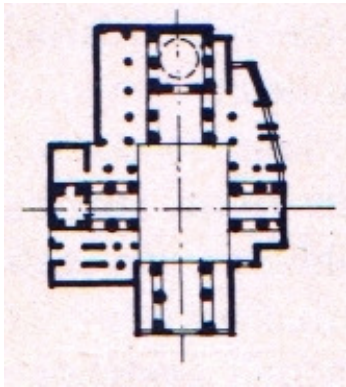


Fig.80: Ardestān, plan of the four-*īwān* mosque after Vogt-Göknil, 1160 AD
Source: Vogt-Göknil: *Die Moschee*, 1978, p.50

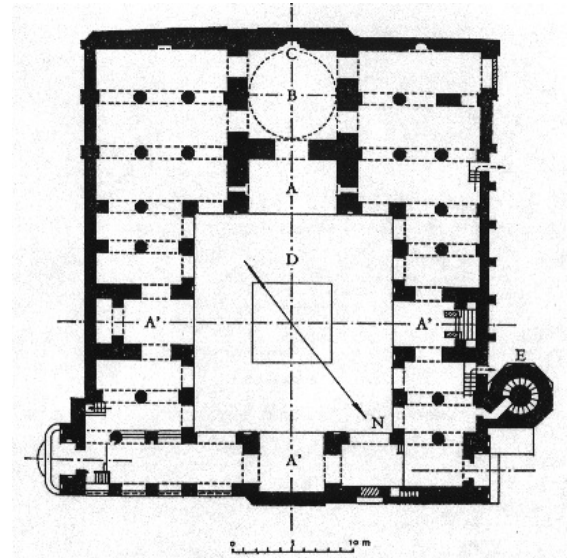


Fig.81: Zavāra, plan of the four-*īwān* Friday mosque after Godard, 1135/36 AD
Source: Godard: *Iran*, p.248, Fig.202

¹⁵¹ Ibid., p.35.



Fig.82: Natanz, plan of the four-*ṭwān* mosque after Blair, 1304 AD

Source: Archnet [Accessed on 1 April 2010]

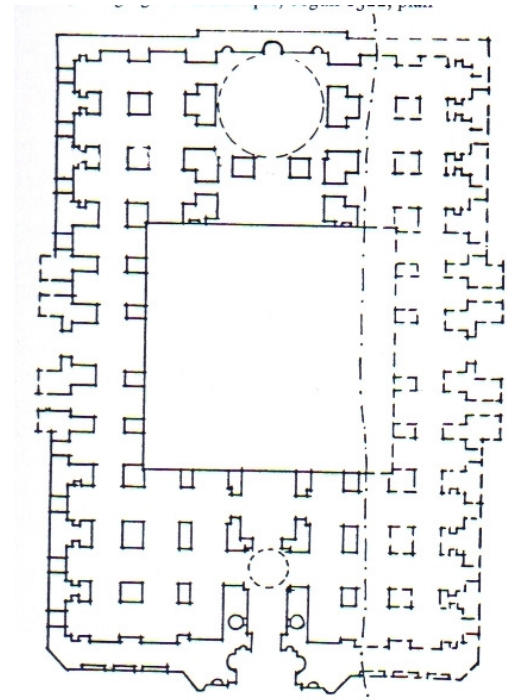


Fig.83: Varamin, plan of the four-*ṭwān* Friday Mosque after Sarre, 1322 AD

Source: Wilber: *Il Khanid Architecture*, 1955, Fig.37

The attempt to represent the celestial garden on earth (i.e. macrocosmos) tries to solve the philosophical conflict between the two-dimensional world of ideas into the three-dimensional world of reality. The four-*ṭwān* plan can be, thus, regarded as a scheme, which represents the two-dimensional Koranic descriptions, praising the celestial garden, in a three-dimensional manner - by projecting them on the *ṭwāns*. The intersecting cross-axial design reveals and forms the four realms of the Celestial garden; the *ṭwāns* being in line with the axial spatial orientation, mark the four directions of the world. Another celestial geometrical element is the equal importance of the four cardinal points, reflecting the four directions of the cosmos. As such, the four-*ṭwān* plan represents the world as a microcosmos in its totality. What is more, it can be analysed as a geometrical micro version of the macro-world. Whereby, the closed rectangular ensemble, spatially isolated from the urban landscape, is filled in with atmosphere of sacredness and uniqueness: this is done in the field of the shorter-cycle *Excluding-Including* theme as proposed by Mekking.

The spatial factor underlying all Islamic and basically all cosmological geometric patterns is symmetry. The usage of the four-*ṭwān* compound, based on perfect orthogonal symmetry, represents God's perfection and transcendent purity, similar to other Middle Eastern and Mediterranean cultural traditions. The straight lines have been considered to represent *tawhid* – the divine unity and sacred order between man and nature. This order, created by the geometrical divine patterns is founded by mathematical regularity. The scheme of the

four-*īwāns* can be thus interpreted as a denotation of the four quarters or directions of the universe.

The divine aspect of perfection is also underlined by bilateral symmetry. The intersecting axes form four rectangular spaces, which are identical and mirrored along the main design axis that leads to the *qibla*. The *īwāns* are also mirrored along the two axes in a similar manner as the world which reflects, e.g. as the world that represents, the divine world. As a result, the whole four-*īwān* plan is an example of bilateral symmetrical organisation.

Another aspect, related to the symmetry, is that God's perfection, evoked and represented by perfectly organised building and landscape schemes, is in contrast with human's imperfections. The human being is seen as subordinated to the divine organisational principles. The four-*īwān* plan, as opposed to the chaotic grown urban fabric, can be regarded as a perfectly organised system based on orthogonal symmetry. In this way, we have two juxtapositions: on the one hand, the human imperfection in contrast to the divine symmetry; and on the other hand, the urban, quasi unstructured frames in contrast to the place of divine presence and worship i.e. the mosque or the madrasa. Further, the asymmetrical "chaos" versus the symmetrical "cosmos", the cosmos (from the Greek κόσμος, meaning "ordered world") is created by God to generate order. With regard to the cycles, presented by Mekking, the "unstructured" urban fabric can be explained and compared in the frame of the shorter-cycle *Excluding-Including* theme as the excluded world, while the symmetrically structured compound with four *īwāns* is the all-encompassing perfect Paradise.

The central organisation of the four-*īwān* plan continues the representation of the waters of Paradise and is crucial for the architectural plan of the compound, in the frame of the intercultural Paradise tradition. The centre is at the intersecting point of the two orthogonal axes and is the most mysterious space. The central point of the two intersecting axes is underlined by a fountain or a pool of water: the *fawwara*, which is an architectural representation of the Paradisiacal Kawthar (Fig.72). This element was used for sacred ablutions. According to Kuban¹⁵², the *taharam* a prerequisite for the *salah* which may be achieved by the act of *wudu*, was an innovation of the caliph Omar. Originally, the water was collected in a pool, *birka*, situated in the centre of the *sahn* (courtyard). But the followers of Abu Hanifah refused to carry out ablution with standing water, maintaining that it was impure and instead used a fountain of running water. Later, places for ablution were located near the

¹⁵² Kuban, D.: *Muslim Religious Architecture*. Leiden: E. J. Brill, 1974, p.12.

entrance of the *sahn* and were called *mi'da'a* or *mavadi'u*¹⁵³. Generally, it has not been customary for ablutions to take place within the sanctuary.

A small basin, *sihrij* or *siqaya*, with a water jet, *fawwara*, was often constructed in the mosque for decorative purposes and/or for drinking water. Kuban states that the pool or fountain may have been both for drinking and ablution purposes, yet, those two functions of ablution and drinking have been most likely strictly separated. The existence of two pools, as in the Friday Mosque in Isfahān, for example, can be explained with the two different functions, attributed to each of the pools. Perhaps, during the early development of the mosque compound, the central pool had strictly metaphysical and philosophical purposes. Probably, the function of sacred ablution was carried into the mosque compound at a later stage, since it is secondary to the pool. It emerged with the increasing number of worshippers, attending the mosque and the need for ritual ablutions. Previously, these functions were carried out either outside the mosque's compounds or in the second pool. However, in the majority of four-īwān mosques, there is only one central water pool.

Usually, the central water tank is situated in the middle of the four-īwān open courtyard and has the function of representing the divine creation by reflecting it on its smooth water surface. It is part of the overall concept of creating sacred space along two intersecting axes (in the case of Isfahān: north-south and east-west) and accentuating the point in which they meet. As such, the pool represents the meeting of the cardinal points and thus creates a visible scheme of the world in its totality – a microcosmos with God in its centre, and its mirror reflection being in the water pool as a representation of the macrocosmos. In terms of the current dissertation, the water pool creates an invisible *Axis Mundi*, connecting the underworld (the Unholy Zone), (where the water comes from) with the Earth (the first Holy Zone, nourished by water), and the Heavenly realm (the second Holy Zone). It can be also regarded as a microcosmic version of the primordial sea, from which life originated.

¹⁵³ Ibid., p.9.

II.4 The Hierophany of the Gates of Paradise

The gate as a sacred border has been widely used in the monuments based on the hierophany of the Cosmic Cross and the *Axis Mundi* worldwide. The hierophany of the gates of Paradise is closely related to the hierophany of Paradise. The gates play the role of sacred thresholds through which the worshipper can enter the realm of Paradise. Passing through the gate is a transcendental experience, since the gate transpositions the human being from the world of unorganised chaos into the world of perfect order, i.e. the world of God's creation. I argue that the four *ṭwāns* are architectural representation of the hierophany of the gates of Paradise.

The hierophany of the four is often multiplied to the hierophany of the eight, a number associated with Paradise in Islamic culture. The eight can be explained with a square (i.e. the four) that is rotated at 90° along the vertical axis (i.e. the *Axis Mundi*) to form an octagonal. In the cosmology of Ibn 'Arabī, for example, the octagonal is represented by the eight bearers of the Throne of God (Fig.17,84), four of which will be appointed on the day of resurrection. The other four are the four archangels¹⁵⁴.

The hierophany of the eight (Fig.84-86), formed by the rotating square has been also used to devise poetry and represent the organisation of the verses, which only stresses the visual importance of the hierophany and its spatial impact on the representation of language. It also shows the interchanging play between the Arabic calligraphy and two-dimensional geometrical representations related to the cosmos.

The octagonal (four- *ṭwān*) plan, resulting from the rotation of the square, has been widely used for tombs (e.g. Taj Mahal) (Fig.59) and Paradise gardens (e.g. Hasht Behesht in Isfahān, the garden of eight Paradises). All these compounds are architectural representations of Paradise and of the dwelling of man in the hereafter.

The Ka'ba is situated at the centre of the square, that rotates at 90° along the vertical axis (i.e. the *Axis Mundi*) to form an octagonal (Fig.85). King¹⁵⁵ stresses the fact that similar representations appear in Sufi texts and gives as an example a diagram from an anonymous Sufi treatise on the Ka'ba preserved in a late 18th c. AD Egyptian manuscript¹⁵⁶. The Ka'ba is shown in the centre of two diagonally-superimposed squares based on an Aristotelian-type configuration. The corners of the inner square are rendered as a representation of the four

¹⁵⁴ See Akkach: *Cosmology and Architecture*, 2005, pp.125-130.

¹⁵⁵ Ibid., p.812.

¹⁵⁶ Found in MS Cairo TJ 811,7, fol.59v-60r, copied 1783-84 AD.

cardinal points, the four seasons, the four elements and their qualities and the four winds, related to each geographical direction. The corners of the outer square, rotated at 90° are rendered as a representation of the moderate intermediary winds (Fig.85). In this representation, the Ka'ba is surrounded by the hierophanies of the four (i.e. representations of the Cosmic Cross) and it is staged at the centre of the intersecting axes (i.e. representation of the *Axis Mundi*). As such, we can interpret the Ka'ba as a product of the *hierophanic palimpsest* of the four.

As I have shown above, the hierophanies of the Cosmic Cross and the *Axis Mundi* surrounding the Ka'ba remain unchanged in their essence, only the religious setting is Islamic. To sum it up, the rotating square marks the world in its totality, since it combines the cardinal with the intercardinal points and creates a complete representation of the macrocosmos, based on the number eight, which has been used in Islamic architecture and calligraphy.

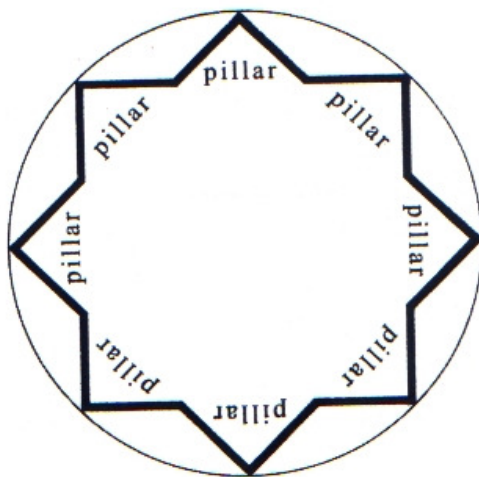


Fig.84: The form of the Throne in the hereafter according to Ibn 'Arabī after Akkach
Source: Akkach: *Cosmology and Architecture*, 2005, p.128, Fig.3.5

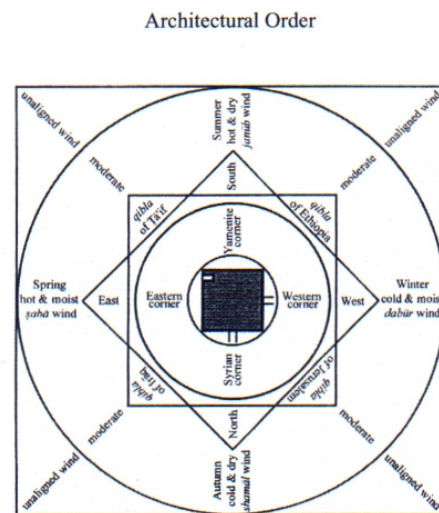


Fig.85: The Ka'ba as a cosmograph of quaternary spatial structure (18th c. AD Ottoman source)
Source: Akkach: *Cosmology and Architecture*, 2005, p.187, Fig.4.13

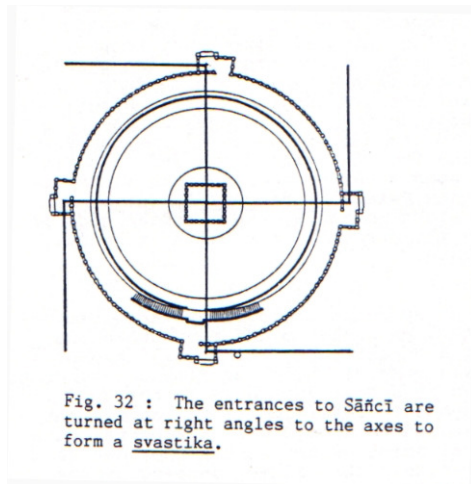


Fig.86: The four entrances to the Sāñcī
Source: Snodgrass: *The Stupa*, 1985, p.78, Fig.32

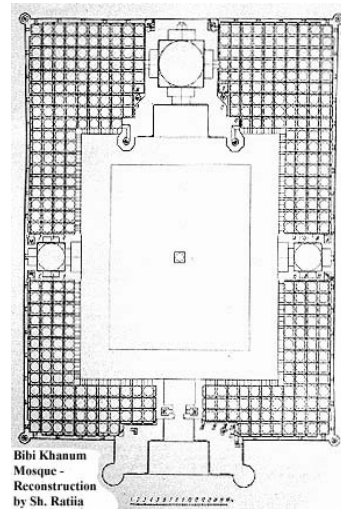


Fig.87: Samarkand, Bibi Khānum Mosque, plan after Sh. Ratiia
Source: <http://depts.washington.edu/silkroad/cities/uz/Samarkand/bibi.html> [Accessed on 1 April 2010]

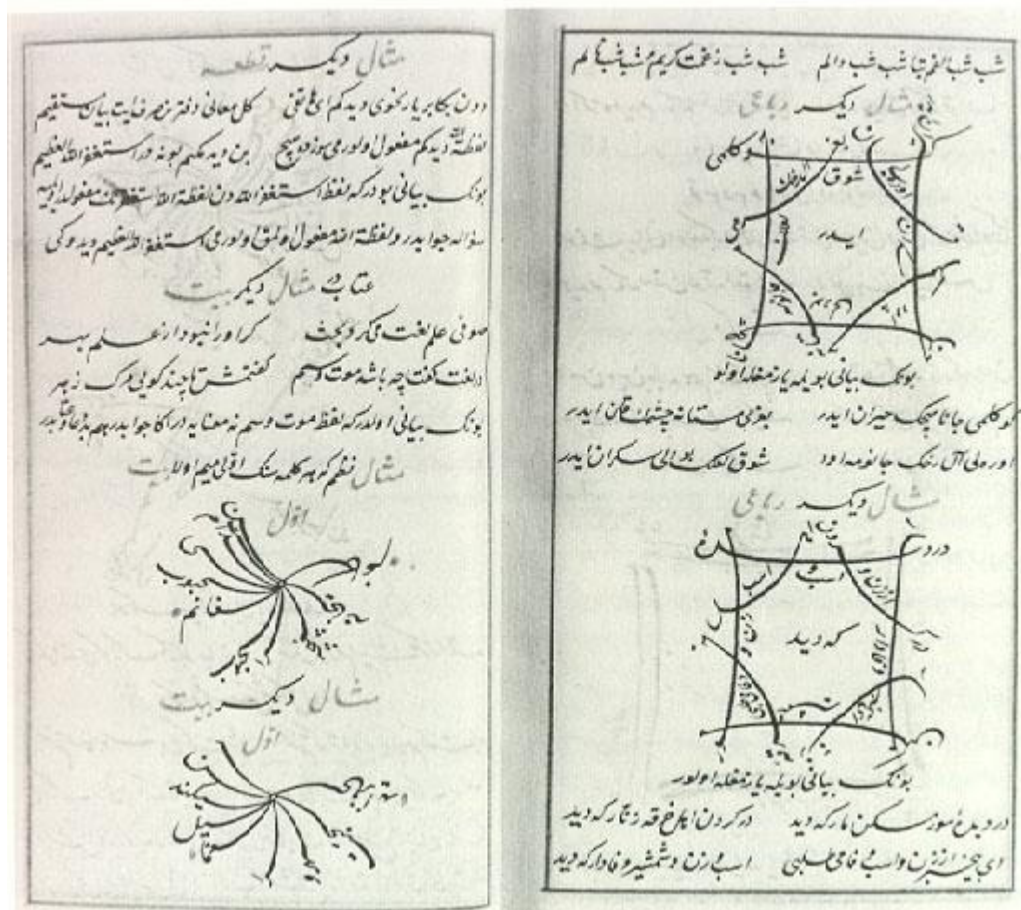


Fig.88: Diagrams of pattern-forming verses
Muslih al-Din Mustafa Sururi. From his "*Bahr el-maari*" (Sea of knowledge), written for the Ottoman prince Mustafa in 1549 AD, copied in 1585 AD, red and black ink on paper. MS H. 659, fol. 134v-135r.
Source: <http://www.thegatesofparadise.com/topcopy/p211.jpg> [Accessed on 1 November 2009]

The origin of the number eight, formed by the rotating square can be also explained with the descriptions of Paradise. The Islamic garden of Paradise, which is situated on the seventh level of the Heavens, is also enclosed by eight gates and is on eight levels. Rustomji¹⁵⁷ quotes the texts of al-Samarqandi (d.1002 AD) and al-Qadi and summarises the following hierarchy of the gates:

"The first gate is for prophets, messengers, martyrs, and those who were generous. The second gate is for those who prayed. The third gate is for those who gave charitable offerings (*zakaṭ*) willingly. The fourth gate is for those who commanded the good and forbade the reprehensible. The fifth gate is for those who desisted from their desires. The sixth gate is for those who did pilgrimage (*hajj* and *ʿumra*). The seventh gate is for those who struggled in the way of God (*jihād*). The eighth gate is for those who turned their eyes from forbidden things and respected parents, relatives, and others."

Rustomji notes that this spatial organisation of behaviour does not occur in earlier *hadīths*. So, we can assume that the ascription of architectural elements, i.e. gates in the garden of Paradise, to religious behaviour can be attributed to the 11th c. AD at the earliest. This is closer in time to the formation of the Paradise discourse which acquired its stable descriptive accounts around the 12th c. AD.

In the four-*īwān* plan, the four cardinal points are marked not by pillars but by four monumental *īwāns* (gates), whose bulky architecture cannot be defined as tectonically aesthetic and is most likely meant to represent the fortification of the earthly world. In terms of the cosmology of Ibn ʿArabī, we can speculate that the *īwāns* serve as fortifications against the Satanic attack, which weakens human nature and places obstacles on the way to divine revelation. Therefore, the four-*īwān* compound represents a stronghold of God's domain, a place where humans can strive for direct contact with God, secured by remodelling the compound according to the principles, used by God while creating the world.

The design of the *īwāns* is subjected to the level of the eyes, so that the views that open in front of the worshipper can be fully enjoyed and appreciated. In the four-*īwān* compound, the *īwāns* are over-dimensional, compared to the human scale, and are meant to be perceived as such. Their intricate geometrical decorations and Koranic inscriptions show that they are conceived as gates to the holy realm. The human being entering the gate is minimal in size, compared to the giant *īwāns*. The *īwāns* can be regarded as a representation of the cosmic and paradisiacal landscape, and gazing at them is looking at the gates of Paradise. Conceived as gateways to the celestial world, the *īwāns* combine intimate spiritual experience with architectural manifestation. Sufi scholars, such as al-Ghazālī, Ibn Sīnā and

¹⁵⁷ Rustomji: *The Garden*, 2009, pp.115-117.

Ibn 'Arabī, have written about the delight of contemplating God's design and thus created a sense of pseudo real first-hand experiences.

A further aspect, with regard to the proportions of the *īwāns*, is represented by the giant Koranic inscriptions on them. The nature of the letters also has a cosmological explanation, according to Critchlow¹⁵⁸. He regards the lunar mansions as macrocosmic counterparts of the twenty eight letters of the Arabic alphabet, from which the language of the divine word can be articulated as an expression of the divine breath (*nafas-al-rahman*). That is why, the gigantic inscriptions from the Koran on the *īwāns* can be regarded as a representation of God's grandeur, compared to the human dimensions. The Koran does not only have a spiritual importance, but it is also present in two-dimensional images along the three-dimensional *īwāns* in the form of superb stuccos in different colours.

The flat surface of the *īwāns* is very dominant in the overall impression of the courtyard. Why were the *īwāns* deprived of any three-dimensional ornamentation on their front façades, why were they left so smooth? The following hypothesis might seem quite farfetched, however, it might shed some more light on the phenomenon of the *īwān*. I argue that the *īwān* might be an architectural representation of the veil that covered the face of Muhammad during the *miraj*. It carries the same iconography as the black silk cover of the Ka'ba (*kisva*) and the veil that covered the face of the caliph during prayer. Shukurov¹⁵⁹ discusses the nature of the veil as a mystery of pulling down the curtain and revealing the hidden truth. He also compares the veil with the border/threshold between the material and the spiritual, the phenomenal and the transcendental. The curtain/veil is seen as a mediator between two realities, between the two aspects of the hidden (e.g. the *batīn*) and the manifested (e.g. the *zāhir*). The flat surface of the *īwān* is very similar to the smooth surface of a silk covering, it does not contain any protruding ornamentation. Of course the comparison between the *īwān* and the veil is allegorical, however, the *īwān* can be interpreted as a transcendental barrier between the promised Paradise and the world of the living. The worshiper that prays in the four- *īwān* courtyard acquires the same allegorical imagery of Muhammad during the *miraj*, that is of a mediator between two worlds – the world as God's creation on earth and the Paradise as God's domain in the hereafter.

¹⁵⁸ Critchlow, K.: *Islamic Patterns. An Analytical and Cosmological Approach*. London: Thames and Hudson, 1976, p.59.

¹⁵⁹ Shukurov: *On the Depiction of the Image of the Prophet Muhammad*, 1989, pp.252-267.

Conclusion

The hierophanies of the Cosmic Cross and the *Axis Mundi* are at the core of the development of the four-*īwān* plan. The four *īwāns* can be analysed as architectural representations of the four cardinal points; the centre of the four-*īwān* plan can be associated with the centre of the world, the place at which the *Axis Mundi* connects the three vertical worlds.

Since the four-*īwān* plan is based on different hierophanies (i.e. the Cosmic Cross, the *Axis Mundi*, Paradise, the Gates of Paradise), it evolved in a *hierophanic palimpsest*, in which all these hierophanies have been used in different layers throughout time.

The four-*īwān* plan is a representation of Paradise on earth, since it adopts the architectural morphology of Paradise (two intersecting orthogonal axes with a central water element, from where the four world rivers flow). Paradise is also the locus where Muhammad met Allah. That is why, the four-*īwān* plan is the most appropriate architectural representation of Paradise on earth, where the worshipper can access Allah as well.

The four-*īwān* plan has been used prior to the advent of Islam and its essence is not Islamic but hierophanic. The four-*īwān* plan has been used together with other religious sacred buildings, such as Buddhist stupas before Islam adopted it.

III Physiomorphic Representations of Paradise

III.1 Mount Kailas

Since the concept of Paradise on earth can be found in every religion, it is worth exploring natural settings associated with Paradise that might have been used as direct allocation of the *Axis Mundi*. These settings are usually venerated long before any organised religious activities were known. In most of the cases, Paradise is associated with the serenity of a garden. However, mountains and high peaks are also known to evoke the notion of the centre of the world, from which all life originated.

The Bible postulated that Paradise was an earthly garden and that Eden was situated in the east, at an exceedingly high altitude and thus untouched by the Flood¹⁶⁰. Strabo, quoted by Scafi¹⁶¹, describes the locus of Paradise in the 12th c. AD *Glossa ordinaria* as follows:

“Some manuscripts have Eden `in the sunrise`. We can conclude from this that paradise is in the east. However, wherever it is, we know that it is on earth; and that there is the ocean in between, and that there are mountains situated so as to form a barrier. [We also know] that it is very far from our world, located on high, and reaches the sphere of the moon. This is why the waters of the Flood did not touch it at all.”

Strabo's statement that the Garden of Eden was located on a very high mountain confirmed Ezekiel's prophecy for the Prince of Tyre of Eden as “the holy mountain of God” (Ezekiel 28:13-14). The sphere of the moon, mentioned by Strabo, was mentioned in the Aristotelian and Ptolemaic visions of the universe, which marked the border “between the changing and corruptible sublunary world (made up of the four elements of water, earth, air, and fire) and the stable dimensions of the heavens”. Further, the *Glossa* used quotations from Augustine and Bede emphasising that the Garden of Eden was anchored to the inhabited earth by the four rivers and their underground course. Clearly, the representations of the sphere of the moon, the four elements and the four rivers of Paradise are based on the hierophany of the four. However, it is even more interesting that there is a peak in the Himalayas - Mount Kailas, which almost perfectly fits the above description from the 12th c. AD.

Mount Kailas (*Kailāśa Parvata*)¹⁶² (Fig.89, 90) is the denotation of Paradise of Siva in Hindu mythology. It is also a peak near lake Manasarowara in the Gangdisê mountains in Tibet. It is the sacred place for four religions: Hinduism, Buddhism, Jainism and the Bön faith, which predates Buddhism in Tibet.

¹⁶⁰ Scafi: *Mapping Paradise*, 2006, p.49.

¹⁶¹ Ibid., pp.49-50.

¹⁶² *Encyclopaedia of India*, Vol.2, p.471, Electronic edition [http://library.britishcouncil.org.in/IndiaCollections/CyclopediaOfIndiaVol2-K\(Part1\).pdf](http://library.britishcouncil.org.in/IndiaCollections/CyclopediaOfIndiaVol2-K(Part1).pdf) [Accessed on 20 August 2009]

Both Brahmanical and Buddhist cosmogony derive four great rivers of India—the Indus, the Sutlej that rises near the sources of the Indus and the Brahmaputra, the Ganges, and the Sardha—from the holy lake at the foot of Kailas. The Kailas mountain (Fig.82,83) is thus geographically and mythologically¹⁶³ “the meeting place of waters”. The Brahmaputra, or rather the *Tsan-pu*, as it is known in Tibet, flows to the east, the Indus to the west, and the Sutlej to the southwest. The Kailas or Gangri range of Mountains extends in one unbroken chain from the source of the Indus to the junction of the Shayok, and forms the natural boundary between Ladakh, Balti, and Eongdo on the south, and Euthog, Nubra, Shigar, and Hunzanagar on the north.

Kailas means crystalline or icy, and is derived from *Kelas*, crystal, which is itself a compound of *Ke*, water, and *La*’s, to shine. It is the abode of Siva and the celestials. The Tibetans look upon *Ti-se* or the Kailas peak as the highest mountain in the world. It is also called Ganaparvata; also *Eajatadri*, silver mountain. They also call Mount Kailas *Kang Rinpoche*, or Snow Jewel, and the Indians refer to it as Mount Meru.

Further, Mount Kailas is one of the most renowned pilgrimage sites worldwide. Circumambulating Mount Kailas is a holy ritual which can purify from all sins. The peregrination is made in a clockwise direction by Hindus and Buddhists. Followers of the Jain and Bönpo religions circumambulate the mountain in a counter clockwise direction.



Fig.89: Mount Kailas

Source:

http://www.summitpost.org/object_list.php?object_type=3&parent_id=151369 [Accessed on 17 November 2008]



Fig.90: Mount Kailas

Source: Photo by John Shen

http://www.summitpost.org/object_list.php?object_type=3&parent_id=151369 [Accessed on 17 November 2008]

¹⁶³ According to the Sanskrit tradition.

According to a description in the Vishnu Purana, Mount Kailas is regarded as Paradise and the spiritual centre of the world. The four faces of the peak are made of crystal, ruby, gold, and lapis lazuli. It is the pillar of the world; the centre of the world mandala; and it is located at the heart of six mountain ranges symbolizing a lotus. The four rivers flowing from Kailash then flow to the four quarters of the world and divide the world into four regions.

The Tantric Buddhists regard Mount Kailas as the home of the Buddha Demchok, who represents supreme bliss.

Mount Kailas is relevant to the current dissertation for two reasons. Firstly, it is directly associated with the imagery of the *Axis Mundi*, the Paradise and the heavenly home of the deities in the Hindu (e.g. Siva) and Buddhist traditions. Secondly, four major rivers spring from its centre. These two characteristics make Mount Kailash a physiomorphic representation of Paradise on earth.

III.1.1 Kailasa Temple (756-773 AD), Ellora

The Kailasa (Kailasanath) Temple (756-773 AD)¹⁶⁴ (Fig.91-93) is a two-story Hindu sanctuary carved from the rocks at the Ellora cave complex, India and is the world's largest monolithic structure. The cave complex consists of 34 monasteries and temples of which 12 are Buddhist, 17 Hindu and 5 Jain, extending over more than 2km; all were dug side by side in the wall of a high basalt cliff. The Kailasa Temple represents the adobe of Shiva in the Himalaya and is thus an architectural physiomorphic representation of Mount Kailas. The different religious denominations of the temples in the Ellora cave complex also reflect the nature of Mount Kailas as a polytheistic sacred site.

The Kailasa Temple was commissioned by King Krishna I (757-775 AD) of the Rashtrakuta dynasty, the rulers of the western Deccan area. The local people call the site "*Ranga-Mahal*"¹⁶⁵ (Colourful Palace). The Kailasa Temple complex consists of an imposing entry portal, a Nandi (i.e. bull) shrine, an open porch, main hall, and an inner sanctum. The temple is ideally oriented along the cardinal points, the main Cosmic Cross sanctuary is built along the east-west axis and situated in a large courtyard.

The Kailasa Temple is discussed here because it is an architectural representation of Mount Kailas, i.e. of the centre of the world and has the elements inherent to the four-*īwān* plan. Namely, the orientation along the cardinal points, the square sanctuary placed in the middle of a walled courtyard, the imposing entrance porch and large gates along the main compositional axes (the fourth gate is missing, since the temple is cut in the rocks). Thus, the Kailasa Temple can be seen as a non-Muslim prototype of a sanctuary purposefully designed to resemble a certain physiomorphic setting associated with the *Axis Mundi*. By recreating the earthly Paradise with architectural means, the patron (i.e. the king) becomes a creator himself, associating himself with God, who created the centre of the world at Mount Kailas. By implementing an architectural representation of the hierophany of the four corners of the world (i.e. the Cosmic Cross) in a sacred temple setting, the patron further denotes the macrocosmic imagery on a microcosmic scale. Thus, the location of the Kailasa Temple gains sacred connotations not because it is intrinsically sacred but because its architecture and iconography represents the physiomorphic qualities of a holy site (i.e. Mount Kailas). The Kailasa Temple could have been built anywhere chosen by the patron, yet he decided to carve it from the rocks, which attaches another earthly importance to the site. The Heavenly

¹⁶⁴ Bussagli, M.: *Oriental Architecture*, volume 1. Milan: Electa, 1981, p.87.

¹⁶⁵ Volwahn, A.: *Indien. Bauten der Hindus, Buddhisten und Jains. Architektur der Welt*. Fribourg: Office du Livre, 1968, p.59.

domain of Shiva is recreated on earth by reusing the imagery of the square as an architectural representation of the earth and the imagery of the dome as an architectural representation of the Heavens.

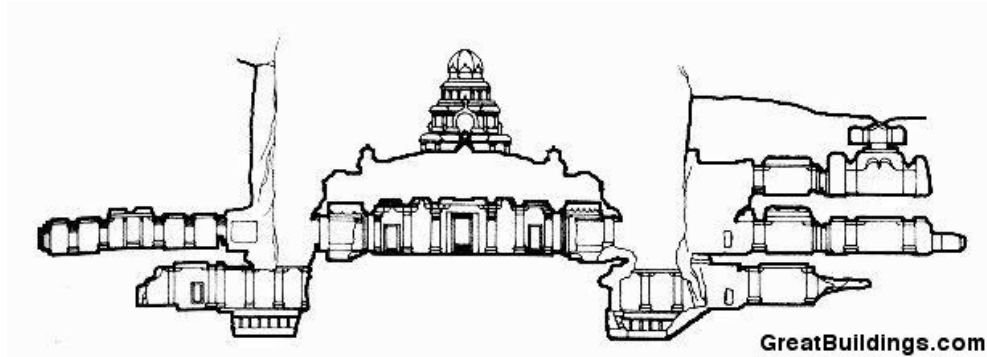


Fig.91: Cross section of the Kailasa Temple at Ellora after Volwahren

Source: http://www.greatbuildings.com/buildings/Kailasa_Temple.html [Accessed on 25 August 2009]

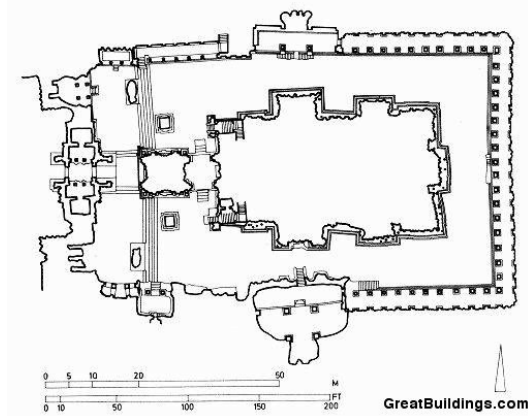


Fig.92: Ground plan of the Kailasa Temple at Ellora after Volwahren

Source:
http://www.greatbuildings.com/buildings/Kailasa_Temple.html
[Accessed on 25 August 2009]

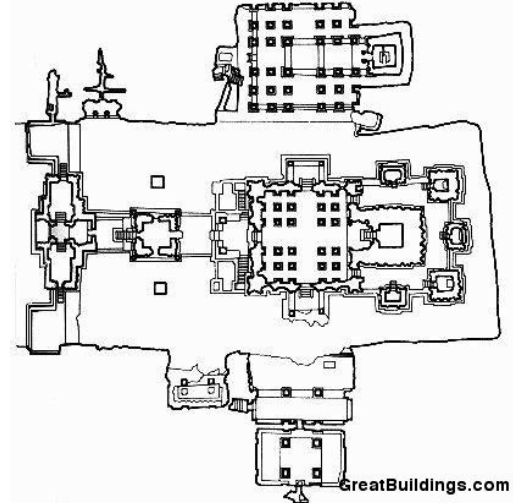


Fig.93: Plan of the second floor of the Kailasa Temple at Ellora after Volwahren

Source:
http://www.greatbuildings.com/buildings/Kailasa_Temple.html
[Accessed on 25 August 2009]

III.2 The Mandala

The mandala (Fig.94) is the epitome for centred, cosmicized space, recreated from the disordered chaos. It defines the homologous domains of microcosmic and macrocosmic space, whereby they are constantly replicating each other. The mandala consists of a square and a circle. The square is symbolic of the earth, signifying the four directions that bind and define it: it is a representation of the hierophany of the Cosmic Cross. The circle is a metaphor for the Heavens, without beginning or an end, signifying timelessness and eternity, a characteristically divine attribute. Thus, the mandala (and by extension the temple built on a mandala) becomes the meeting point of Heaven and earth.

Although the mandala is associated with Buddhism and Hinduism, its underlying concept of geometrical, centrally-organised holy space can be used to explain both the symbolical and the philosophical approach intrinsic to the creation of the four-*īwān* plan.

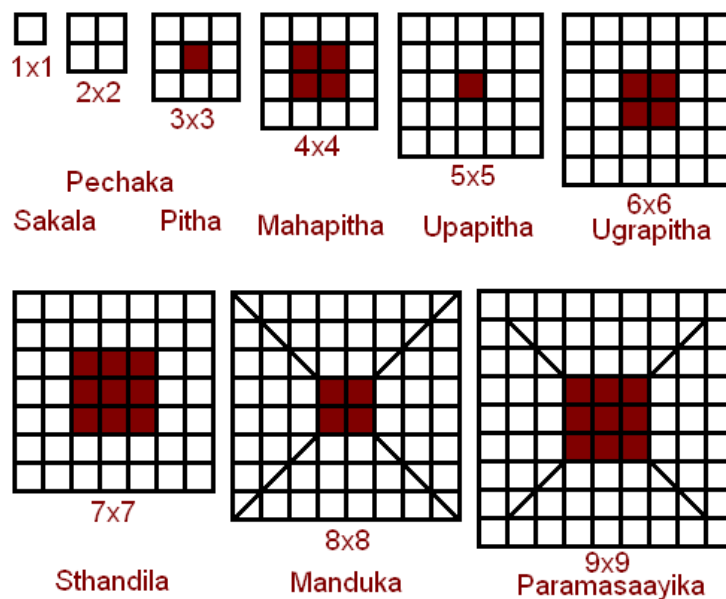


Fig.94: Different types of mandala squares

Source: <http://ssubbanna.sulekha.com/mstore/ssubbanna/albums/> DN [Accessed on 1 November 2009]

Herewith, we should differentiate between two types of sanctuaries based on the mandala. The first type is the centrally organised, square sanctuary with wall openings along the cardinal points (e.g. *vihāra*, stupa). The second type is a square sanctuary, situated in a rectangular courtyard (e.g. the Gupta Temple, the Kailasa Temple). The first type can be architecturally associated with the Islamic tombs, mausoleums and centrally-domed Sufi *khānaqāhs*. The second type can be described as a cosmic prototype of the open-courtyard four-*īwān* mosques, madrasas and caravansarays.

III.2.1 The Hindu Temple Based on a Mandala

The mandala is a geometric representation of the hierophanies of the Cosmic Cross and the *Axis Mundi*. In Indian culture, *Vāstu Shastra*¹⁶⁶ is regarded as the most essential traditional knowledge for architectural activities. It organises the *Panchabhoota* or the five essential elements: ether, air, fire, water and earth in a strictly regulated spatial system. In it, the earth represents the centre, the water the northeast, the fire the southeast, the ether the southwest and the air the northwest. In architectural practice, the site of a town or a building should be organised according to an 8x8 division square or a 9x9 division square. A Hindu god resides in each square of the mandala with Brahma, the supreme deity, in the central square, called *Bindu* or *Prakara Beejam*. The mandala is seen as a cosmic grid in which all energies are concentrated in its centre, the periphery is hierarchically organised: with the least important deities occupying the fringes.

The Vāstu Shastra Mandala (Fig.95,97) is based on the hierophany of the Cosmic Cross. It is closely related to the physiomorphic Vāstu-Purusha Mandala (Fig.96-98), based on the hierophany of the *Axis Mundi*. The latter depicts the Cosmic Man – the primordial demon Vāstu-Purusha within the cosmic grid of the mandala. Vāstu-Purusha transcends time and the celestial bodies, and the *Axis Mundi* emanates from his navel. The term *vāstu* stands for “a dwelling place, a building”, which is defined by the outline of the mandala. As such the building acquires the qualities of the structured, organised cosmos. Purusha refers to the Universal Man, who is the anthropomorphic expression of the essential principle of manifestation¹⁶⁷. The temple based on the Vāstu-Purusha Mandala is seen as the eternal dwelling of the deity or the supreme ruler of the Universe.

¹⁶⁶ Huang, En-Yu: “The Architectural Representation of the Taboo: Toilet Taboos as Guardians of Old Tawanese Representations of Family Life”. In *The Global Built Environment as a Representation of Realities*. Pallas Publications, 2009, pp.141-173.

¹⁶⁷ Snodgrass: *The Stupa*, 1985, p.110.

Roga	Ahi	Mukhya	Bhallata	Soma	Bhujaga	Aditi	Diti	Agni
Papa-Yakshman	Rudra						Apa	Parjanya
Shosha		Raja Yakshman	PRTHIVIHARA		Apa Vatsa			Jayanta
Asura		M			A			Indra
Varuna		I			R			Surya
Kusuma Danta		T	BRAHMA		Y			Satya
Sugriva		R			A			Bhrisha
Dauvanika	Jaya	A			N		Savitra	Antariksha
Pitarah	Mrga	Bhrga-Raja	Gandharva	Yama	Bhikshata	Vitatha	Pushan	Anila

Fig.95: Vāstu Shastra Mandala

Source:

http://ssubbanna.sulekha.com/mstore/ssubbanna/albums/default/vi_vastu_mandala.jpg [Accessed on 3 September 2009]

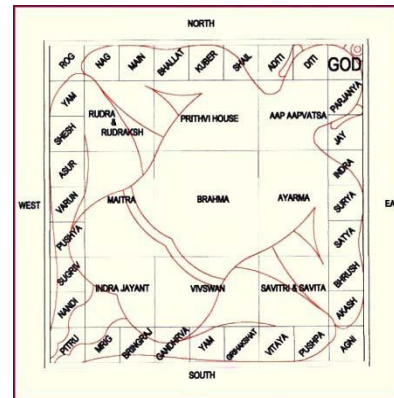


Fig.96: Vāstu-Purusha Mandala

Source:

http://ssubbanna.sulekha.com/mstore/ssubbanna/albums/default/vi_vastu_mandala.jpg [Accessed on 3 September 2009]

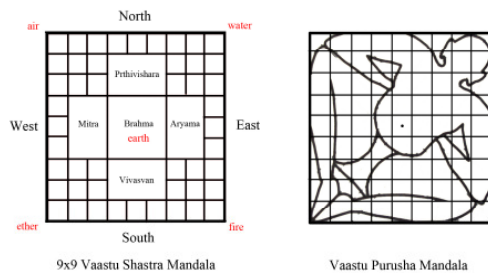


Fig.97: 9x9 Vāstu Shastra Mandala and the Vāstu-Purusha Mandala

Source: Drawing by En-Yu Huang

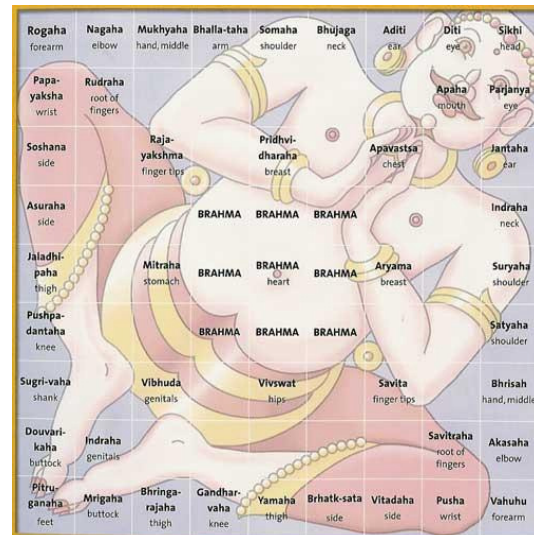


Fig.98: Vāstu-Purusha Mandala

Source:

http://ssubbanna.sulekha.com/mstore/ssubbanna/albums/default/vi_vastu_mandala.jpg [Accessed on 3 September 2009]

According to Michell¹⁶⁸, the Hindu temple can be seen as a symbolical representation of the quest of man “to dissolve the boundaries between man and the divine”. In this, the divinity is directly associated with the building itself, which becomes a metaphor for the whole universe. The deity reveals itself when being cherished in the temple, that is why, the words denoting a temple refer to it as the house of God (*devagriham*), the seat of God (*prasada*), the residence of God (*devalaya*), etc. The image of the deity is housed in the square sanctuary, called the “womb-chamber” (*garbhagriha*).

¹⁶⁸ Michell, G.: *The Hindu Temple*. Tiptree: Elek Books Limited, 1977, p.61.

The square sanctuary and the reference to the womb are clear signs of the alignment with the earth hierophanies of the Cosmic Cross and the physiomorphic tradition. The earth, as the abode of man is the point at which the divine and the human meet. Furthermore, the sacred image of the God denotes the unity with the divine and the priest, who is the only one allowed to enter the square sanctuary and to perform rituals to facilitate this moment of unity. The rituals related to the sanctuary include four celebrations at sunrise, noon, sunset and midnight, thus being related to the motion of the earth around the sun and to the hierophany of the four.

The penetration of the worshipper in the temple becomes gradually more sacred with every step in the direction of the sanctuary. Stepping over the threshold of the sanctuary is regarded as a transition from the temporal to the eternal. Circumambulations (*pradakshinas*) in a clockwise manner are carried out to awaken and appease the deity. The architecture of the sanctuary is, therefore, accomplished with ambulatory passageways around the main statue of the deity (a representation of the hierophany of the *Axis Mundi*). Furthermore, four sacred images (based on the hierophany of the Cosmic Cross) are placed in the centre of the northern, western and southern walls of the sanctuary, the entrance being to the east. These images reflect the energies that emanate from the centre, marked by the image of the main deity (based on the hierophany of the *Axis Mundi*). Sometimes statues of the eight gods (based on the hierophany of the square rotated at 90° to form an octagonal) or the eight guardians (*dikpalas*) of the directions of the universe are placed around the temple or in the niches of the outer walls, as is the case in the Svarga Brahma temple in Alampur¹⁶⁹ from the 7th c. AD. Although the majority of the Hindu sanctuaries are an ideal square, there are temples, such as the Mundeshvari temple in Ramgarh¹⁷⁰ from the 7th c. AD with an octagonal plan. In these cases, the octagon is formed by the rotated square at 90°. In the Islamic tradition, both the square and the octagonal sanctuaries are quite common and used as architectural plans, especially for tombs.

While the horizontal procession to the sanctuary of the Hindu temple is related to the physiomorphic tradition and the horizon, the vertical procession is metaphorically related to the anthropomorphic tradition and the *Axis Mundi*. Although man himself cannot perform the upward ascent, the hierophanies represented by the temple architecture help him achieve the upward movement. The finial, according to Michell¹⁷¹, symbolises the absolute and the timeless nature of the journey of man towards the unity with the Gods. The verticality of man

¹⁶⁹ For a plan of the temple, see Michell: *Hindu Temple*, 1977, p.67.

¹⁷⁰ For a plan of the temple, see *Ibid.*, p.97.

¹⁷¹ Michell: *Hindu Temple*, 1977, p.68.

is reflected in the association of the temple with the mountain. For example, the Kailasa Temple is representing Mount Kailas, which is the earthly equivalent of Mount Meru, being the navel of the universe according to the Hindu and Buddhist beliefs and pilgrimage practices. This explains the fact that the superstructure of the Hindu temple is known as “mountain peak” or “crest” (*shikhara*). The horizontal storeys are referred to as “earth” or “soil” (*bhumi*) which pertains to the symbolism of the earth (i.e. the hierophany of the Cosmic Cross). The verticality of the mountain is reflected in the position of the summit, exactly above the sanctuary. Thus, the horizontality of the sanctuary is vertically underlined by the image of the holy mountain. In its essence, the Hindu sanctuary is the *Axis Mundi*.

The Cosmic Man Purusha (Fig.99), who is bound within the grid of the Vāstu-Purusha Mandala, upon which the sanctuary is built, displays the link with the universe and the four cardinal points by his body. At the same time, the verticality of man is underlined by the verticality of the sacred mountain and aligned with his spine. The Hindu mandala (Fig.100) as a microcosmic image of the universe is related to the cosmic order that is restaged by man on earth. The position of the sanctuary exactly in the middle of the mandala, where the sacred square of Brahma is situated, is reflected in the image of the navel of the Cosmic Man, which is also situated in the central square of the Purusha Mandala. Thus the man and the cosmos are architecturally united, the Hindu temple being the *Axis Mundi*, along which the cosmic energies flow.

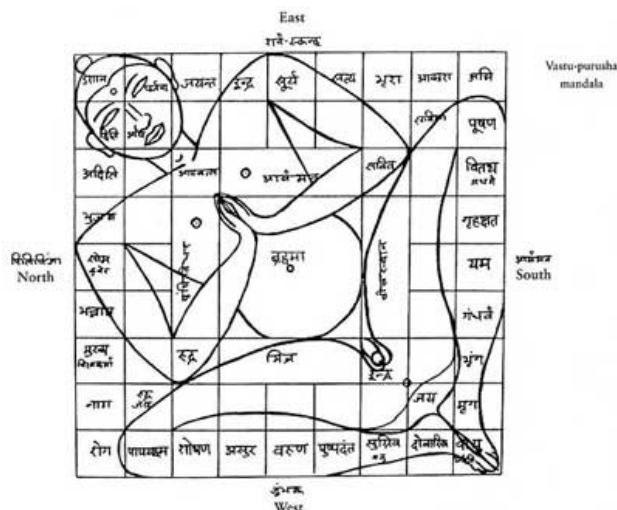


Fig.99: Hindu Vāstu-Purusha Diagram
Source:
http://www.exoticindiaart.com/read/hindu_temple.htm
[Accessed on August 31, 2009]



Fig.100: A Hindu Mandala
Source:
http://www.exoticindiaart.com/read/hindu_temple.htm
[Accessed on August 31, 2009]

The ground plan of the Hindu temple is strictly oriented along the cardinal points with the main procession axis being the east-west axis. Compared to the four-*īwān* plan, which only visually¹⁷² stresses the orientation to the cardinal points, the Hindu temple copies the ideal orientation of the universe. The four-*īwān* plan denotes the four cardinal points by the four *īwāns*, however, their orientation is a result of the orientation of the *mihrāb* in the sanctuary, which is situated either along one of the axes, as in the case of the Hindu temple, or aside the main entrance *īwān* in the antechamber.

The four-*īwān* plan copies the orthogonal organisation of the Hindu temple and the rectangular basic floor plan. While the centrality of the mandala in the Hindu temple is underlined by the main sanctuary, the centrality of the four-*īwān* plan is underlined either by a water pool situated in the centre of a courtyard or simply by the intersecting point of the two orthogonal axes, defined by the *īwāns*. The *īwāns*, actually, can be seen as the gates in a Hindu temple, which in most of the cases have staircases and columns. The macro-cosmological scheme of the Hindu temple with its intersecting axes is reflected in the microcosmological architecture of the square sanctuary with its also two intersecting axes. The Hindu sanctuary consists of four massive walls, depicting the four main deities, similar to the massive walls of the *īwāns*. However, the closeness of the Hindu womb-like sanctum is very different from the openness of the *īwāns* in the middle of the four courtyard walls.

The square Hindu sanctuary is repeated in the squareness of the Islamic tomb, e.g. the Sāmānid Mausoleum¹⁷³ in Bukhārā. Whereby, the role of the Hindu Mountain Meru is architecturally represented by the cupola of the Islamic tomb. The Islamic cupola being the dome of Heaven. There is no cupola in the four-*īwān* plan, yet, the representation of the dome of Heaven is revealed by the accessibility of the sky and the openness of the courtyard. In the Sufi four-*īwān khānaqāhs*, the square ground floor space is domed with a large cupola that carries the same cosmological representations¹⁷⁴.

While in the Hindu temple the *Axis Mundi* is clearly represented by the horizontal centre of the mandala and by the verticality of the mountain-like tower, the four-*īwān* plan reveals two potential loci for the *Axis Mundi*. The one is, of course, in the centre of the courtyard, which is the geometrical centre of the compound and the intersecting point of the two orthogonal axes. The second one is in the *mihrāb*, situated in the *qibla* wall in the main sanctuary. On

¹⁷² Following the hierophany of the Cosmic Cross, the *īwāns* were originally oriented along the cardinal points, as is the case in the most palaces. However, the majority of Islamic four-*īwān* compounds are not exactly aligned with the four corners of the world.

¹⁷³ See Chapter IV.7.2.

¹⁷⁴ The "*opaion*" has similar architectural connotations.

the one hand, the imam or the shaykh carrying out the religious service assumes the function of the Cosmic Man in the *mihrāb* and connects metaphorically with the Heavens. On the other hand, the congregation in the courtyard as a whole acts as an *Axis Mundi* and unobstructed by any architectural settings (lack of a cupola) connects with the divine. These two architectural centres can be explained with the *hierophanic palimpsest*. Primarily, the orthogonal centre of the courtyard was also the locus of the *Axis Mundi* and the most sacred place. However, with the advent of monotheistic thought and with the Islamic necessity to incorporate the *mihrāb* into the *qibla* wall as the most sacred locus in the compound, the four-*īwān* plan acquired two hierophanic centres: the centre of the courtyard, marked by the water basin and the *mihrāb*.

This schematic comparison between the Hindu temple and the four-*īwān* plan shows that the basic compositional features such as the orientation along two orthogonal axes, the situation of the sanctuary in their crossing point, the massive four gates, etc. are similar. Although there is not a historical direct link between the two architectural settings, the hierophanies of the *Axis Mundi* and the Cosmic Cross, of the navel of the world, of the holy mountain, etc are basically the same. They represent two architectural traditions (the Hindu and the Islamic) based on the same anthropomorphic and physiomorphic beliefs, and major cosmological schemes and hierophanies that transcend religious thought.

III.2.2 The Jain Temple Based on a Mandala

The most famous of all Jain monuments are the white marble temples at Mount Abu (Fig.106), a pilgrimage site in southern Rajasthan. Other sacred mountain sites graced with imposing temples include Ranakpur also in Rajasthan (Fig.101-104), Girnar and Satrunjaya (near Palitana) in Gujarat (Fig.105), Sammeda in Bihar, Sravana Belgola in Karnataka and Ashtapada¹⁷⁵ in the Himalayas. These architectural complexes represent the epitome of the Jain medieval temple tradition.

The rectangular site of the Jain temple is oriented according to the ideal cardinal points. The main axis is to the north-south. Relevant to the current thesis are the Jain *chaumukhs* (*chau* = four, *mukh* = face) or four-faced temples which emerged in the 15th c. AD. In these compounds, the image of a *Tirthankar* (ford maker) faces the four sides of the temple, or four *Tirthankars* are placed back to back to face the four cardinal points. The entrance to the temple is through four doors. The Chaumukh temple of Adinath¹⁷⁶ (Fig.101-104) in Palitana from 1439 AD is a characteristic example of the four-door temple. Open on all four sides, it enshrines the four faces image of Adinath facing the four cardinal directions. One doorway leads out to the assembly hall in front while the other three have porches leading into the main courtyard. Another Chaumukh temple of Adinath from 1439 AD is built in Ranakpur, one of the five holy places of the Jain community.

The Jain *chaumukhs* are characterised by the following features. A dominant central building, comprising three floors (representing the hierophany of the three worlds: the upper celestial world, the middle mortal world, and the lower infernal world) contains the cella. The cella, which acts as the *Axis Mundi*, opens up to all four cardinal points. The *Tirthankar* in the cella has four faces i.e. *chaumukhs*. The temple represents the enlightened *Tirthankar*, who passes on teachings to his followers, gathered together in all four directions of the world. After this ritual, at the exact moment of enlightenment of a Jina, the gods create a hall, in which the Jina takes his place. Upon which, three times the Gods manifold the Jain fourfold. The architecture of the Jain *chaumukhs* represents exactly this process of enlightenment and recreates the universe in its totality. The temple itself is the divine hall of the manifolded Jain.

¹⁷⁵ Believed to be Mount Kailas.

¹⁷⁶ The Palitana city constitutes 863 Jain temples in its Shatrunjaya Hill, some of them dating back to the 11th c. AD. Chaumukh Temple of Palitana is one of the most magnificent attractions of the Shatrunjaya Hill.



Fig.101: Panoramic view of the Chaumukh Temple of Ranakpur, 1439 AD
Source: <http://static.panoramio.com/photos/original/7349850.jpg> [Accessed on 1 October 2009]

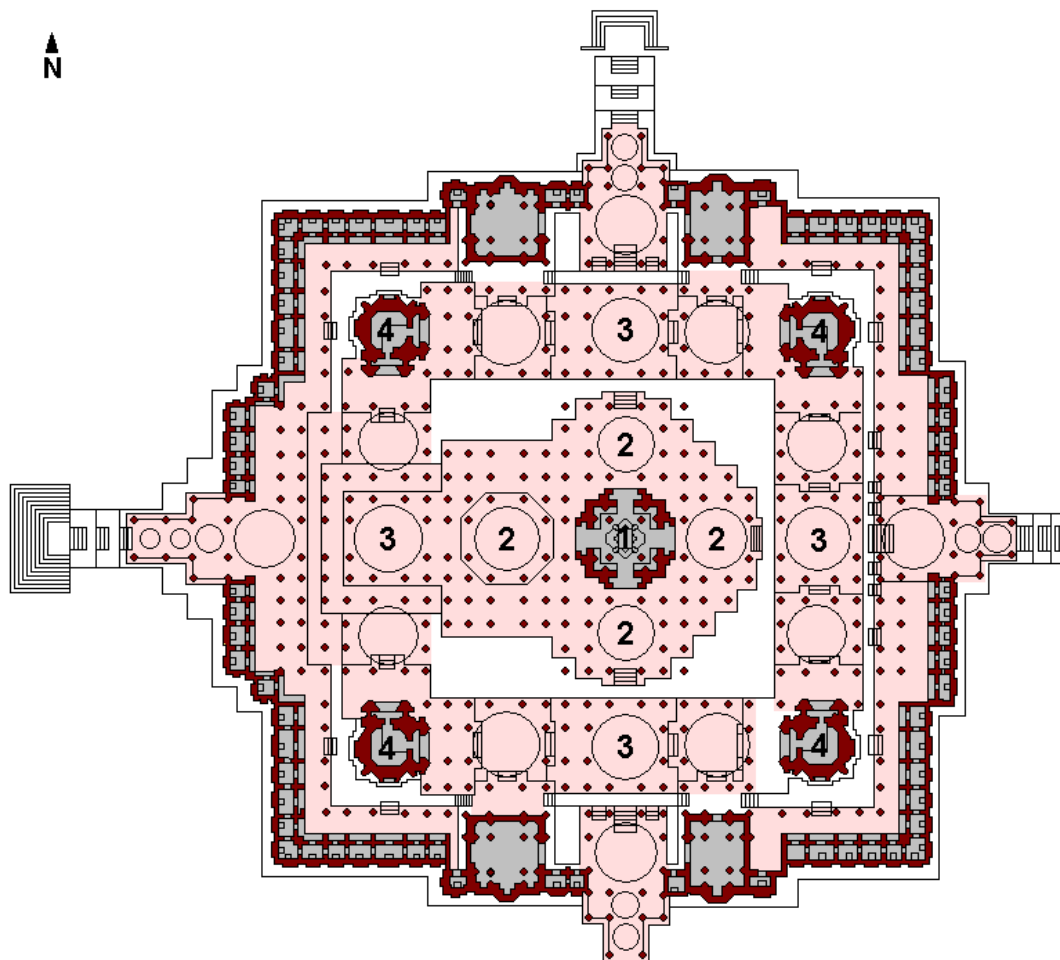


Fig.102: Plan of the Chaumukh Temple of Ranakpur, 1439 AD after Peter
Source: http://de.wikipedia.org/w/index.php?title=Datei:Grundriss_Adinatha-Tempel_Ranakpur.gif&filetimestamp=20070814132327 [Accessed on 1 October 2009]

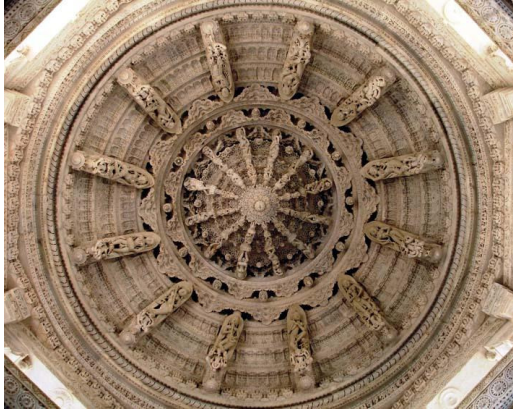


Fig.103: Ceiling of the cella at the Chaumukh Temple of Ranakpur, 1439 AD
Source:
http://image58.webshots.com/158/7/51/78/2864751780056014438qRZftJ_ph.jpg [Accessed on 1 October 2009]



Fig.104: Chaumukh Temple of Ranakpur, 1439 AD
Source:
http://www.travelogues.net/India/index_js.htm?page=photos_ranakpur.htm [Accessed on 1 October 2009]

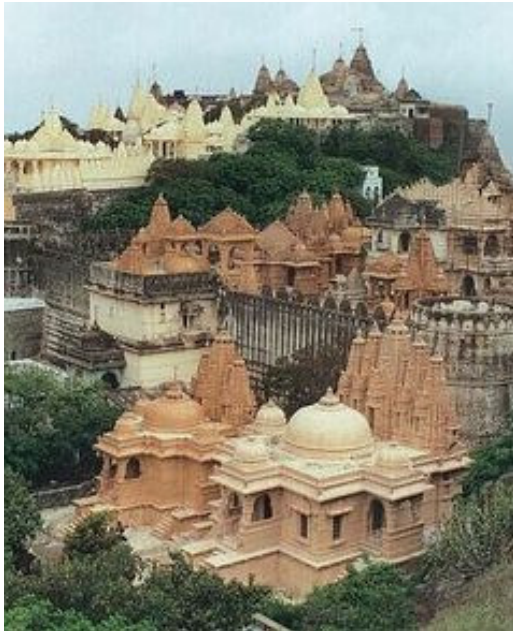


Fig.105: Jain Temples of Palitana
Source:
<http://www.absoluteastronomy.com/topics/Jainism> [Accessed on 1 October 2009]



Fig.106: Jain temple at Mount Abu, Rajasthan
Source: photo by E. Petitalot [Accessed on 1 October 2009]

As shown above, the Jain cosmos is divided into three realms: the upper or celestial world, the middle or mortal world, and the lower or infernal world. These three realms can be represented by abstract or anthropomorphic images. The latter is usually in the form of the Cosmic Man (Lokapurusha) (Fig.107), whose body is hierarchically arranged to symbolise the three realms of creation. Undoubtedly, the Lokapurusha can be considered as a representation of the hierophany of the Cosmic Man, similar to the Vāstu-Purusa in the Hindu mythology.



Fig.107: Jain Cosmic Man Lokapurusha, 15th c. AD

Source: <http://paularonderos.googlepages.com/mitolog%C3%ADa> [Accessed on 1 October 2009]

Among the more abstract Jain representations are maps of the middle world from where liberation from the cycle of rebirth is possible (Fig.108). They show two-and-a-half continents, arranged concentrically and separated by blue rings that represent oceans. The central continent is called *Jambudvīpa*, the continent of the rose-apple tree. In the south of this continent is India. At the very centre of the map stands Mount Meru, representing the hierophany of the *Axis Mundi*. The circle is surrounded by four doorways/buildings situated along the intercardinal points, representing the hierophany of the Cosmic Cross. Similar Jain maps of the middle world might have been used as architectural prototypes to create the main cella of the Jain temples, which consist of a round tower with four doorways, as is the case of one of the Jain temples at Palitana (Fig.109) and Mount Abu (Fig.106). The four doorways follow almost exactly the imagery of the map (Fig.108): they have two columns each supporting a triangular tympanum. The doorways lead to the main cella of the temple, which represents Mount Meru springing from the world ocean.

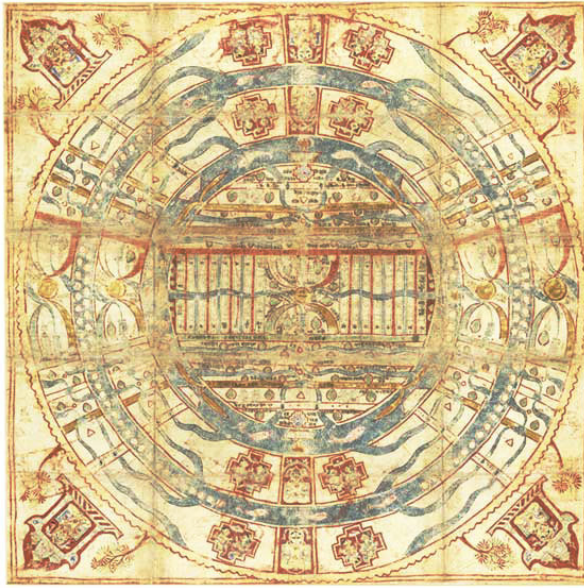


Fig.108: Jain cosmological mandala as a plan of Jambudvīpa, 19th c. AD. Victoria and Albert Museum.
Source:
http://www.vam.ac.uk/collections/asia/asia_features/jainism/art_religion/realms/index.html [Accessed on 1 October 2009]



Fig.109: Tower of a Jain temple at Palitana
Source:
[http://www.tailormyholiday.com/images/Image/PLA0000147_liketearsintherain\(2\).jpg](http://www.tailormyholiday.com/images/Image/PLA0000147_liketearsintherain(2).jpg) [Accessed on 1 October 2009]

If we take the above Jain map of the middle world, we can also lay it out as a prototype plan for the four-īwān compound. The outer lines of the map can be the exterior border of the courtyard, with a water pool in the middle, represented by the world ocean on the Jain map and the four doorways will be obviously represented by the four īwāns. Although this supposition is based only on visual imagery and is not substantiated by any religious reasoning, it shows that the basic organisation of a sacred site is based on “universal” elements that denote the earth in its totality: four cardinal points and a holy centre, usually the spring of the world ocean and the rising *Axis Mundi*.

III.2.3 The Buddhist Temple Based on a Mandala

The stupa¹⁷⁷ is the most vivid example of the Buddhist temple based on a mandala. The hierophany represented by the Buddhist stupas is Mount Meru (i.e. the *Axis Mundi*). The particular stupas with a mandala plan, a central tower with four side towers accentuate the four corners of the world (Fig.110). They are oriented along the ideal cardinal points and their plans are based on cross-axial geometry. Furthermore, there are not only single stupas based on a mandala but also whole architectural compounds arranged according to a mandala plan (Fig.113). In Central Asia, Tibet, Burma and China, there are groups of five stupas, one in the middle and four situated along the cardinal points. In these cases, the towers represent Mount Meru and the four lesser mountains that surround it in the four directions of space. Whereby, the extra towers can be placed either along the ideal or along the intermediate directions of the cosmos. However, these two mandala patterns are cosmologically equivalent, since they are based on the hierophanies of the Cosmic Cross and the *Axis Mundi*.

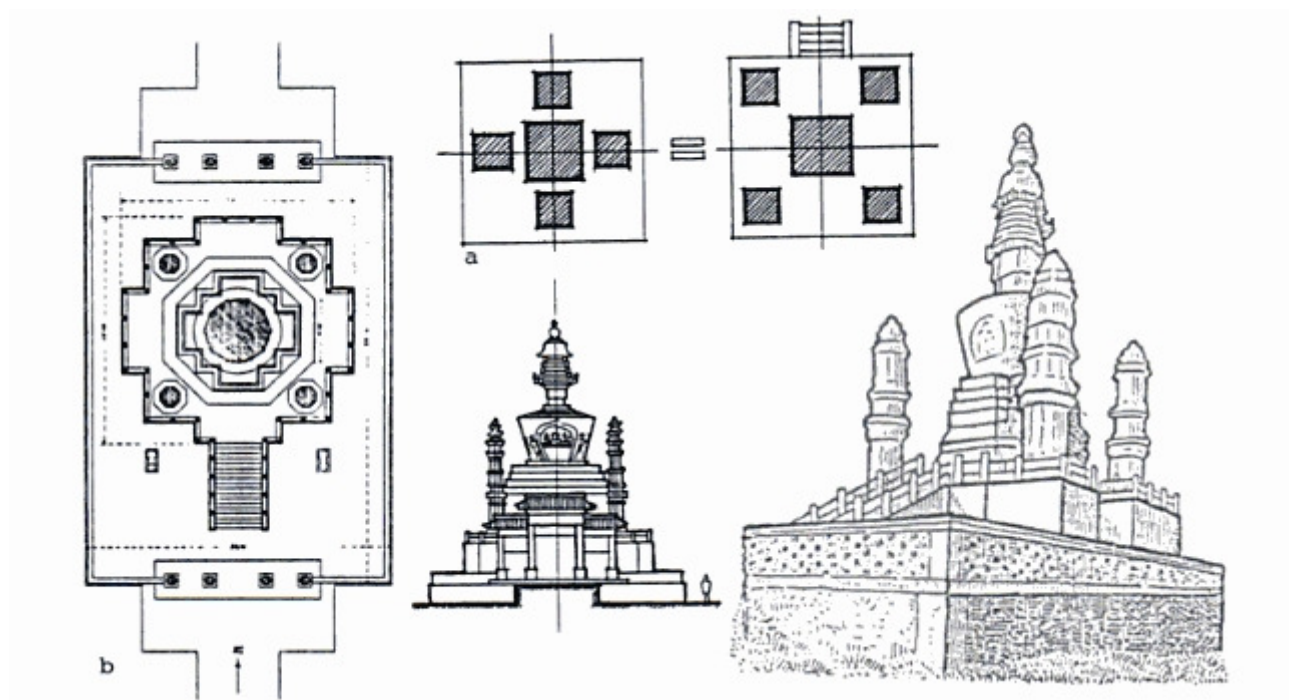


Fig.110: Stupas with four towers representing Mount Meru after Snodgrass
Source: Snodgrass: *The Stupa*, 1985, p.127, Fig.69

The same principle of five compositional elements is also found in the five diamond-throne pagodas. The first examples of which are the Azure Clouds Temple (Biyunsi) from the early 14th c. AD (Fig.111) and the Five-Pagoda Temple (Wutasi) from 1473 AD (Fig.112), both in

¹⁷⁷ For the most comprehensive study of the stupa, please refer to Snodgrass: *The Stupa*, 1985.

Beijing, comprising one higher pagoda in the centre and four smaller pagodas in the four corners. The pagoda can be seen as closely connected to the stupa, since its architectural form has developed from the stupa. Snodgrass¹⁷⁸ classifies the pagoda as a “towered stupa”. Furthermore, Snodgrass¹⁷⁹ relates the towered pagoda to the *harmikā* and the *cattravali*, the upper architectural elements of the stupa’s pinnacle, which are also analogous to the cosmic tree that springs from the top of Mount Meru.



Fig.111: Temple of the Azure Clouds (Biyunsi); Beijing, early 14th c. AD.
Source: <http://www.city.china.com.cn> [Accessed on 27 September 2009]



Fig.112: Five-Pagoda Temple (Wutasi), Beijing, 1473 AD
Source: <http://www.timeout.com> [Accessed on 27 September 2009]

The mandala pattern of a single stupa can be further enlarged as in the case of Chotscho, Sin-kiang in Turfan (Fig.113,a), where stupas in groups of 25 are situated in the diagonal directions around a central group of 5 stupas. Or as in the case of Candi Bungsu in Sumatra (Fig.113,b), where the additional stupas are arranged both along the cardinal and intercardinal points.

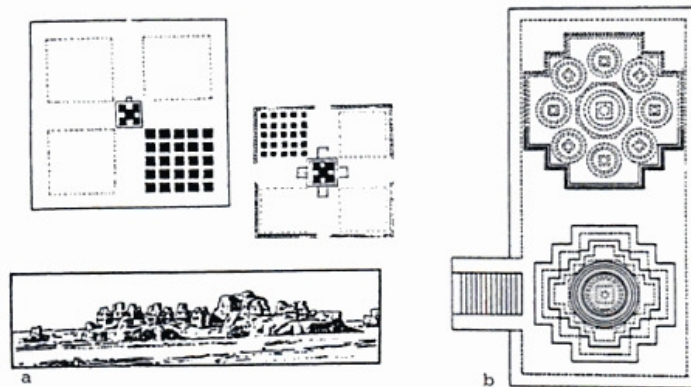


Fig.113: Groups of stupas arranged according to a mandala after Snodgrass
a) Chotscho, Sin-kiang, Turfan, b) Candi Bungsu, Muara Takus, Sumatra
Source: Snodgrass: *The Stupa*, 1985, p.127, Fig.68

¹⁷⁸ Snodgrass: *The Stupa*, 1985, p. 221.

¹⁷⁹ *Ibid.*, p. 226.

It will not be architecturally farfetched to compare the four minarets in the four-*īwān* settings with the four stupas e.g. the Chinese lamaist stupa and the four pagodas e.g. the five-diamond type in Wutasi, Hohhot (Fig.115), as vertical compositional elements situated along the cardinal points, accentuating the centrality of the main sanctuary in the compound, situated along the intersecting orthogonal axes. The Bībī Khānum Mosque¹⁸⁰ (Fig.114) built by Tīmūr in 1398 AD was the first Tīmūrid mosque to have four minarets in the four corners of the compound. The four minarets will become a distinguished feature in all future Tīmūrid and later Mughal mosques and madrasas. Although the situation of the four minarets does not follow the ideal cardinal points, the fact that they exist to mark the corners and thus the boundaries of the sacred mosque compound, is eloquent. The minarets do not follow the cardinal points because their situation is defined by the orientation of the *qibla* in the main sanctuary, which in turn defines the orientation of the whole mosque. Ideally, seen from a cosmological perspective, if we consider that the four *īwāns* mark the cardinal points, in the middle of the four walls, the minarets can define the four intercardinal points in the rectangular courtyard. In this way, the four-*īwān* compound becomes a structured cosmological locus, with eight basic architectural elements i.e. four *īwāns* and four minarets, defining the cosmos in its totality. In Bībī Khānum (Fig.114), there are mosques in the three *īwāns*, excluding the entrance *īwān*, which reinforces even more the sacred imagery of the greatest mosque built by Tīmūr. The largest mosque is, of course, in the main sanctuary. All mosque plans are based on the cruciform plan with four arched wall recesses. So, the hierophany of the four is carried out in the Bībī Khānum Mosque on several levels: four *īwāns*, four corner minarets, four recesses in each mosque, cruciform plans with orthogonal axes. These architectural elements represent and accentuate the cosmological plan of the Bībī Khānum Mosque. If it had been a strictly Islamic monument, the main emphasis would have been only on the sanctuary with the *qibla* wall.

¹⁸⁰ The Bībī Khānum Mosque is discussed in Chapter V.2.1.

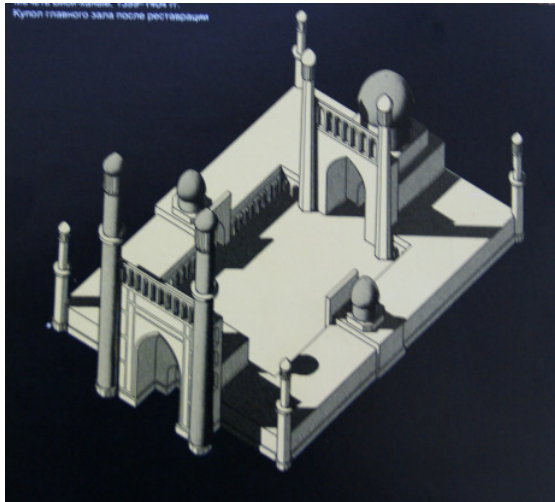


Fig.114: Four *īwāns*, four minarets and three mosques of the Bībī Khānum Mosque, Samarqand, 1398 AD after Borodina
Source: Borodina: *Central Asia*, 1985, p.70



Fig.115: Temple of the Five Pagodas in Hohhot, Mongolia, 1732 AD
Source: <http://www.cinaoggi.com/china-map/hohhot/index.htm> [Accessed on 27 September 2009]

The cross-axial architecture of the stupa can be also emphasised by images of Buddha's or other deities placed along the four cardinal directions or can be underlined by flights of stairs or gates, also placed along the axes (Fig.116). For example, in the early Hīnayāna stupas¹⁸¹, the four Manusi Buddhas, the Buddhas of the present aeon, are placed in niches along the four directions (Fig.119). Whereby, each Buddha is associated with a certain direction. This principle can be traced down in many parts of Asia, such as the Ānanda temple in Burma, the Manusi Buddha stupa in Nepal, the Manusi Buddha stupa in Nālandā, India. By utilising the Manusi Buddhas in the spatial structure of the stupa, the architecture of the compound combines the spatial orientation along the cardinal points with the temporal semantics of the Buddhas, thus defining the physical macrocosmos on a microcosmic scale.

This Buddhist iconography is mirrored in Islam by the four *īwāns* as gates, symmetrically situated around the open mosque/madrassa courtyard or as four gates under a large cupola in the Sufi four-*īwān khānaqāhs* (Fig.118) or in the cross-axial domed markets along the main trading routes (Fig.117).

¹⁸¹ Snodgrass: *The Stupa*, 1985, p.131.

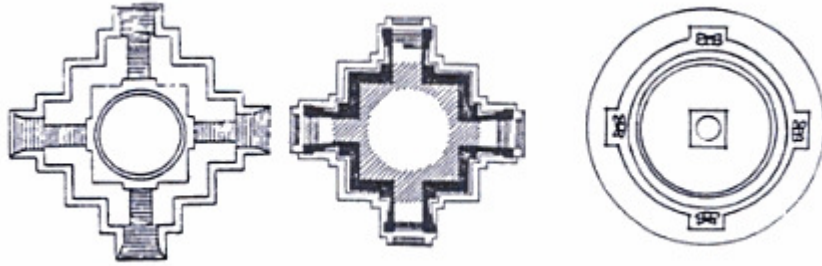


Fig.116: Plans of stupas with four stairways or four Buddha images in the cardinal points after Snodgrass
Source: Snodgrass: *The Stupa*, 1985, p.132, Fig.75

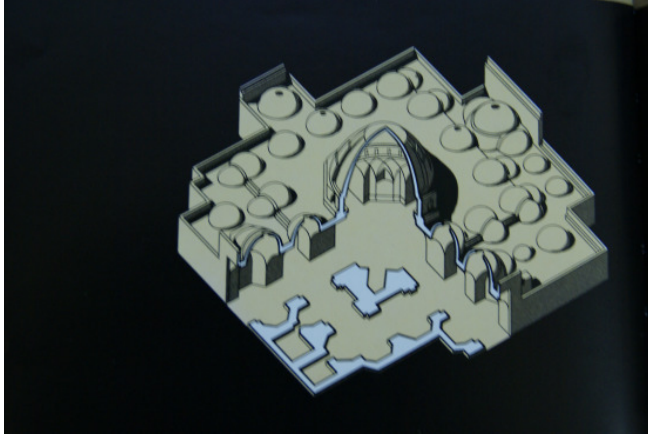


Fig.117: Bukhārā, the covered market Taqi Zargaron, 16th c. AD after Borodina
Source: Borodina: *Central Asia*, 1985, p.122

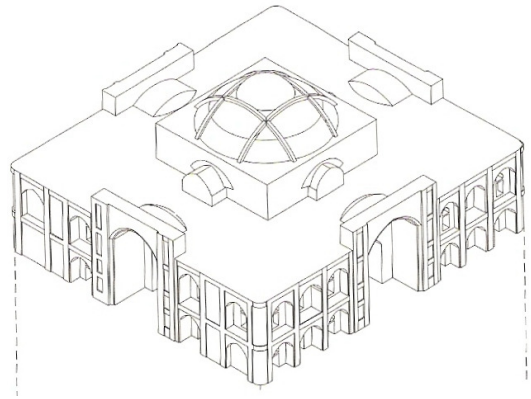


Fig.118: Bukhārā, Bahauddin *khānaqāh* 16th c. AD, isometry after Gangler, Gaube and Petruccioli
Source: Gangler, Gaube and Petruccioli: *Bukhara*, 2004, p.150



Fig.119: Stupas with four Buddha images in the cardinal points after Snodgrass
Source: Snodgrass: *The Stupa*, 1985, p.133, Fig.77

In its vertical aspect, the mandala represents another hierophany in the Buddhist temple, namely the *Axis Mundi*. The cosmic axis rises from the waters in the form of the Cosmic Mountain. The Receptacle World (Fig.120), described in the *Abhidharmakosa*¹⁸², contains three main levels: the circle of space, the circle of water (from where Mount Meru rises) and the circle of gold (containing the continents, the seven concentric mountain ranges and the seas). These circles are basically mandalas, situated above each other and held together by the *Axis Mundi*. The cosmic tree is the perpendicular that centres the cosmos and the iconic representation of the Buddha. Both the *Axis Mundi* and the Cosmic Cross are one of the most widely spread anthropomorphic hierophanies (i.e. abstractions derived from the human body) in all ancient cosmologies, defining the origins of the world and denoting the four cardinal points.

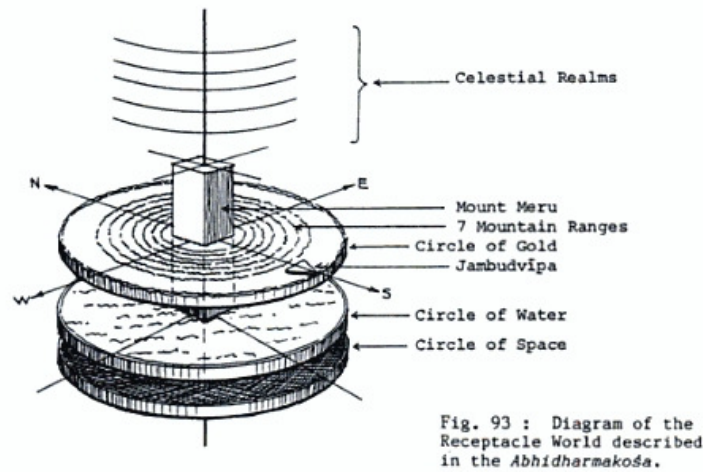


Fig.120: The Receptacle World after Snodgrass
Source: Snodgrass: *The Stupa*, 1985, p.159, Fig.93

The centrality of the four-īwān compound is underlined by a water pool that reflects the circle of water in the Buddhist cosmology. Water, as life necessity and as representation of the hierophany of the world's ocean, has a purifying function in Islam. In some of the four-īwān compounds, such as in the Kalyān Mosque in Bukhārā, the courtyard contains both a tree and a water pool. However, at present the existence of a tree within the four-īwān compound is a rarity, rather than a norm. Unfortunately, we cannot draw any conclusions about the existence and the position of trees in the early four-īwān compounds from the 12th c. AD. On the other hand, the water pool for purification purposes is more often used to determine the geometrical centre of the open four-īwān courtyard.

¹⁸² *Abhidharma* (Sanskrit) or *Abhidhamma* (Pāli) are ancient Buddhist Works (3rd c. BC) which contain detailed scholastic reworkings of doctrinal material appearing in the Buddhist *Sūtras*. *Abhidharma-kośa* (the compendium of *Abhidharma*) is a key Sanskrit text by Vasubandhu. The text was widely respected, and used by schools of Mahayana Buddhism in India, Tibet and the Far East.

III.2.4 Geometrical Similarities between the Mandala and the Four-*Īwān* Plan

The geometrical similarities between the mandala and the four-*Īwān* plan are:

- the orthogonal symmetrical outline,
- the grid, based on which the compound is organised,
- the central organisation and cross-axial design (stressing the four cardinal directions, be it with deities, staircases or colours in the buildings based on the mandala in stupa's, Hindu and Buddhist temples; or with *pishtaqs* in the case of the *Īwāns*),
- the anthropomorphic organic unity and four directions of the world.

III.2.4.a Orthogonal Symmetry

The closed rectangular ensemble, both in the stupa and in the four-*Īwān* compound is based on orthogonal symmetry. The spatial controlling factor of hierophanic geometrical patterns is symmetry. The metaphorical interpretation of architecture has generated orthogonal symmetry to God's perfection and transcendent purity. The straight lines in Islam have been considered to represent *tawhid* – the divine unity and sacred order between man and nature. This order, created by the geometrical divine patterns was expressed in mathematical regularity.

Another aspect related to orthogonal symmetry is that God's perfection, evoked and represented by perfectly organised building and landscape schemes, is in contrast with human's imperfections. The human being is seen as subordinated to the divine organisational principles. The four-*Īwān* plan within the urban fabric can be regarded as a perfectly organised system based on orthogonal symmetry. In this way, we have two juxtapositions: on the one hand, the human imperfection in contrast to the divine symmetry; and on the other hand, the unstructured, organically-grown urban frame in contrast to the place of divine presence and organisation: the four-*Īwān* compound.

III.2.4.b The Grid

The symbolism of the grid goes beyond the mere tectonic importance of the lines defining the orientation of the sacred setting. According to the allegory of the mandala, the grid represents the lines of breath (*prāna*; *πνεῦμα*)¹⁸³, which refer to the body of man and the cosmos. The anthropomorphic microcosmic presence of man is related to the macro-world held together by a pneumatic net. Furthermore, *prāna* is also used to measure time. Snodgrass points out that in Indian architectural manuals, *prāna* and *vāyu* (wind) are units of measure. The act of measurement and laying out the grid is equal with the process of cosmogenesis. The measured land/area acquires the characteristics of the ordered, harmonious universe as created by God.

The measurements, necessary to lay out the grid in the Hindu temple¹⁸⁴ are based on *chhanda* (rhythm) and the temple is referred to as *vimana* (based on correlated measures). The design of the plan is based on *talacchanda* i.e. the rhythm of the ground. All Buddhist temples (Fig.122) based on the mandala are also automatically based on a grid that defines the mandala itself.

The four-*īwān* compound, especially in Tīmūrid architecture, is also based on a strict grid, used to define both the architectural plan and the façade of the building. The usage of the grid as an architectural means to represent design was widely possible due to the availability of paper, which was much cheaper than papyrus and parchment. Rag paper was implemented in Samarqand by Chinese prisoners of war in 751 AD and as Necipoğlu¹⁸⁵ points out, by the 11th-12th c. AD architectural drawings were widely used in the Tīmūrid/Turkmen world. The earliest known Tīmūrid architectural drawings, according to Necipoğlu, are the so-called Tashkent scrolls¹⁸⁶ from the 16th c. AD (Fig.121) presumably made by an Uzbek craftsman from Bukhārā. What is important, with regard to the grid organisation of the plans, is that they contain ideal two and three-dimensional architectural designs created by various grid systems. These were called *giriḥ* (knotted or interlaced) and were based on a single pattern, multiplied or rotated along one or more symmetrical axes. Necipoğlu states that the two most widely used grid systems were the square or rectilinear grid, used for ground floor plans and *bannā ī* brick ornaments and the radial grid, scratched on the paper with the help of a compass.

¹⁸³ Snodgrass: *The Stupa*, 1985, p.111.

¹⁸⁴ Deva, K.: *Temples of India*. Volume I. New Delhi: Aryan books international, 1995, p.2.

¹⁸⁵ Necipoğlu, G.: "Geometric Design in Timurid/Turkmen Architectural Practice: Thoughts on a Recently Discovered Scroll and Its Late Gothic Parallels". In *Timurid Art and Culture*, ed. L. Golombek and M. Subtelny. Leiden: Brill, 1992, pp.49-66.

¹⁸⁶ Kept at the Institute of Oriental Studies at the Academy of Sciences in Tashkent, Uzbekistan.

“Based on dividing the circumference of a circle into equal segments by equidistant rays emanating from its centre, along which rows of polygons and star polygons are formed, the radial grid constitutes the basis of both two- and three-dimensional designs, including projections for stellate *yazdī bandī* and *muqarnas* vaults.”¹⁸⁷

Although the Tashkent scrolls are from the 16th c. AD, the similarity in the ground floor plans between the four-*īwān* madrasas in Bukhārā from the 15th c. and the 16th c. AD can suggest that the existing scrolls record earlier knowledge and working methods of the architects at least dating back to the early 15th c. AD when the Ulugh Beg Madrasa (Fig.123) in Samarqand was built.

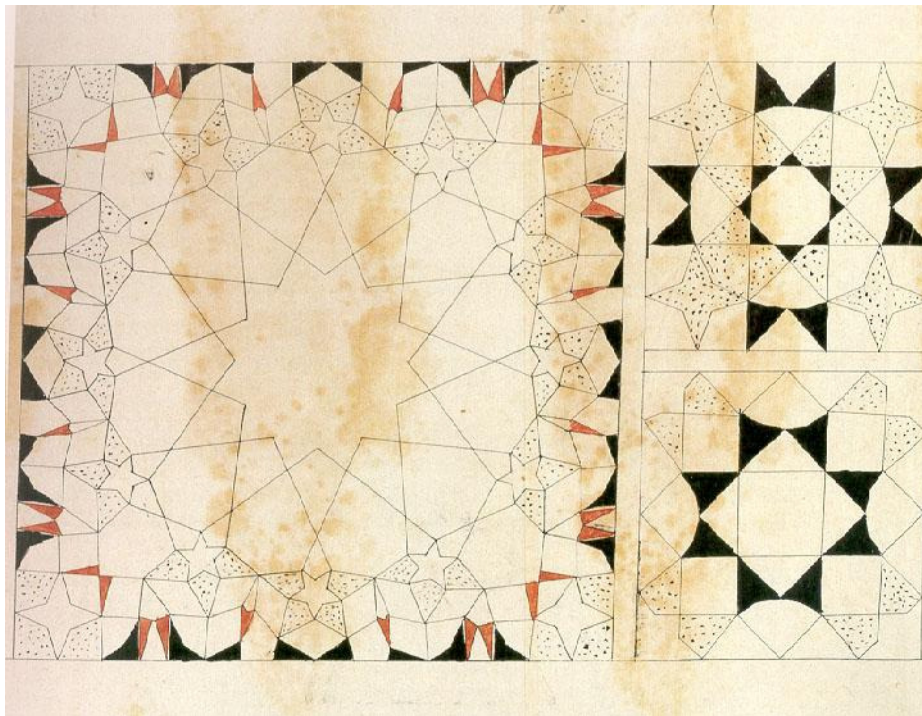


Fig.121: Topkapi scroll, fan-shaped *muqarnas* full vault, two stellate *muqarnas* full vault
Source: <http://www.thegatesofparadise.com/topcopy/Topkapi.htm> [Accessed on 1 November 2009]

Ulugh Beg, a mathematician and astronomer himself, had a library of manuscripts and scrolls on architecture. The Tīmūrid astronomer and mathematician Ghiyas al-Din Jamshid al-Kāshī's dedicated his treatise *Key to Arithmetic* to Ulugh Beg in 1427 AD. There he discusses arches, vaults, domes and *muqarnas* types and presents methods to calculate their surface area. The treatise also provides mathematical tables for architects to facilitate their computations. Furthermore, al-Kāshī was the building supervisor of the Ulugh Beg's observatory in Samarqand, which suggests a close link between the methods presented in his treatise and the actual construction of that building.

¹⁸⁷ Necipoğlu: *Geometric Design*, 1992, p.50.

Another important architectural manual in Ulugh Beg's library was a transcribed copy of the 10th c. AD practical guide by Abu'l Wafa' al-Busajani *About That Which the Artisan Needs to Know of Geometric Construction*. Although the treatise was compiled in Baghdad, it was probably used in Samarqand as well. It taught the construction of geometric figures by subdividing them into congruent parts and inscribing them into one another by means of simple instruments and without any complex mathematics. These two above listed manuals must be only a few to mention. However, they show the following: there were clearly architectural manuals, unifying the workmanship of the *muhandisān*; the manuals were widely usable because they contained practical methods and not complicated arithmetical formula's; the manuals were provided probably by the main patron (in the case of Samarqand by Ulugh Beg) so that he could secure that the architectural heritage of the past would be preserved. Further, he could steer the representational nature of his buildings and relate their geometry to the geometrical rules coined in Baghdad.

A very important feature of the grid architecture typical of the Tīmūrid period is that it is based on the cubit measurement of the *gaz*, which is the main module. However, there is no clear definition of its measurement. So, the *gaz* is used for modular geometric grids, whereby all measurements could be fitted to the local materials at the building site, as stressed by Necipoğlu.¹⁸⁸ Pugachenkova notes the following:

“La dimension du gaiz n'est pas normalisée en Asie centrale, mais comme il s'agit d'une unite modulaire, ce qui compte c'est la possibilité qu'il donne, indépendamment de ses dimensions absolues, de rendre compte des proportions des divers elements architecturaux dessinés sur le plan.”¹⁸⁹

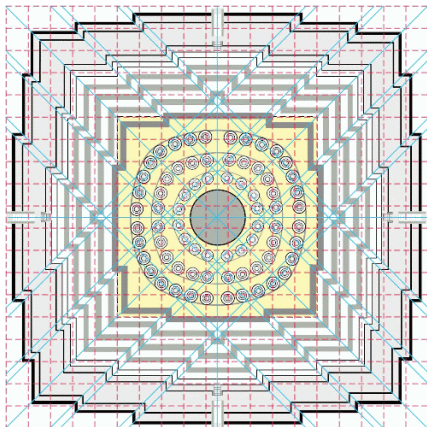


Fig.122: Borobudur's corresponding layout in terms of a 19 x 19 grid of squares
Source: http://www.borobudur.tv/survey_1.htm
[Accessed on 19 August 2009]

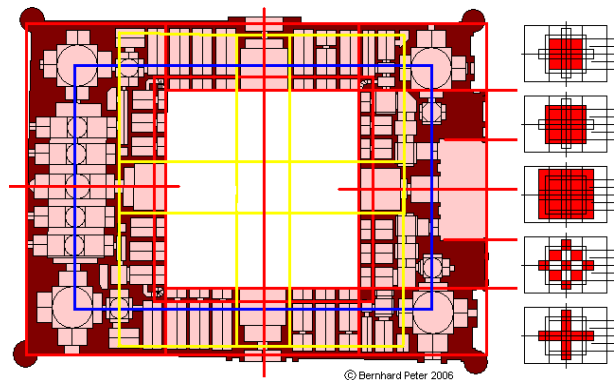


Fig.123: Grid Ulugh Beg Madrasa, Samarqand after Peter
Source: Website of B. Peter
<http://www.kultur-in-asien.de/Usbekistan/architektur/ulughbegprop.htm> [Accessed on 19 August 2009]

¹⁸⁸ Ibid., p.62.

¹⁸⁹ Pugatchenkova, G.: *Chefs d'oeuvre d'architecture de l'Asie Centrale XIVe-XVe siècle*. Paris, 1981, p.21.

III.2.4.c Central Organisation and Cross Axiality

The central organisation and the cross-axiality are crucial to all sacred architecture. The centre of the mandala is at the intersecting point of two orthogonal axes and is the holiest space within the compounds, i.e. it is an architectural representation of the hierophany of the Cosmic Cross. By marking the centre with a water pool, the compound acquires the qualities of the centre of the world, which can be virtually anywhere. The centre symbolises the principle of cosmogenic creation that generates the universe. The atemporal nature of the centre is a metaphor for the cyclic return to the origin of the universe.

The centre is marked by the verticality of the *Axis Mundi*. The hierophany *Axis Mundi* is represented by the omphalos, in Hinduism with the four-headed Brahmā with eight hands or the Mount Meru with its four sides, each correlated with a colour and a caste, facing the four directions of space. In Buddhism, the *Axis Mundi* is marked either with the Mound Meru or with the four-headed Buddha.

A very eloquent example of the above phenomenon is the Bayon temple at Angkor Wat from the 12th c. or early 13th c. AD (Fig.124,125). The Mahayana Buddhist temple is situated at the centre of Jayavarman's capital, Angkor Thom and has strictly orthogonal plan along two intersecting orthogonal axes. The central tower was originally also cruciform but was made circular at a later stage. There is very little space between the inner gallery and the upper terrace, which is very similar to the closeness of the cruciform stupa to the *īwāns* at Adzhina Tepa. The central organisation and cruciform representations are also the basis for the Bodhisattva heads at Bayon, their four heads are oriented along the cardinal points.

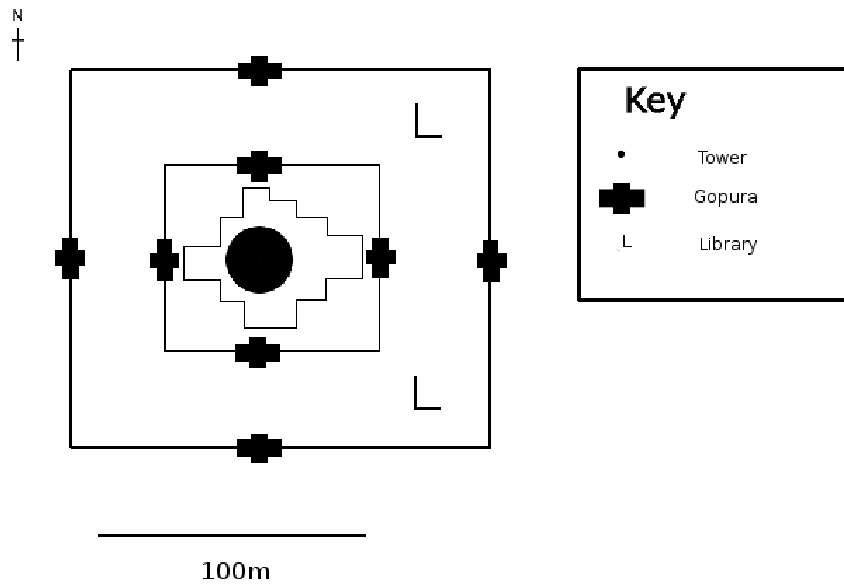


Fig.124: Angkor Wat, Bayon temple, plan

Source: <http://en.wikipedia.org/wiki/Bayon> [Accessed on 1 November 2009]



Fig.125: Angkor Wat, Bayon temple, Bodhisattva heads

Source: <http://dancollier.org/pictures/original/DSCF2030.JPG> [Accessed on 1 November 2009]

At Bayon and at any Hindu or Buddhist temple based on the mandala, the centre is defined by the three-dimensional Cosmic Cross, with its five arms: two intersecting axes marking the cardinal points and one vertical axe. Exactly this cross-axial design is essential both to the four-*īwān* compounds and to the mandala. As for example in the Kiri-Vihāra Stupa in Polonnaruwa, Sri Lanka, which is laid out as a mandala, there is a Mountain Meru in each of the four cardinal directions and at the centre (Fig.126,127).

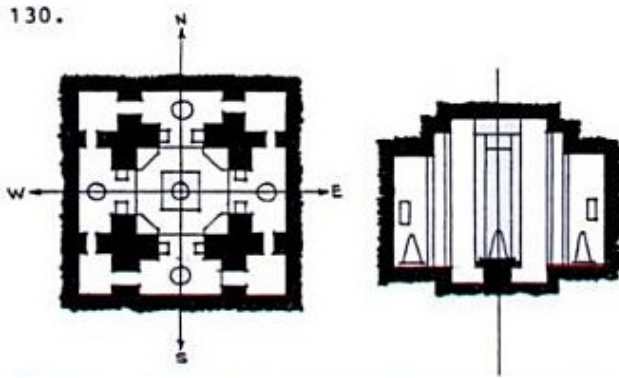


Fig.126: Kiri-Vihāra Stupa, Polonnaruwa, Sri Lanka after Snodgrass
Source: Snodgrass: *The Stupa*, 1985, p.130, Fig.71



Fig.127: Kiri-Vihāra Stupa, Polonnaruwa, Sri Lanka
Source: <http://www.travelpod.com>
[Accessed on 29 August 2009]

Similarly, in the four-*īwān* plan the *īwāns* are situated exactly along the two intersecting axes, be it in a rectangular or in a square open courtyard. However, the axes of the four-*īwān* plan are not always along the ideal cardinal points and the centre of the compound is marked either by a water pool or is left empty. Whereby, the *mihrāb* carries the hierophany of sacredness in the four-*īwān* compounds. This illustrates the phenomenon of coexistence of a mythological (pre-religious) hierophany of four horizontal elements (e.g. the *īwāns*), denoting two-dimensional space and one vertical element (the *Axis Mundi* represented by the water pool), denoting three-dimensional space, combined with the religious necessity of incorporating the most sacred element (the *mihrāb*) into the whole man-made structure. The position of the *mihrāb* varies from being along the main entrance to being in the *īwān* facing the entrance *īwān*. This shows that the *mihrāb* is a later feature, added to the older and undoubtedly more stable orthogonal plan containing only the four *īwāns*. In this case, we can define the four-*īwān* plan as a product of the *architectural palimpsest*, in which a pre-religious layout is reused with a religious rendering by shifting the most sacred element from the centre of the open courtyard to the domed sanctuary. Although the Cosmic Cross is redefined according to the new religious necessities of Islam, the essence of central organisation, represented by the centrality of the water pool and the orthogonality of the *īwāns*, remains unchanged.

III.2.4.d Anthropomorphic Organic Unity and Four Directions

Furthermore, the number four derives from the symmetry of the human body, which suggests a four-partite division of the horizon: a front and a back, left and right side. That is why, a cosmography without directional alignment would have been very hard to imagine. There is no doubt that the marking of the horizon with four cardinal points was widespread long before the religious organisations existed.

The anthropomorphic organic unity in the mandala is best exemplified by the Buddhist and Hindu temples based on the Vāstu-Purusha Mandala (Fig.128) or by the Lokapurusha in the Jain Temple. Vāstu-Purusha and Lokapurusha have the universe decoded in their human bodies that define them as Cosmic Men. Also the plan of Borobudur can be analysed based on the Vāstu-Purusha Mandala (Fig.128) or based on the proportions of the standing Cosmic Man (Fig.129). The hierophany of the Cosmic Man is inseparable part of all world religions and shows an attempt to relate creation to the anatomy of the human body.

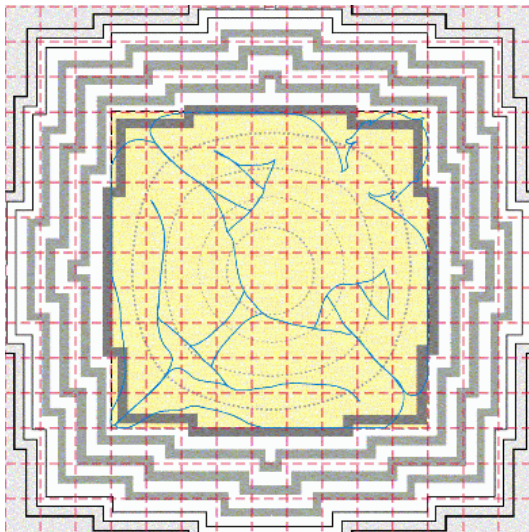


Fig.128: The NE/SW orientation of Borobudur's "spine," which is represented by the two great bodhi trees that span the two corners of the monument's fourth gallery balustrade, correspond with the orientation of the purusha's body as the symbolic foundation upon which the entire summit rests. Source: http://www.borobudur.tv/survey_1.htm [Accessed on 19 August 2009]

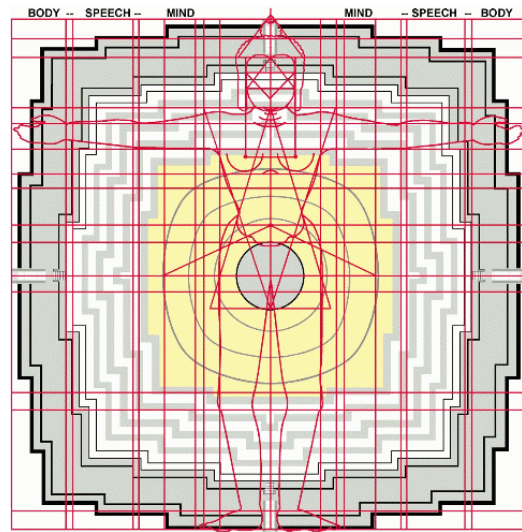


Fig.129: Borobudur's mandala with an overlay representing the proportion system that was incorporated into the later mandala traditions of Tibet Source: http://www.borobudur.tv/survey_1.htm [Accessed on 19 August 2009]

The Hindu Temple, for example, is not only a home of God but can be also regarded as a representation of the lying and standing human body (Fig.130), which in turn is of course related to the body of the deity depicted in the temple. The symbolism of the temple plan and elevation suggests that the *garbhagriha* represents the head and the *gopura* the feet of the deity. Further, the *sukhanasi* or the *ardhamantapa* (the small enclosure in front of the *garbhagriha*) is the nose; the *antarala* (leading to the main *mantapa*) is the neck; the various

mantapas are the body; the *prkaras* (surrounding walls) are the hands and so on. Vertically, the *garbhagriha* represents the neck, the *shikhara* (the superstructure over the *garbhagriha*) the head, the *kalasha*¹⁹⁰ (the finial) the tuft of hair (*sikha*) and so on. Although some of these comparisons can seem to be rather farfetched, the main concept of integrating the anatomy of the human body into the temple architecture is evident.

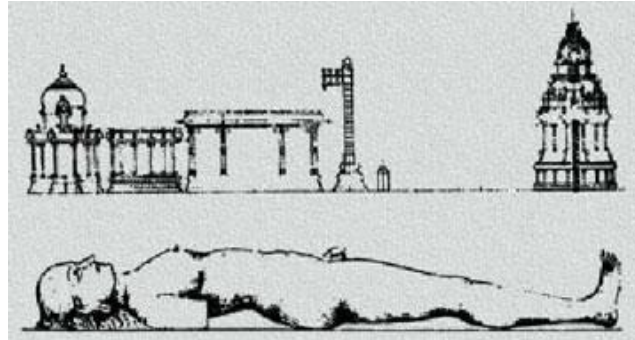


Fig.130: A lying human body represented in the architecture of a Hindu temple.

Source: <http://ssubbanna.sulekha.com/blog/post/2008/03/temple-architecture-devalaya-vastu-part-four-4.htm>
[Accessed on 3 September 2009]

Another reference to the hierophany of the four, combined with the cardinal points can be found in the images of the four Regents of the Quarters (*lokapāla*)¹⁹¹ (Fig.131). Their function is to protect the sacred borders of the mandala and usually they are depicted at the base of the stupas in Central Asia, China, Japan and Tibet. Their armour iconography stands for warriors who guard the sanctified domain of the holy setting (the mandala) and do not allow chthonic forces to enter the compound. Their importance as guardians of the cosmic order is augmented by pairing them with the Buddhas of the cardinal directions.

Should we dare to compare the four regents of the directions in Buddhism with the four angels supporting the Throne of God in Islam (Fig.17,18), we may not find the same iconography of armour, but we will definitely find the principle of reinforcing the power and the strength of the structure, be it a stupa or the Throne of God, by four non-deities, which provide physical support and guard the holy compound. Further, the iconography of the four Caliphs and Muhammad (Fig.132) can be also related to the same basic hierophany of one main deity in the centre and four “supporting deities” representing the cardinal points. Parallels with Christianity are also possible with Christ and the four Evangelists (Fig.11-15).

¹⁹⁰ Please note the etymological similarity with Mount Kailash as the representation of Mount Meru (*Axis Mundi*). The finial being an architectural representation of the hierophany of the *Axis Mundi* that connects the temple with the Heavens.

¹⁹¹ Snodgrass: *The Stupa*, 1985, p.134.

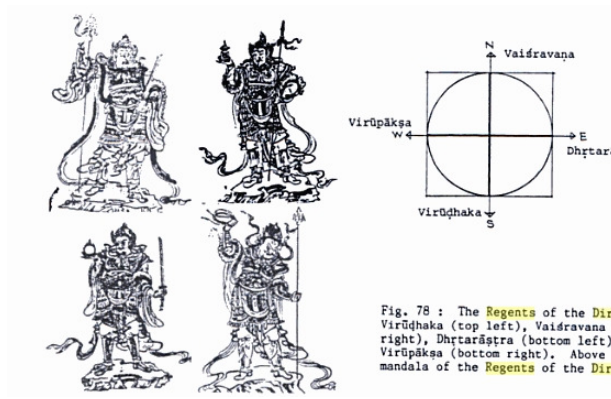


Fig.131: The Regents of the Directions
Source: Snodgrass: *The Stupa*, 1985, p.134, Fig. 78



Fig.132: Muhammad (top, veiled) and the first four Caliphs. From the *Subhat al-Akhbar*. Original in the Austrian National Library in Vienna.

Source:
http://zombietime.com/mohammed_image_archive/islamic_mo_face_hidden/ [Accessed on 1 April 2010]

Conclusion

The four-*īwān* plan is based on a geometrical grid with orthogonal symmetry, very similar to the grid of the mandala. This relates automatically the four-*īwān* plan to Buddhist, Hindu and Jain sacred monuments also based on the mandala. All these settings have cross-axial design based on the hierophanies of the Cosmic Cross and the *Axis Mundi*.

The centre is marked by the verticality of the *Axis Mundi*. The hierophany *Axis Mundi* is represented by the omphalos, in Hinduism with the four-headed Brahmā with eight hands or the Mount Meru with its four sides, facing the four directions of space. In Buddhism, the *Axis Mundi* is marked either with the Mound Meru or with the four-headed Buddha. The centrality of the four-*īwān* compound is underlined by a water pool that reflects the circle of water in the Buddhist cosmology.

IV Civitas Dei: Paradise as Urban Representation of Power

IV.1 The Hierophanies of the Cosmic Cross and Paradise Used in Urban Plans

The dialectic between the *čahār-bahr* Paradise garden and the royal capital is best represented by the axial quadripartite pattern used as an urban grid to symbolise political power and its divine origin. The emperor stages himself as a representative of God on earth and opts for an urban scheme that comes as close as possible to the holy descriptions of the Heavens. The monumentality of the cities based on the *čahār-bahr* pattern is created by large intersecting avenues which define the centre of the royal dominion as an *Imago Mundi*. The royal power stretches to the four realms of the universe, epitomised by the four quadrants of the Paradise garden.

The paradisiacal theme is carried out on different layers and scales. Firstly, on an urban level, the royal capital is organised with orthogonal boundaries, with usually four city gates in the middle of the four city walls and two orthogonal main transport axes. Whereby, the city walls and the main gates are situated along the cardinal points. Secondly, the royal palace or residence is also based on an orthogonal pattern, be it a *čahār-bahr* garden with a pavilion, where the ruler resides, or a palace, that is used only as a representative building. Thirdly, the throne of the ruler is placed in a pavilion or a building with a rectangular or octagonal plan, mostly based on the four-*īwān* scheme and with three or four stories and four corner towers, also evoking the imagery of Paradise.

The evocation of Paradise imagery on an urban scale (i.e. laying out the city as a *čahār-bahr* garden), combined with recreating Paradise on a building scale (i.e. using the four-*īwān* plan for the royal residence) legitimises the power of the ruler on a macrocosmic and microcosmic level. The city as a whole, the dwelling of the ruler and his throne claim the royal dominion as an *Imago Mundi*, a microcosmic representation of the macrocosmos. The ruler is conceived as a cosmocrator that rules the world from his capital, which is conceived and represented as the centre of the world.

Further, the political power of the ruler is combined with his religious aspirations and in almost all cases, the main congregational mosque of the imperial city is commissioned by the emperor and based on the four-*īwān* plan. In the case of Tīmūr, this is of course the Bībī Khānum Mosque in Samarqand, in which no expense was spared to convey the imagery of Paradise. In the case of Shāh Rukh, the Friday Mosque in Harāt is also based on the four-*īwān* plan but it was an existing structure prior to the proclamation of Harāt as the new capital of the Tīmūrid empire, ten years after the death of Tīmūr in 1405 AD. However, Shāh Rukh

and his wife carried out extensive renovations in Harāt. Bukhārā, as the main religious centre also has a Congregational mosque based on the four-*īwān* plan, i.e. the Kalyān Mosque.

The imperial capital offered also the paradisiacal setting for the dynastic tombs and mausoleums. Tīmūr chose primarily Shahr-i Sabz, his second summer capital, to build the memorial complex Dār al-Siyādat, containing the graves of two of his sons, his father and himself, and even Ulugh Beg, following of course his grandfather's ambitions for grandeur intended to have his dynastic mausoleum in Shahr-i Sabz. However, later he did transform Gūr-i Amīr in Samarqand as the main Tīmūrid dynastic mausoleum, in which Tīmūr, Shāh Rukh and Ulugh Beg are buried. All Tīmūrid mausoleums are based on a cruciform plan with four wall arched recesses, repeating the paradisiacal architecture based on orthogonal axes, denoting the four corners of the world and crowned with an impressive blue-tiled dome, representing the Heavens.



Fig.133: A map of the Tīmūrid Dynasty

Source: <http://www.taīwāndna.com/SalarTīmūridEmpire.png> [Accessed on 1 November 2009]

Below, several major Tīmūrid cities (Fig.133) will be covered, which all share an urban layout based on the quadripartite scheme representing Paradise. Baghdad will be analysed at first, since the major Tīmūrid buildings in Samarqand – the Bībī Khānum Mosque and the Ulugh Beg Madrasa are most likely directed towards Baghdad¹⁹². This hypothesis is based on compass measurements of several Tīmūrid *qiblas* (*mihrābs*), carried out by the author in 2006 and will be further developed in the subsequent chapters, dealing with the four-*īwān* complexes in present-day Uzbekistan. Marv will be analysed as part of its connection to Al-

¹⁹² Please consult Chapter V.2.1 and Annex I.

Mansur and the fact that several world empires used it as their capital. Harāt, Bukhārā, Shahr-i Sabz, Khīva and Samarqand were all closely connected to the Tīmūrid triad of Tīmūr, Shāh Rukh and Ulugh Beg and had a quadripartite urban plan. The city of Safavid Isfahān also falls into the category of Paradise capitals. However, it has been a subject of a separate study¹⁹³ and will not be discussed here.

Special emphasis will be put on the quadripartite urban plan of the above cities and any relevant four-īwān complexes or other dynastic structures with a cruciform plan that have been built there. The main discussion point being that the anthropomorphic and physiomorphic nature of the cities, with main urban axes orientated towards the four corners of the world, was reinforced by four-īwān complexes, also repeating the same orientation along the cardinal points. However, the available architectural substance of some of those monuments does not allow a definite restoration of their plans and thus a complete certainty of their allocation as four-īwān compounds. That is why, several hypotheses will be presented, which will examine the possibility that e.g. Āq Sarāy and the Dār al-Tilavah Ensemble in Shahr-i Sabz were indeed conceived as four-īwān compounds, the assumption being based on Clavijs' descriptions and comparative analysis with other major Tīmūrid sites in Samarqand.

IV.2 Indian and Chinese Manuscripts on the Construction of Four-fold Urban Entities

The origin of the plans of the below presented cities cannot be attested with certainty. However, it is a fact that all of them are based on a strict orthogonal grid (e.g. mandala), representing the basic hierophany of the Cosmic Cross and the hierophany of Paradise. This urban layout precedes religious thought. The first written sources that report on the orientation of the cities, palaces and temples along the cardinal points can be found in India and China. Below, I will present a short summary of the earliest texts that deal with that issue; all indentations are mine. It is very important to note that these holy texts on architecture and urban planning should be followed as meticulously as possible; if that is not the case, the architect, the king and the whole kingdom suffer from the mistakes made during construction. This detail presupposes that the process of building is regarded as extremely sacred and it must follow very clear rules. These rules reflect God's harmony and structured cosmos, that is why, any deviation is severely punished.

¹⁹³ Walcher, H.: *Between Paradise and Political Capital: The Semiotics of Safavid Isfahān*. Electronic edition: <http://environment.research.yale.edu/documents/downloads/0-9/103walcher.pdf> [Accessed on 1 April 2004]

The earliest of these texts should be the Indian *Manasara*¹⁹⁴ from the 3rd c. AD. In Chapter X, it provides the following prescription for erecting towns and forts (Fig.134):

“A city with the king (i.e., royal palace) in the center and inhabited by numerous wealthy (lit. meritorious) people should preferably be laid out within the kingdom on the banks of a river; it is always given by the learned the name of Rajadhani (capital or metropolis) if there be (built) a temple of (god) Vishnu at the entrance or in the center of it. **Having four gates towards the four cardinal points** and furnished with Gopuras (towers)”¹⁹⁵

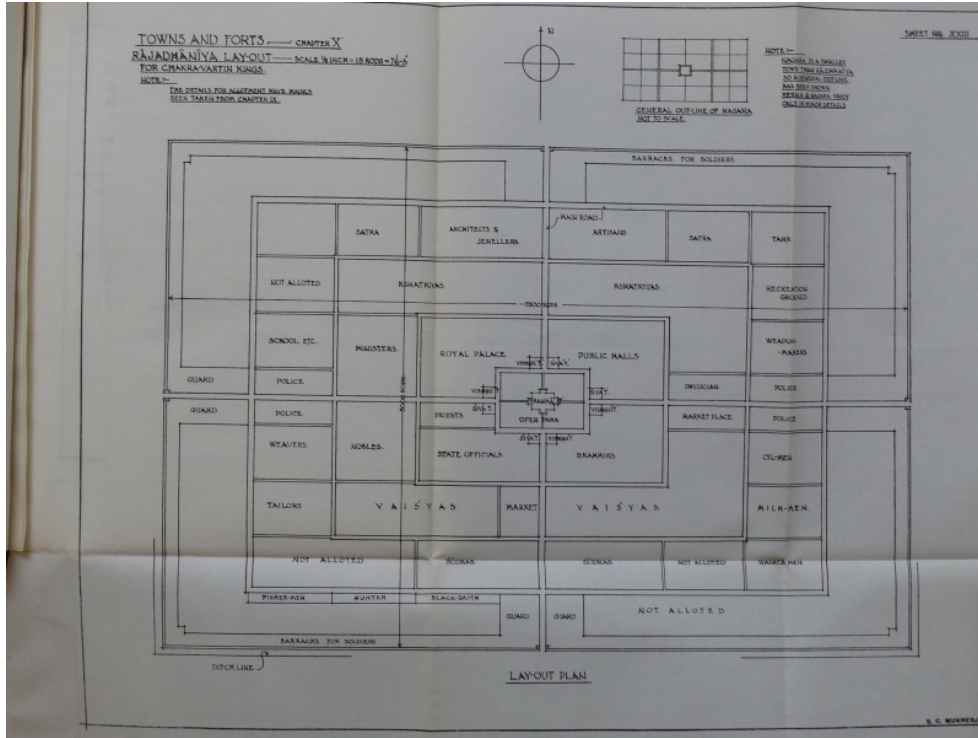


Fig.134: The *Manasara*, Chapter X, the lay out of towns and forts
Source: The *Manasara*, courtesy of En-Yu Huang

Further in Chapter XXXI, the text deals with the construction of courts (Fig.135), the description is very similar to the lay out of the four-īwān complexes. It is remarkable that the temples and the palaces are put in the same category, which of course underlines the divine origin of power:

“**Four doors** should be opened at their **four sides**, and the smaller doors at the interspace. The (entrance) door should be constructed in the middle (of the length and breadth) in case of the temples and the palaces (of the universal monarchs). In the buildings of the Brahmans and other men the main door should be opened at the middle; the main (lit. great) door (in such buildings) should be constructed at the left of the middle line.”¹⁹⁶

¹⁹⁴ *Architecture of Manasara*. Translated from original Sanskrit. Manasara Series: Vol.IV. Prasanna Kumar Acharya. New Delhi: Munshiram Manoharlal Publishers Pvt. Ltd., 1934.

¹⁹⁵ *Manasara*, p.95.

¹⁹⁶ *Manasara*, p.292.

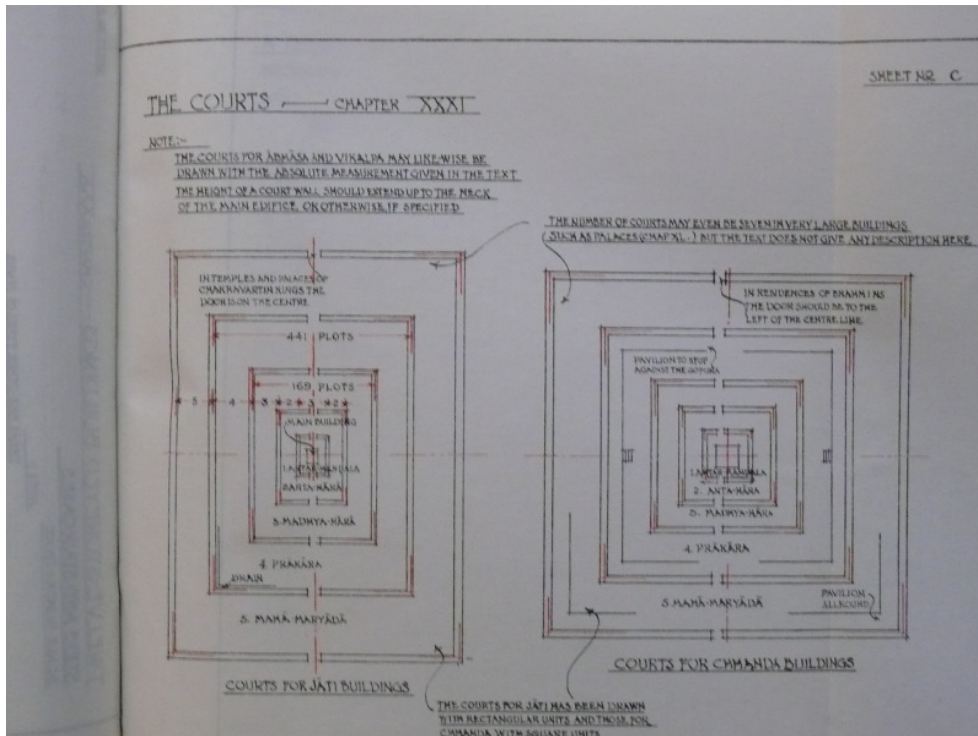


Fig.135: The *Manasara*, Chapter XXXI, the lay out of courts
Source: The *Manasara*, courtesy of En-Yu Huang

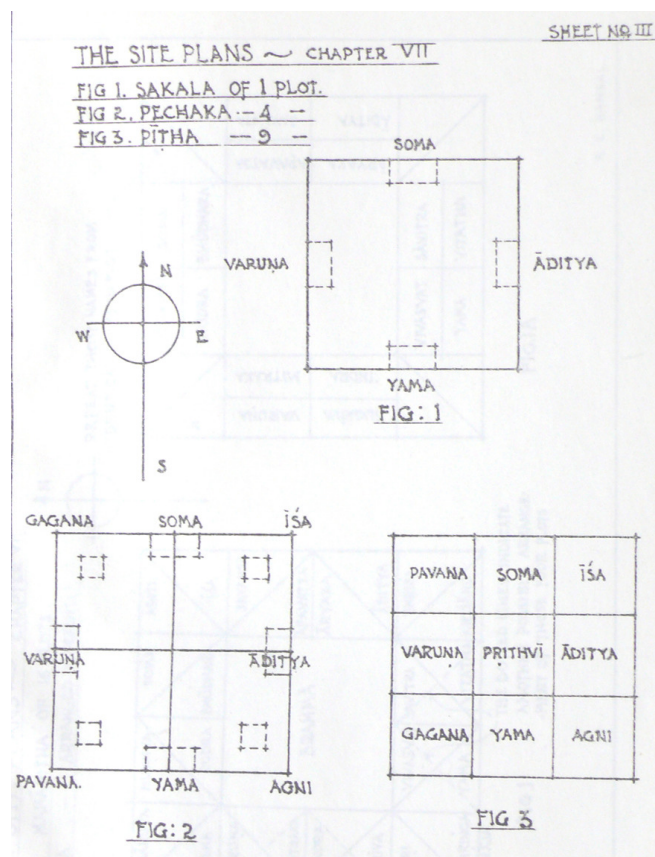


Fig.136: The *Manasara*, Chapter VII, the site plans
Source: The *Manasara*, courtesy of En-Yu Huang

Chapter XXXIII of the *Manasara* makes a clear distinction between the scale of “divine” and “human” buildings. Obviously, the measurements of the sacred compounds should not be used for dwellings. This is a very important difference between sacred and profane complexes, which has been misunderstood in the Western architectural history. If Godard had been acquainted with the text of the *Manasara*, he would not have suggested his theory on the origin of the four-īwān mosques and madrasas and derived their plan from the private homes in Khurasan (Fig.5).

“The measurement prescribed for the divine buildings must not be used in the human dwellings, but the measurement suitable to the human buildings may be also applicable to the divine buildings (temple).”¹⁹⁷

Chapter XXXVIII prescribes the orientation of the four doorways (Fig.136) that should be constructed in all temples, palaces, courts and pavilions:

“In all kinds of temples of the gods, and the dwelling houses of the Brahmans and other castes, in (all kinds of) palaces (harmya) of the kings, and in the courts (prakara), and pavilions (mandapa) **four main doors should be constructed on the four sides**, and there may be as many smaller (minor) doors as one likes.”¹⁹⁸

These main four doors are architectural representations of the hierophany of the four, which is also at the core of the four-īwān plan.

Another important text is the *Mayamatam: Treatise of Housing, Architecture and Iconography*¹⁹⁹ from the 9th c. AD. Chapter 10 deals with the towns and their lay out:

“A town is called ‘ordinary’ when it has **four entrances at cardinal points**, gateways and ramparts, when it contains shops as well as dwellings for all classes of people and temples for all gods.”²⁰⁰

“A town called ‘**royal capital**’ is impregnable **at the north and at the east**.”²⁰¹

“The king’s palace is to be found, as is convenient, to the west of the place of Brahma.”²⁰²

Also the *Mayamatam* stresses the four entrances of cities at the cardinal points. It also prescribes that the king’s palace should be very close to the centre of the urban grid, e.g. the adobe of Brahma, and should be to the west of it. In the cities, discussed below, all citadels

¹⁹⁷ *Manasara*, p.305.

¹⁹⁸ *Manasara*, p.410.

¹⁹⁹ *Mayamatam: Treatise of Housing, Architecture and Iconography*. AD 9th-13th c. Sanskrit text edited and translated by Bruno Dagens. New Delhi: Indira Gandhi National Center for the Arts and Motilal Banarsidass Publishers Pvt. Ltd., 1994.

²⁰⁰ *Mayamatam*, p.93.

²⁰¹ *Mayamatam*, p.93.

²⁰² *Mayamatam*, p.105.

are situated to the west of the intersecting point of the orthogonal axes, which is an architectural representation of the hierophanies of the Cosmic Cross and the *Axis Mundi*.

Chapter 18 of the *Mayamatam* stresses the four arched doors of the sacrificial pavilion in a temple, these doors have very similar architecture as the four *īwāns*. Then the temple should be dresses in textile. This feature is very interesting, since in the previous chapter on the hierophany of Paradise, I discussed the hypothesis that the *īwāns* might be stone representations of the veil/textile that adorns sacred settings. Also the Tīmūrid garden pavilions were adorned with rich textile fabrics²⁰³.

"In front of the temple a **sacrificial pavilion** is to be built according to rule; it has **four doors, each adorned with an arch**, and it is decorated with cloth, garlands of darbha and crowns of flowers... Then the temple is to be dressed in cloth from base to finial whilst the finial's axis is adorned with new cloth interwoven with kusa."²⁰⁴

The text of the *Agni Puranam*²⁰⁵ from the 8th c. AD also mentions that the main doors of sacred buildings should face the cardinal points:

"The general characteristics of a **divine edifice**. A square plot of ground should be divided into **four equal rectangular divisions**."²⁰⁶

"The **doors should be made so as to face the cardinal points of the compass**, and not as to open on the angular points of the heaven."²⁰⁷

Chapter 106 of the *Agni Puranam* deals with the city and the organisation of the different trades and casts according to the world's directions. It also makes an important note that the villages as well should be organised according to the same cosmic principles:

"The goldsmiths and smithy shops should be established in the south-eastern quarter of a city."²⁰⁸

"The houses of Brahmans, monks, and other holy personages should be in the northern quarter of the town...The Kshatryas should dwell in the eastern part...The Vaishyas should occupy the southern part...The Shudras should make the western quarter."²⁰⁹

"The cremation ground should be in the southern part."²¹⁰

"This rule should be observed even in small villages."²¹¹

²⁰³ See Clavijo and his descriptions of the garden pavilions in Samarqand, and the *Zafarnama* with the descriptions of the same pavilions.

²⁰⁴ *Mayamatam*, p.295.

²⁰⁵ *Agni Puranam*, AD 8th-11th c. A Prose English Translation by Manmatha Nath Dutt Shastri. Varanasi: The Chowkhamba Sanskrit Series Office, 1967.

²⁰⁶ *Agni Puranam*, Chapter 104, p.419.

²⁰⁷ *Agni Puranam*, Chapter 104, p.422.

²⁰⁸ *Agni Puranam*, Chapter 106, p.429.

²⁰⁹ *Agni Puranam*, Chapter 106, p.430.

²¹⁰ *Agni Puranam*, Chapter 106, p.430.

²¹¹ *Agni Puranam*, Chapter 106, p.431.

Here I would like to make the following observation. The impact of Indian (*Manasara*, *Agni Puranam*, *Mayamatam*, etc.) and Chinese (*Kaogongji*) texts on the spatial development of urban settlements across Central Asia and beyond should be analysed in more detail in further studies. Petruccioli, Gangler and Gaube²¹² do try to draw parallels between the *Manasara* and the foundation of Harāt. However, they focus only on Harāt, which is simply one of the many urban centres based on an orthogonal plan. In a seminal article²¹³ Petruccioli does try to compare the cross-axial design of the *čahār-bahr* garden and the orthogonal lay out of Asian cities. The parallels between Indian, Chinese and Western cities and their visual representations are paramount. If we compare a representation of the “Capital City of Kings” from the 10th c. AD (Fig.137) with a representation of the New Jerusalem from the 13th c. AD (Fig.138), we will notice that although these two “cosmic plans” come from completely different cultural backgrounds, their geometric essence is the same. Both are based on an orthogonal grid with two pairs of three axes crossing in the centre of a square; each axis has two respective gateways. In my view, the phenomenon of the cross-axial urban design should be better explained with the hierophanies of the Cosmic Cross and the *Axis Mundi*, since they provide a broader cosmological range of interpretations and representations.

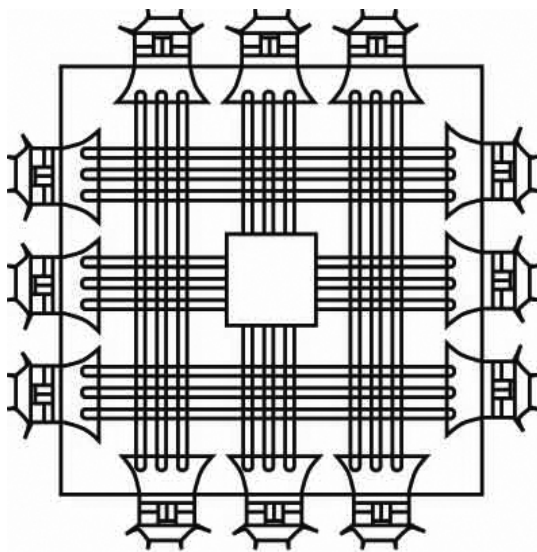


Fig.137: The ‘Capital City of Kings’ found in the 10th c. AD *Sanlitu*.

Source: En-Yu Huang, upcoming PhD



Fig.138: *The New Jerusalem*, from *The Trinity College Apocalypse*. Manuscript on parchment, London c.1255-1260, Cambridge, Trinity College MS R 16 2.

Source:

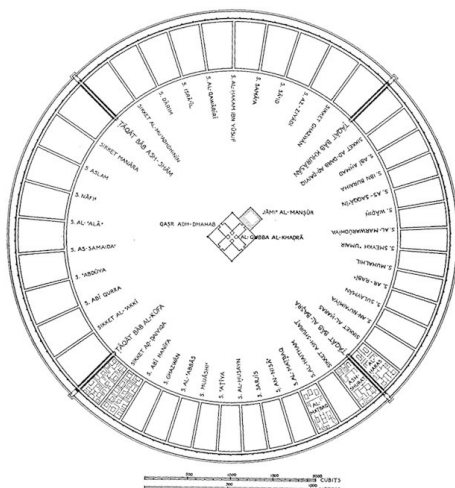
http://henrycorbinproject.blogspot.com/2008_08_01_archive.html [Accessed on 1 April 2010]

²¹² Gangler, Gaube and Petruccioli: *Bukhara*, 2004, p.37 quoting Shukla 1938, I, pp.247-248.

²¹³ Petruccioli, A.: “Der Garten als Antizipation der Stadt Parallele Entwicklungen”. In *Der Islamische Garten*. Stuttgart: Deutsche Verlags-Anstalt, 1994, pp.85-108.

IV.3 Baghdad

The concentric urban plan of Baghdad (Fig.139) is a representation of the “round holy city” (Fig.140-142), known at least for fifteen centuries before the foundation of Baghdad. Some examples include the Ecbatana²¹⁴ built in 715 BC, the round temple complex at Koi Krylgan Kala from the 4th-2nd c. BC (Fig.142), the Parthian cities of Dārābgird, Takht-i Sulaymān and Hatra (Fig.140), the Sāsānid cities of Fīrūzābād (Fig.141), founded in 224-241 AD and Ctesiphon, the Islamic cities of Heraqlah (Fig.31), Isfahān, Sabra. The concentric circular city carries the same hierophanic semantics as the “rectangular/square imperial capital”. Some examples include Harāt (Fig.153,154), Nīshāpur, Īwān-i Kharkā, Marv (Fig.143-145). What remained unchanged in these two urban imperial solutions (*urbs quadriporticus*) was the existence of the four main city gates and the orientation along the cardinal points of the two axial roads that crossed in the centre of the cities. The centre was occupied by a compound representing the *Axis Mundi*: e.g. the Appearance Temple in Uruk (c. 3000 BC), a fire tower in Fīrūzābād, a Citadel in Dārābgird. Also the main concept of a sacred, walled sanctuary remained unaffected. The round and the rectangular cosmic plans can be analysed as geometrical representations of the hierophanies of the four (the square), representing the earth and the hierophany of the endless infinity (the circle), representing the Heavens.



10. Baghdad. Reconstruction of the original city of Mansur, 762. (After Creswell)

Fig.139: Plan of Baghdad after Creswell
Source: Creswell: *Early Muslim Architecture*, 1969, Fig.10



Fig.140: An aerial view of Hatra after Stierlin
Source:
http://www.esicomos.org/nueva_carpeta/info_IRAKUNESCO.htm [Accessed on 1 November 2009]

²¹⁴ See Ardalan and Bakhtiari: *The Sense of Unity*, 1973, pp.86-88.



Fig.141: An aerial view of Fīrūzābād, founded 224-241 AD
Source: http://www.cais-soas.com/CAIS/virtual_museum/sasanian/Sites/firuzabad.htm [Accessed on 1 October 2009]



Fig.142: Karakalpakstan, the round temple complex at Koi Krylgan Kala, 4th-2nd c. BC
Source: <http://www.sanat.orexca.com/eng/2-02/img/middle1.jpg> [Accessed on 1 October 2009]

Some of the earliest circular enclosures, according to Creswell²¹⁵, were the Assyrian military camps, which most likely did not have a sacred function. However, the circular plan, similar to the hierophany of the Cosmic Cross, represented by the four city gates, four city quadrants, etc. is much older than Islam and simply puts the understanding of Islam into perspective to other cosmological hierophanies that existed prior to monotheistic religions.

Baghdad (Fig.139), built by the second 'Abbāsīd Caliph Al-Mansur in 762 AD, is defined by the four gates, directed towards the Gates of Heaven²¹⁶. Whereby, the Gates of Heaven refer to the two solstices and two equinoxes²¹⁷. The four gates were named after the city or province to which they opened, an example that was later followed also in Samarqand and in Bukhārā. The gates in Baghdad were oriented towards the intercardinal points, namely the Kūfa Gate was to the southwest, the Basra Gate was to the southeast, the Khurasan Gate was to the northeast and the Damascus Gate was to the northwest.

The structure of the gates was very interesting. Firstly, according to al-Khatīb, quoted by Creswell²¹⁸, the gates consisted of two gateways, with a rectangular courtyard in between. At the one end of the courtyard, there was the gate of the outer *fasil* and at the other end the actual city gate. At the two remaining ends of this courtyard, there were two gates (doorways) opening onto the two *fasils*: “that to the right opened on to the *fasil* of the Damascus Gate, that to the left opened on to the *fasil* of the Basra Gate, which continued round to the Kūfa Gate.” From this description, we can only conclude that the courtyards of the main city gates of Baghdad had four doorways, very reminiscent of the structure of the

²¹⁵ Creswell: *Early Muslim Architecture*, 1969, p.236.

²¹⁶ Ardalan and Bakhtiar: *The Sense of Unity*, 1973, p.88.

²¹⁷ Ibid., p.136.

²¹⁸ Creswell: *Early Muslim Architecture*, 1969, p.231.

four-*īwān* plan. Creswell²¹⁹ also mentions that three of the four city gates of Rusafa (Sergiopolis), built by Justinian, also consisted of two gates each along a main axes with a small courtyard in between.

To sum it up, in Baghdad, we have four city gates, courtyards within each city gate with four doorways each. The main palace of the caliph, situated at the centre of the intersecting axes, formed by the city gates, was also based on a cruciform plan. So, Baghdad is the *urbs quadriporticus par excellence*.

The Palace of the Golden Gate, as it was known, had a square plan. There was an *īwān* with an adjacent room, covered by a dome. Above it, there was a second room with the same dimensions and also covered by a dome. The latter was the famous Green Dome, the dome of Heaven, which gave the name to the palace, the al-Qubbat al-Khadrā.

Furthermore, the zone between the main city wall and the palace was further divided into four equal quadrants²²⁰ by vaulted arcades that ran from the main gates to the gates of the palace area.

Al-Mansur most probably saw himself as an universal ruler with religious and secular authority. His imago of a cosmocrator was best represented by recreating the universe on an urban scale and organizing the whole design of the city around the hierophany of the four gates, denoting the four corners of the world and epitomizing the four gates of Paradise.

²¹⁹ Ibid., p.238.

²²⁰ Ibid., p.233.

IV.4 Marv

In the late 4th c. BC, the eastern territories of Alexander the Great's empire became part of the Seleucid Empire (312-363 BC), and Antiochus I (281-261 BC) began a massive expansion of the city of Marv²²¹. The earlier city of Erk-Kala (Fig.144,145,147) was converted into a Citadel and a vast new walled city was laid out, Antiochia Margiana, today called Gyaaur-Kala (Fig.143-145). The Seleucid inner city of Marv²²², the Gyaaur-Kala (Fig.143-145) had a square city wall with two orthogonal axes oriented along the cardinal points. There were four main roads, dividing the city into four quadrants, whereby each road started at a gate in the middle of the four city walls. The Citadel, the Erk-Kala (Fig.147), was situated at the northern edge of the city within the city wall. The wall itself was 10m wide and had 100 bastions. In the south-western corner, the Razik canal flowed through a vaulted tunnel.

In the early feudal period, the Gyaaur-Kala (Fig.143-145) was Marv's *shahristan* with an area of 100 hectares surrounded by walls 30m high and 12m wide. At that time, Marv was the largest city in Central Asia. Together with the suburbs it was surrounded by the wall (Al-Ray) built in the 3rd c. AD and fencing a territory of 4km in diameter. The *shahristan* consisted of housing estates, blocks of craftsmen, temple and palace complexes.

²²¹ Mentioned in a well-known Bek-histun inscription as the country of Mar-gush. In Avesta it was called Margav; ancient Greek and Roman geographers called it Margiana and Medieval Arab and Persian manuscripts described it as Maru or Marv, Source: <http://siyakhat.narod.ru/Marv.html>

²²² Gangler, Gaube, Petruccioli: *Bukhara*, 2004, p.36 and Pugachenkova: *Samarkand, Bukhara*, 1968, p.42.

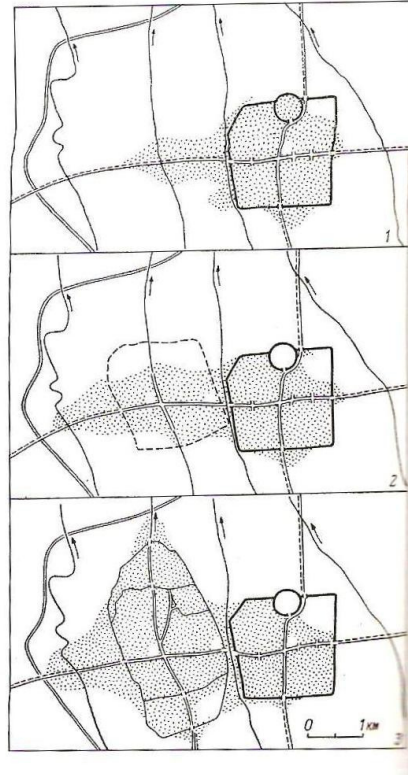


Fig.143: Marv, urban development after Gangler, Gaube and Petruccioli
Source: Gangler, Gaube and Petruccioli: *Bukhara*, 2004, p.36



Fig.144: Map of ancient Marv
Source: <http://siyakhat.narod.ru/Marv.html>
[Accessed on 1 November 2009]

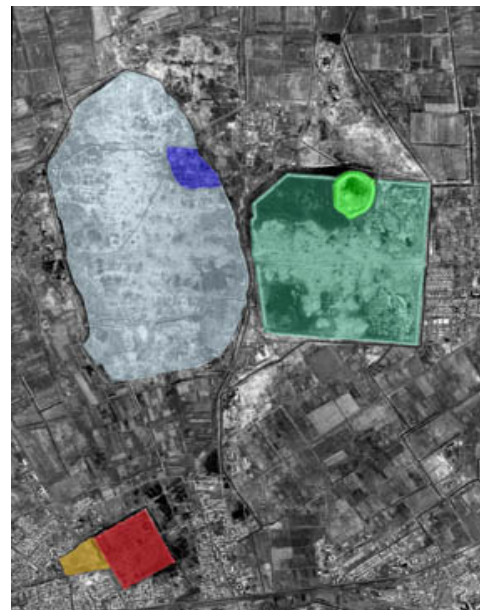


Fig.145: Annotated image of the Marv Archaeological Park
On the right of the image the light green enclosure is Erk Kala, Gyuar Kala (darker green) surrounds it. These lie adjacent to Sultan Kala (light blue), with the diamond shaped enclosure of the Citadel of Shahriyar Ark (dark blue). Outside the contiguous zone of the park lie Abdullah Khān Kala (red) and Bairam Ali Khān Kala (orange).
Source: <http://www.ucl.ac.uk/Marv/Marv/>
[Accessed on 1 November 2009]

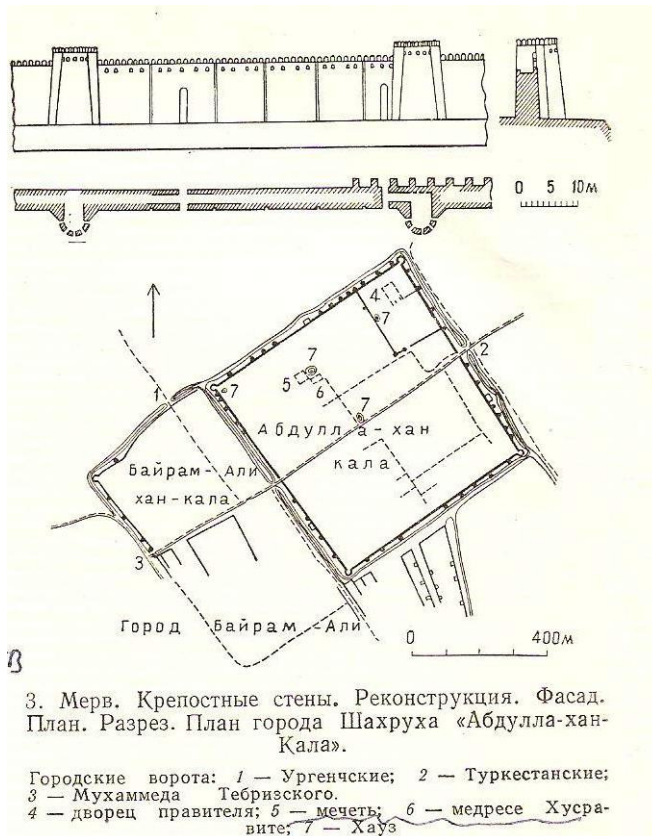


Fig.146: Marv, fortification plan in the 15th c. AD after Baranov

Source: Baranov et al: *Encyclopaedia*, 1969, p.279

Fig.147: Detailed aerial view of the Erk-Kala Citadel

Source: <http://archive.cyark.org/ancient-Marv-info> [Accessed on 21 Jan 2010]

During the late 7th c. AD the first mosque in Marv, the Banu Makhan Mosque was built exactly in the centre of the Gyaur-Kala (Fig.143-145), at the intersecting points of the two orthogonal roads. Becoming too small for the increasing number of Islamic population, it had to be enlarged by a second mosque, built at the town gate on the Razik canal (Fig.144).

In the 740s Abu Muslim took control of Marv, to proclaim the start of the 'Abbāsīd revolution. Baghdad was soon established as the capital of the new empire, but Marv's status as the capital of Khurasan had grown and now the eastern 'Abbāsīd empire was administered from here. Abu Muslim commissioned a new mosque to be built alongside the Majan Canal (Fig.144), to the west of Gyaur-Kala city wall. By the 11th c. AD Abu Muslim's mosque lay at the centre of the thriving city Marv al-Shahijan (Marv the Great: today Sultan-Kala) (Fig.143-145). The mosque was at the heart of the new capital Sultan-Kala. Sultan-Kala was situated to the west of the Seleucid city Gyaur-Kala and it had a similar plan²²³. It also had four roads, stretching along the two orthogonal axes of the city, marking the cardinal points (Fig.143).

²²³ Pugachenkova: *Samarkand, Bukhara*, 1958, p.191.

During the period 813-818 AD, Marv became Caliph al-Mamun's residence and thus the second capital of the 'Abbāsīd Caliphate. Although there are no remaining architectural monuments of that time, it is known that the Banu Makhan Mosque in the Gyaaur-Kala was restored. The departure of Caliph al-Mamun to Baghdad led to the decay of Marv and it fell under the Takhirids, who moved the royal residence of the Khorasan rulers to Nīshāpur. However, Marv continued to grow to the west between the Razik and Khurmuzfarra canals. Possibly, even at that time, the new part of the town (the Sultan-Kala) had already an external wall.

In the 10th c. AD Marv gained the epithet «*Shakjahan*» ("soul of kings") and began to develop intensively under the Saljūqs. In the period of Sultan Sanjar, it was his imperial capital and the largest town in Central Asia (its area together with suburbs was 1,800 hectares with a population of 150,000 people).

The Saljūq Marv developed from the former western suburb of Gyaaur-Kala on the Madjan canal, where in the middle of the 8th c. AD. Abū Muslim had moved his residence, the market and built his mosque. During the reign of Sultan Melik-Shakh (1072-1092 AD), the central square part of the Sultan-Kala was built. The Sultan-Kala was surrounded by the new wall with a deep moat of 22m wide and the Razik canal to the east. Along the wall, at every 20m there were about 200 semi-circular towers 4m in diameter with two-story vaulted rooms for infantrymen. The new wall was 10-12m high and 6m wide. Under the Saljūqs, Marv continued to grow in the northern and southern directions along the Madjan canal, dividing the town into two parts (Fig.143). During that period, the life also continued in the old *shakhristan* (the Gyaaur-Kala), where new housing and craftsmen's estates appeared, and a new mosque was built in its centre replacing of the old one. There was a large industrial quarter in the western suburbs of the Sultan-Kala, mainly producing pottery.

In the 11th c. AD the Citadel, the Shakhriar Ark was erected in the northeastern corner of the Sultan-Kala (Fig.147). The divan and the royal residence were part of it.

In 1221 AD Marv was fully destroyed by the Mongols. 200 years after the Mongol invasion Marv was restored by Shāh Rukh, who in 1418 AD issued orders to rebuild the city. Due to water shortage, the new town was moved 2km to the south of the Sultan-Kala. The remains of Tīmūrid Marv are known as 'Abdallāh-Kala (Fig.146). In 1454-1457 AD another Tīmūrid, Mirza Sanjar, expanded Marv to the adjoining territory now called Bairama-likhan-kala. Both sites of the town are lying on the same axis, have a symmetrical plan and are surrounded by fortress walls with semi-circular towers and are encircled by a moat.

IV.4.1 Dār al-Imāra (747-748 AD), Marv

Between 747 and 748 AD Abū Muslim²²⁴, built a Dār al-Imāra²²⁵ at Marv (Fig.148), which was situated at the back of the mosque. It was a cruciform building with a domed chamber with four *īwāns*. Creswell²²⁶ quotes Istakhrī, who provides a description of this chamber, which was obviously used also as a throne hall:

“[...] And the domed chamber has four doors, each leading to an *īwān*, and the height of each *īwān* is...[blank]. And in front of each *īwān* is a square *sahn*.”

According to Creswell, the diameter of the dome was equal to the width of the *īwāns*, which makes the Dār al-Imāra one of the earliest examples of a four-*īwān* domed building from the 8th c. AD. What is also very interesting is that there were square *sahns* in front of each *īwān*. In the four-*īwān* open courtyard compounds, the *sahn* is in the middle of the courtyard, at the intersecting point of the orthogonal axes, defining the *īwāns*. The Dār al-Imāra shows that the *sahn* was an inseparable part of the four-*īwān* composition as early as the 8th c. AD. Also the square form of the *sahn* reflects the squareness of the *īwāns* and finishes the square plan of the Dār al-Imāra as a whole. The square can be regarded as a theophanic representation of the earth in its totality, i.e. the four corners of the square, denoting the four cardinal points. The plan that Creswell presents in his book is also oriented along the cardinal points, the *īwāns* being in the four world directions as an architectural representation of the hierophany of the Cosmic Cross.

The position of the Dār al-Imāra behind the mosque, shows the nature of the power of Abū Muslim, namely that his public function is closely related to God. The justice he proclaims under the dome of his four-*īwān* throne hall has the “blessing” of God but also the figure of Abū Muslim, sitting under the dome has a god-like flair. Abū Muslim acts as God from his four-*īwān* setting and his justice spreads along the four directions of the world. The water in the *sahns*, surrounding the *īwāns*, brings the Paradisiacal imagery into play.

²²⁴ Creswell: *Early Muslim Architecture*, 1969, p.229.

²²⁵ In Early Muslim architecture this was usually located at the *qibla* end of the mosque (i.e. behind the *mihrāb*). This was a safety measure to enable the governor (or caliph) to enter the mosque without having to pass through other worshippers. Source: Archnet [Accessed on 24 November 2009].

²²⁶ Creswell: *Early Muslim Architecture*, 1969, p.229.

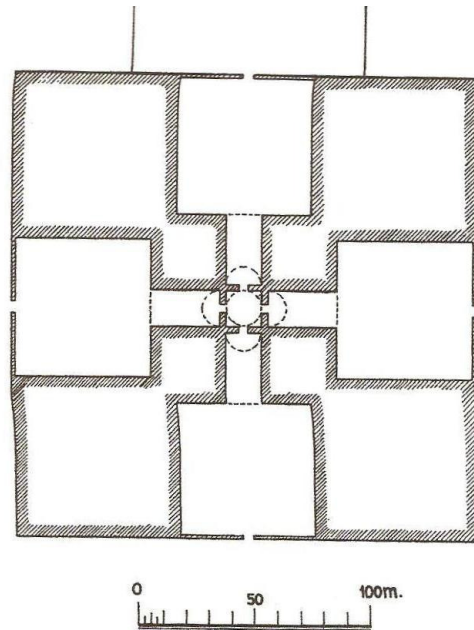


Fig.148: Plan Dār al-Imāra at Marv after Creswell
 Source: Creswell: *Early Muslim Architecture*, 1969, p.230

In 755 AD Abu Muslim was killed by Al-Mansur, the founder of Baghdad. Abu Muslim was a loyal freed man from the eastern Iranian province of Khorasan who had led the 'Abbāsid forces to victory over the Umayyads during the Third Islamic Civil War in 749-750 AD. At the time of Al-Mansur he was the subordinate, but undisputed ruler of Iran and Transoxiana. The assassination seems to have been made to preclude a power struggle in the empire. Yet, it is very interesting that although Abu Muslim was killed by Al-Mansur, the latter almost exactly copied the plan of the Dār al-Imāra in Marv in his royal palace in Baghdad. Apart from the rivalry for power between the two, Al-Mansur saw in the plan of the Dār al-Imāra at Marv an ideal layout for his royal dominion in Baghdad. In Baghdad, Al-Mansur went to great lengths to summon all the best engineers and craftsmen to erect the most spectacular capital of the world. That is why, the choice for the plan of his royal residence could not have been random. Al-Mansur opted for a cruciform plan, in which the orthogonal arms of his palace followed the direction of the city gates. Also, similar to the Dār al-Imāra, there was a mosque situated behind the palace in Baghdad. In this way, the secular and the religious power of the caliph was architecturally represented by the proximity of the two buildings.

IV.4.2 The Saljūq Palace (11th c. AD), Marv

The ruins of the Saljūq Palace in Marv from the 11th c. AD (Fig.149) are situated in the centre of the Sultan-Kala's Citadel (Fig.144), the Shahryar Ark, constructed around 1080 AD and located in the northeastern part of the Sultan-Kala (Fig.145). The palace was probably built by Sultan Sanjar. The palace was relatively small (45m by 39m)²²⁷ and was composed of tall single-story rooms surrounding a central courtyard with four axial *īwāns*. However, in the Russian edition of the Encyclopedia of General History of Architecture²²⁸, the Marv Palace is listed as a two-story building. Also according to the Encyclopedia, the rooms were compactly grouped around the central courtyard with dimensions of 16 x 16m. The four deep *īwāns* were situated along the two orthogonal axes, the northern and the eastern *īwāns* being deeper than the western and the southern ones (Fig.141). It is likely²²⁹ that there was an elaborate fountain in the centre of the courtyard.

Low areas nearby seem to indicate a large garden²³⁰ which included an artificial lake; similar to other gardens found in other Central Asian palaces. Unfortunately, any remnants of interior or exterior decoration have been lost due to erosion or theft. The existence of a fountain in the centre of the palace courtyard and the adjacent garden only reinforce the imagery of Paradise at the Saljūq Palace at Marv.

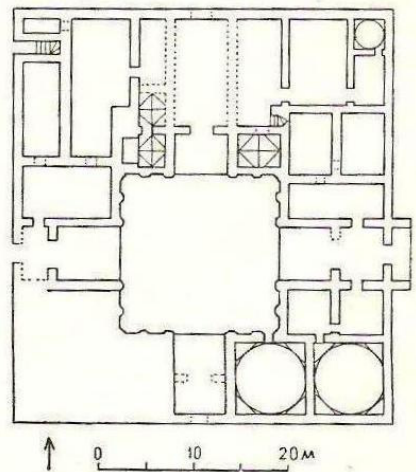


Fig.149: Marv, plan of the Saljūq palace
Source: Baranov et al: *Encyclopaedia*, 1969, p.225

²²⁷ Ettinghausen, Grabar and Jenkins-Madina: *Islamic Art and Architecture 650-1250*, 2001, p.152-153.

²²⁸ Баранов, Н.В.: *Всеобщая История Архитектуры в 12 томах. VI-XIX вв.* Москва: Издательство литературы по строительству, 1969. (Baranov, N.V. et al: *General History of Architecture in 12 volumes, 6th-19th c.*, Moscow: Publishing House for Literature on Architecture, 1969, p.225).

²²⁹ Ancient Marv Project <http://archive.cyark.org/ancient-Marv-info> [Accessed on 21 Jan 2010]

²³⁰ Williams, T.; Kurbansakhatov, K.: "The Ancient Marv Project, Turkmenistan. Preliminary Report on the Second Season (2002)". In *Iran*, Vol. 41, (2003), pp. 139-170.

The pattern of a main palace or a sanctuary at the far end of a *čahār-bahr* garden²³¹ was first used in the palace of Cyrus the Great (580-529 BC) at Pasargadae (Fig.150), in the province of Fars, in 546 BC and was much later also repeated in the design of Taj Mahal (Fig.151). The *čahār-bahr* at Pasargade is the earliest known example of the classical Persian four-fold garden, representing the hierophany of Paradise. Cyrus's garden united the official palace (palace P, Fig.152) and the residential palace (palace S, Fig.152). The throne of Cyrus was situated in the palace P's portico. Palace S had two storeys and four doorways with two rows of columns (Fig.152).

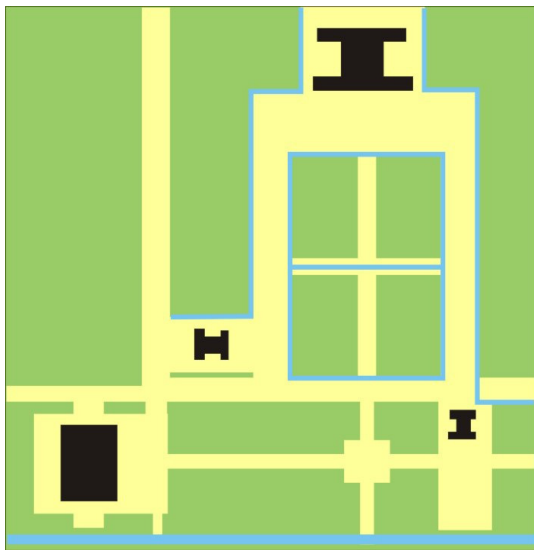


Fig.150: Plan of Pasargadae, a reconstruction of Cyrus the Great's palace garden after Stronach
Source: The plan is based on David Stronach's Pasargadae: a report on the excavations, (Oxford, 1978). http://www.gardenvisit.com/history_theory/library_online_ebooks/ [Accessed on 24 November 2008]

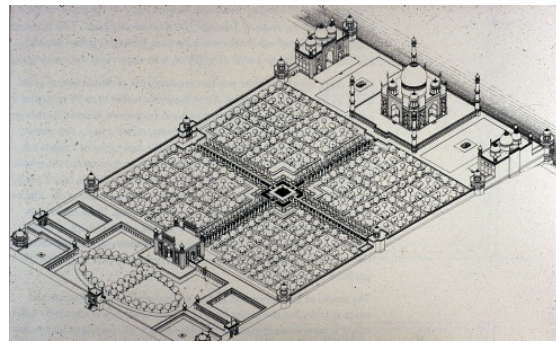


Fig.151: Plan of Taj Mahal
Source: <http://courses.cit.cornell.edu/lanar524/IslamicImages.html> [Accessed on 24 November 2008]

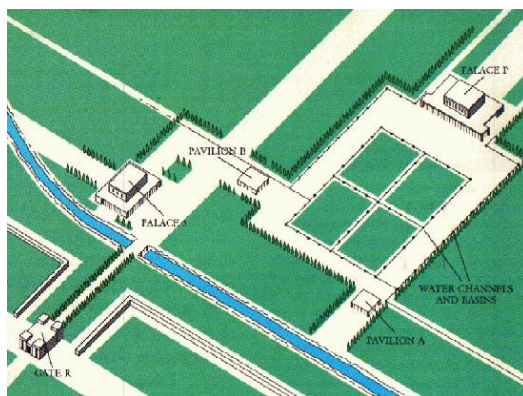


Fig.152: Plan of Pasargadae, another reconstruction of Cyrus the Great's palace garden at Pasargadae 550 BC
Source: <http://oznet.net/cyrus/paradise.htm> [Accessed on 24 November 2008]

²³¹ The more common examples, among which also the Tīmūrid ones, are of *čahār-bahr* gardens with the main pavilion at the centre of the intersecting axes.

IV.5 Harāt

The old city of Harāt was founded by Alexander²³² as one of the seventy Alexandrias and its quadripartite plan is still clearly seen today. The Medieval city of Harāt²³³ was a perfect square²³⁴ with four main roads along the cardinal points, dividing the city into four identical quadrants (Fig.153,154). Each road stretched from a gate situated in the middle of the eastern, western and southern city walls. In the northern wall, there were two gates, one in the middle of the wall, similar to all other three walls, and one extra gate along the northern wall of the northwestern quadrant. This additional gate was built in order to provide extra access to the Citadel, which was erected in the eastern part of the northwestern quadrant.

Quoting Gaube who based his description of Harāt on the works of “classical Arab geographers”, Gangler, Gaube, Petruccioli²³⁵ provide the following description of the inner city of Harāt:

“a wall, constructed like all the other buildings in Herat from mud brick, enclosed the inner city. Its circumference was about 4km. In front of the wall there was a moat, and through four gates in the middle of each wall four roads left the city. The four gates faced the four cardinal points of the compass. Beginning at each gate a bazaar led into the centre of the city. The citadel was placed inside the city walls.”

Pointing out the cultural links between Harāt and India, reaching their height during the Sāsānid period, the three authors offer a possible explanation of the urban structure of Harāt by referring to the *Manasara*, the Indian architectural and urban manual dating back to the 3rd c. AD²³⁶.

“The ideal Indian city is oriented in the direction of the cardinal points of the compass. Each city is surrounded by a wall, inside of which a citadel is located. Outside the wall there is a moat. Generally there are four city gates, one in the middle of each of the four sides. Inside the wall and adjacent to them, wide streets circle the city. In addition there are two broad streets, which connect the opposite gates of the city. They cross each other in the centre of the city where there is a temple or a hall for the inhabitants to congregate. Thus, the city is divided into four quarters, each of which is again further divided by lanes. Along the two main streets which cross in the centre there are houses, on the ground floors of which are shops. The rest of the city consists of living quarters.”²³⁷

²³² Ardalan and Bakhtiar: *The Sense of Unity*, 1973, p.87.

²³³ For a detailed studies of all Tīmūrid monuments of Harāt, please consult the acclaimed study of Allen, T.: *Timurid Herat*. Wiesbaden: Dr. Ludwig Reichert Verlag, 1983.

²³⁴ Gangler, Gaube, Petruccioli: *Bukhara*, 2004, p.35.

²³⁵ Ibid., p.36.

²³⁶ Gangler, Gaube and Petruccioli ascribe the *Manasara* to the 1st c. BC.

²³⁷ Gangler, Gaube and Petruccioli: *Bukhara*, 2004, p.37 quoting Shukla 1938, I, pp.247-248.

The above description from the *Manasara* outlines an universal urban layout, based on the hierophany of the four gates and the four urban quadrants, as early as the 3rd c. AD. This cosmological plan was later adopted also by the major Islamic rulers, at the beginning by the caliphs (e.g. al-Mansur) and later by the emperors (e.g. Tīmūr, Shāh Rukh).

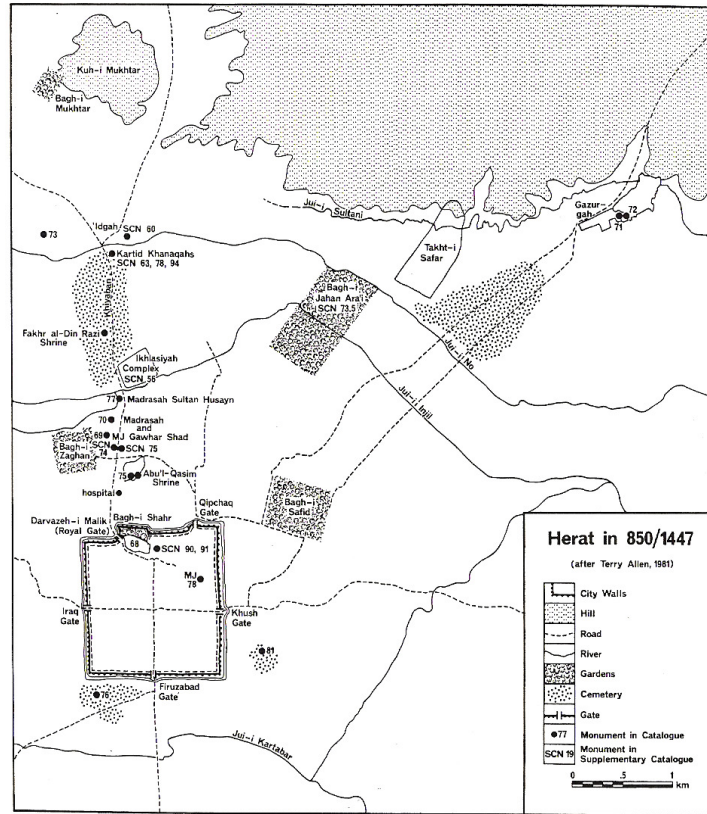


Fig.153: Harāt, urban plan 15th c. AD after Golombek and Wilber
Source: Golombek and Wilber: *Timurid Architecture*, 1988, Map 8

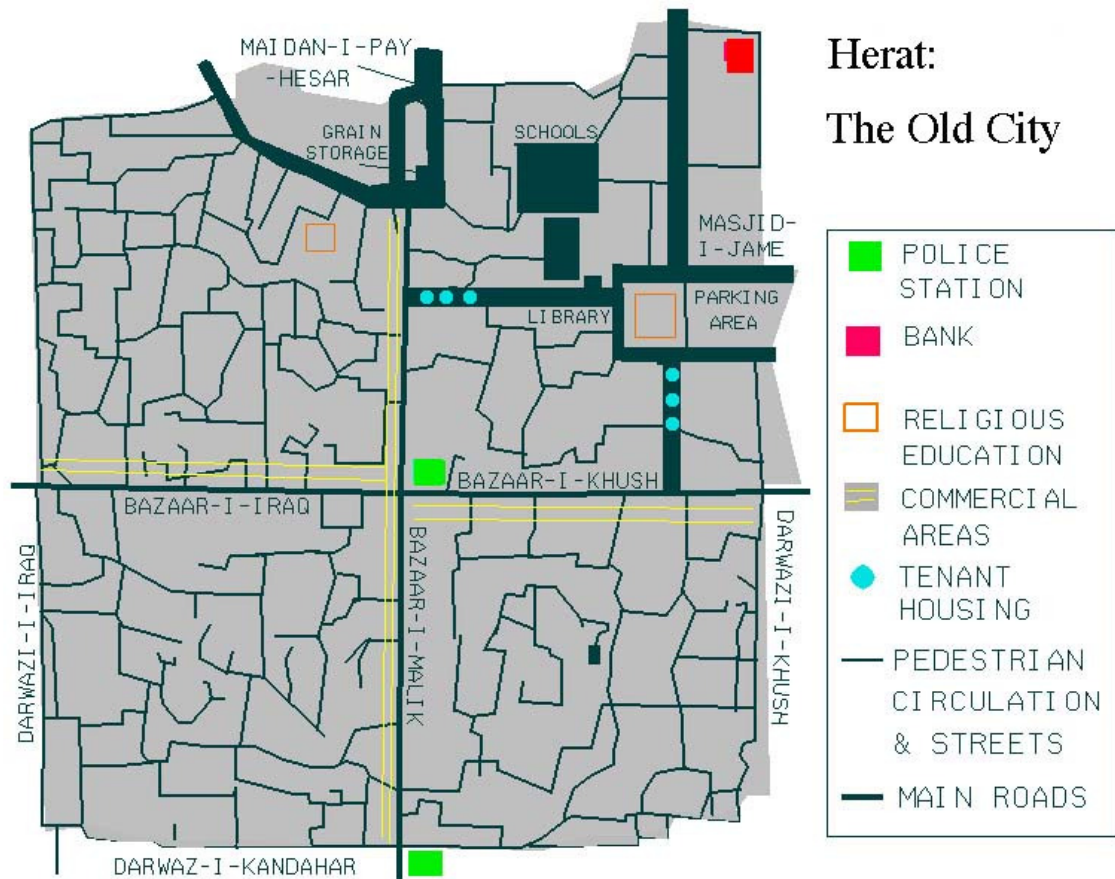


Fig.154: Harāt, a map of the old city

Source: http://map.primorye.ru/raster/maps/world_cities/Harāt_98.jpg [Accessed on 1 October 2009]

The province of Khurasan was first given by Tīmūr²³⁸ to his son Mīrānshāh in 1380 AD. However, trying to lessen the power of his sons, Tīmūr transferred Mīrānshāh to Azerbaijan in 1396 AD and awarded Khurasan to Shāh Rukh a few months afterwards. After Tīmūr's death in 1405 AD, the war for his succession was resolved by Shāh Rukh establishing Harāt as the new capital of the Tīmūrid empire and entrusting the old capital Samarqand into the hands of his son Ulugh Beg.

As one of his royal residences, Shāh Rukh erected the Bāgh-i Zāghān (Raven's Garden), a *čahār-bahr* in the northeastern part of the city, following the heritage of Tīmūr's pleasure pavilions in Samarqand. O'Kane²³⁹ quotes 'Abd al-Razzāq who provides a description of the royal garden, from which we can conclude that the main pavilion was based on the four-īwān plan and had clear references to the sky. Further, it linked Shāh Rukh's royal residence to

²³⁸ O' Kane: *Timurid Architecture*, 1987, p.3.

²³⁹ *Ibid.*, p.11.

the grandeur of Tīmūr by using the same words such as “*kungura*”²⁴⁰ that were applied to the battlements of the Āq Sarāy at Shahr-i Sabz:

“Each of its four stalactite-decorated (*muqarnas*) aivans reached to the arch of Saturn; the crenellations of its lofty castle (*qasr*) reached the arc of Jupiter. The dadoes were of jasper inlaid with figurative decoration...skilful painters carried out a programme in every room and niche in the manner of a Chinese picture-gallery.”

Harāt, as the royal capital of Shāh Rukh, had several gardens based on the *čahār-bahr* plan²⁴¹. Shāh Rukh restored the Bāgh-i Safid and erected new pavilions within it. The layout of these gardens was divided by water channels and was crowned by a pavilion at the centre of the intersecting orthogonal axes. Furthermore, Shāh Rukh erected a *čahār-bahr* garden and a palace (*sarāy*) in Mashhad to use during his pilgrimage there.

We can conclude that similar to Tīmūr, Shāh Rukh also stayed at the gardens outside the royal capital rather than in any palatial structures inside the capital itself²⁴². O’Kane²⁴³ concludes that the garden complexes with the pavilions and open spaces could accommodate the numerous tents of the royal entourage and could afford a “compromise between nomadic and urban life”. He discusses the citadel as “claustrophobic” and notes that the semi-nomadic rulers opted for gardens because they disliked the confinement of the citadels. This argument is quite plausible; however, it might be also possible that the constant movement of the royal tent marked the territory of the empire. The ruler on the move can be analysed as a metaphor for the ubiquity of his power. Similar to God, the ruler is everywhere and his royal presence marks the territory as holy and sacred. Every move of the ruler and his royal tent attribute “divine presence” to the respective area. The royal tent can be analysed as a spatial representation of the *Axis Mundi*, which marks the centre of the world on macrocosmic level and the centre of the empire on a microcosmic level.

Shāh Rukh obviously attached importance to the old Citadel in Harāt (Fig.155-158) and rebuilt it. Similar to Kōk Sarāy in Samarqand, built and utilised by his father Tīmūr, he used it as a prison, a place of execution and a treasury.

²⁴⁰ Ibid., p.26, note 3.

²⁴¹ Ibid., p.12.

²⁴² For a detailed overview of the phenomenon of royal tents, please consult O’Kane, B.: “From Tents to Pavilions: Royal Mobility and Persian Palace Design.” In *Ars Orientalis*, Vol. 23, Pre-Modern Islamic Palaces, 1993, pp. 249-268.

²⁴³ Ibid., p.256.



Fig.155: Harāt, the Citadel, elevated view from south, 2005
Source: Cameron Rashti, Archnet [Accessed on 1 April 2010]



Fig.156: Harāt, the Citadel, exterior view from the northeast, showing eastern ramparts of the Upper Citadel, prior to restoration, 1960s
Source: Karen Ritter, Archnet [Accessed on 1 April 2010]



Fig.157: Harāt, the Citadel, exterior view from the southwest after the Soviet invasion. The southern wall of the Lower Citadel is seen in the foreground, with the fortifications of the Upper Citadel in the background, 1970
Source: Rachel Hall, Archnet [Accessed on 1 April 2010]



Fig.158: Harāt, the Citadel, exterior view from the east, showing eastern ramparts of the Upper Citadel, 2003
Source: Norbert Fontaine, Archnet [Accessed on 1 April 2010]

Although Shāh Rukh did not have an extended building portfolio throughout his reign, he did built a *kosh* of a madrasa and a *khānaqāh* close to the Citadel in Harāt. This example was followed by the majority of his viziers and similar *kosh* ensembles were erected throughout the city during the reign of Shāh Rukh. This exemplifies the ever increasing power of Sufism in the post-Tīmūrid empire. Furthermore, the madrasas of Harāt were a gathering place for preaching Sufis²⁴⁴. The bazaar was also a “recruiting ground for the Sufi community”²⁴⁵, a place for solving disputes in front of the city elite and a stage for ecstatic shaykhs.

²⁴⁴ Manz, B.F.: *Power, Politics and Religion in Tīmūrid Iran*. New York: Cambridge University Press, 2007, p.205.

²⁴⁵ Ibid., p.205.

IV.5.1 Khwaja 'Abd Allah Ansari Funerary Shrine (1425-1427 AD), Gāzurgāh

The funerary complex (*hazīrah*) at Gāzurgāh²⁴⁶ (Fig.159-166), 6km to the northeast of Harāt, is dedicated to the renowned Sufi mystic poet Khwaja 'Abd Allah Ansari (1006-1098 AD), who was also famous as the patron saint of Harāt, better known as *Pīr-i Harāt* or *Pīr-i Ansār*. In Sufi circles, Harāt had been also famous as “the little garden of Ansārīs” (*baghcha-i Ansārīyān*)²⁴⁷. Further, Ansari was a proponent of the Sunnī Islam and a *Hanbalī*²⁴⁸. The following motto summarises his beliefs:

“Be a Shafī'ite in law, a Sunni in external behaviour,
A Hanbalite in creed, and a Sufi in your way of life.”
*ʿAbdullāh Ansārī, Dīwān*²⁴⁹

After his death in 1098 AD, his tomb in the village of Gāzurgāh became a major Sunnī pilgrimage center and was widely venerated in Khorasan. What is more, the huge popularity of Ansari can be also shown by the fact that the sources refer to him as “Shaikh al-Islām”. The fact that he had been dead for over three hundred years when Shāh Rukh built the shrine, shows that his political influence for the Tīmūrīds must have been estimated as “safe”, compared to the living popular local preachers who could assert an immediate effect upon the masses.

Visiting the shrine was part of Shāh Rukh's venerating routine and every Thursday²⁵⁰ he paid his respect to Khwaja 'Abd Allah Ansari and his descendants who were buried in the main four-īwān courtyard. On the one hand, the fact that Shāh Rukh chose to patronize this popular Sunnī shrine may be a statement underlining Shāh Rukh's conservative religious views, as pointed out by Manz²⁵¹. On the other hand, we can draw a parallel between Tīmūr, who patronized the Sufi Khoja Ahmed Yasavi and built a shrine around his grave in order to control politically and religiously the steppe and Shāh Rukh, who built a shrine around another Sufi's grave as a representation of his strict religious affiliations and to control the masses in Khorasan. Yet, the difference between the two rulers is that Tīmūr was constantly

²⁴⁶ For detailed descriptions, please refer to: Golombek, L.: *The Tīmūrid Shrine at Gazur Gah: An Iconographical Interpretation of Architecture*. University of Michigan, 1968. and Subtelny, M.: “The Cult of 'Abdullah Ansari under the Timurids” In *God ist schön und Er liebt die Schönheit/God is Beautiful and He loves Beauty*, ed. A. Giese and J.Christoph Bürgel. Berlin, New York, Paris: Peter Land, 1994, pp.377-406.

²⁴⁷ Subtelny: *Ansari*, 1994, p.385.

²⁴⁸ Manz: *Power, Politics and Religion*, 2007, p.219.

²⁴⁹ Quoted by Subtelny: *Ansari*, 1994, p.377.

²⁵⁰ Subtelny: *Ansari*, 1994, p.387 discusses that four days of the week were considered most propitious for visiting shrines: Fridays (especially after the Friday prayer), Thursdays and Saturdays (before sunrise) and Mondays (at daybreak).

²⁵¹ Manz: *Power, Politics and Religion*, 2007, p.200.

accompanied with Sufi shaykhs e.g. Sayyid Baraka, while Shāh Rukh chose instead to venerate the site of a “pseudo-Sufi” as Subtelny²⁵² puts it.

Shāh Rukh commissioned the four-*īwān* compound around the tomb in 1425-1427 AD (Fig.160). According to the inscription on the southwest portal, the court architect Qavam al-Din Shirazi²⁵³ completed the work in 1425 AD. The four-*īwān* courtyard is covered with cemetery stones of different periods (Fig.161-164) and is thus the only four-*īwān* courtyard with a cemetery function known to me.



Fig.159: Gāzurgāh, courtyard view of the Khwaja 'Abd Allah Ansari shrine, northeastern *īwān* with the sanctuary in front of it
Source: Archnet [Accessed on 1 November 2009]

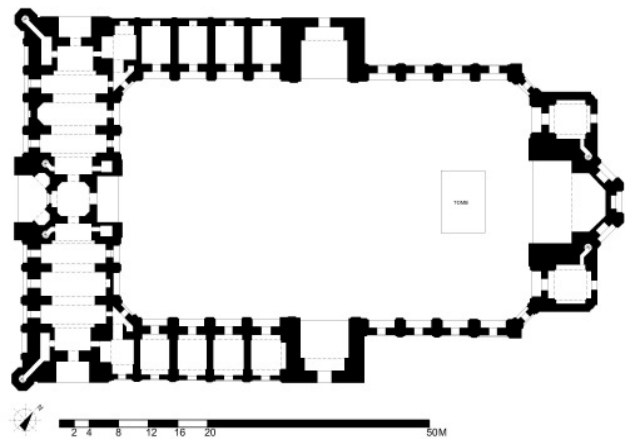


Fig.160: Gāzurgāh, plan of the Khwaja 'Abd Allah Ansari shrine after Golombek
Source: Archnet [Accessed on 1 November 2009]



Fig.161: Gāzurgāh, courtyard view with grave stones, southwestern *īwān*
Source: Archnet [Accessed on 1 November 2009]



Fig.162: Gāzurgāh, courtyard view with grave stones, northwestern *īwān*
Source: Archnet [Accessed on 1 November 2009]

²⁵² Subtelny: *Ansari*, 1994, p.386.

²⁵³ The court architect at that time.



Fig.163: Gāzurgāh, courtyard view with sanctuary *iwān* and the shrine of Ansari
Source: Archnet [Accessed on 1 November 2009]



Fig.164: Gāzurgāh, courtyard view with grave stones, southeastern *iwān*
Source: Archnet [Accessed on 1 November 2009]



Fig.165: Gāzurgāh, exterior view from the south, showing the southwest *iwān* of the shrine of Ansari
Source: www.daylife.com/photo/09Erf3P3385y7
[Accessed on 20 November 2008]



Fig.166: Gāzurgāh, exterior view from the south, showing a blind arched niche along the southwest *iwān*
Source: www.daylife.com/photo/09Erf3P3385y7
[Accessed on 20 November 2008]

The only entrance to the shrine is through the southwestern *iwān*. The sanctuary, i.e. the northeastern *iwān* is the most impressive one but it only offers a backdrop for the tomb of the Sufi poet, it does not have any other function or a dome chamber, which is usually situated behind the *iwān*. The northeastern *iwān* is linked to the northwestern and the southeastern

īwāns only by means of a curtain wall. This solution is unique to all other four-*īwān* compounds, in which all *īwāns* are interconnected with arcades and *hujras*. In a way, the plan of the shrine consists of two parts: the entrance and the side *īwāns*, interconnected with a gallery and the sanctuary *īwān*, only flanked by a curtain wall. Although O’Kane interprets this solution as an “aesthetic weakness”²⁵⁴, we can analyse it not only as a “façade architecture” in his terms, but as an attempt to create a natural, open to the elements alchove for the tomb.

O’Kane²⁵⁵ points out that the shrine at Gāzurgāh was meant to be perceived only from within the courtyard, since the exterior is deprived of any decoration or ornamentation; only the entrance façade is decorated. This fact can only underline the statement of the current dissertation that the interior courtyard of the four-*īwān* compound is the central focal point, it is meant to be viewed only from within the walls and its significance becomes apparent only when the believer enters the compound. Once the worshipper comes in the shrine in Gāzurgāh, he is confronted with the sheer size of the sanctuary *īwān* which immediately focuses the attention towards the tomb.

In a way, the Sufi shrine at Gāzurgāh is a tomb open to the elements, in which the central cenotaph is not covered by an interior dome chamber but by the sky. The tomb is covered with wooden lattice and is situated in front of the sanctuary *īwān*. The sanctuary *īwān* in turn, gets its “sanctuary” function only because the tomb is situated in front of it. The tomb is the real sanctuary. It corresponds directly with the sky and with nature – both God’s creations.

Golombek²⁵⁶ introduces the term *hazīrah* when referring to the Ansari’s shrine and defines it as a mausoleum without a roof. She suggests that the *Hanbalite*’s view against saintship rejects the construction of roofed monuments over tombs. Even though this explanation is based on religious rules and elucidates the absence of a roof, it does not focus on the choice of the four-*īwān* plan as a universal scheme, defining the world in its totality.

The architectural solution at Gāzurgāh shows the flexibility of the four-*īwān* plan, which was transformed to fit the *Hanbalite*’s religious prescriptions without any alterations to the rectangular courtyard space and the position of the four *īwāns*.

²⁵⁴ O’Kane: *Timurid Architecture*, 1987, p.151.

²⁵⁵ *Ibid.*, pp.149-152.

²⁵⁶ Golombek: *Gazur Gah*, 1968, pp.108-109.

IV.6 Khīva

Khīva, derived from the “Keivak well” was the last oasis where the caravans stopped before crossing the desert to Iran. Khīva was first conquered by the Arabs in 712 AD. In 1379 AD it fell under Tīmūr along with the entire region of Khorezm.

Khīva is divided into two urban parts (Fig.167-169): the *Dichan-kala*, the outer town and the *Itchan-kala*, the inner town, protected by brick walls of 10m height. The foundations of the *Itchan-kala* were laid between the 5th and 4th c. BC. The wall surrounding the *Itchan-kala* is between 8m and 10m high, 6m to 8m wide and 2250m long²⁵⁷. Massive round defensive towers are situated on every 30m along the wall. The fortification walls of the *Dichan-kala* were laid by Allāh Qulī Khān in 1842 AD.

During the 10th c. AD, Khīva was a thriving caravan stop on the route between Urgench and Marv. However, in 1226 AD the town was almost completely destroyed by the Mongol invasion. The new political capital of the 15th and 16th c. AD was largely devastated by Nadir Shāh of Iran. The current monuments of Khīva were rebuilt during the 18th and 19th c. AD and restored during the last few decades.



Fig.167: Khīva, aerial view
Source: Google Earth [Accessed on 5 May 2009]



Fig.168: Khīva, drawing of the urban plan of the *Itchan-kala* with the four gates
Source: <http://www.world-heritage-tour.org/asia/central-asia/uzbekistan/itchan-kala/map.html> [Accessed on 5 May 2009]

²⁵⁷ Madaminov, M.; Masharipov, B. and Abdurasulov, A.: *Khiva*. Guidebook. Moscow: Ruz Co, 2001, p.28.



Fig.169: Khīva, urban plan of the *Itchan-kala* with the major monuments and the four gates
Source: <http://www.pagetour.org/Khiva/map.html> [Accessed on 15 January 2010]



Fig.170: Khīva, towers along the fortification wall of the *Itchan-kala*, September 2006
Source: Author's photograph



Fig.171: Khīva, roof view of the city wall and the western Ata Darvaza of the *Itchan-kala*, September 2006
Source: Author's photograph

The *Itchan-kala* has an almost ideal rectangular shape of 650m by 400m (Fig.167-169). The major north-southern axis and the minor east-western axis are marked by four gates corresponding to the four cardinal points²⁵⁸. The four gates of the *Itchan-kala* are²⁵⁹: Ata Darvaza (1842-1875 AD, western gate) (Fig.172), Palvan Darvaza (1804-1806 AD, eastern gate meaning Warriors Gate) (Fig.174), Tash Darvaza (1830/1840-1873 AD, southern gate) (Fig.175) and Bagcha Darvaza (19th c. AD, northern gate) (Fig.173). The majority of the monuments are built along the minor east-western axis of the town. The *Dichan-kala* had ten gates but only three of them have survived. Although the gates were built mainly during the 19th c. AD, they were probably erected on older structures, marking the borders of the city.



Fig.172: Khīva, Ata-Darvaza
Source: www.pagetour.org/Khiva/Ata-Darvaza.html
[Accessed on 1 December 2009]



Fig.173: Khīva, Bagcha-darvaza
Source: <http://www.pagetour.org/Khiva/Bagcha-Darvaza.html> [Accessed on 1 December 2009]

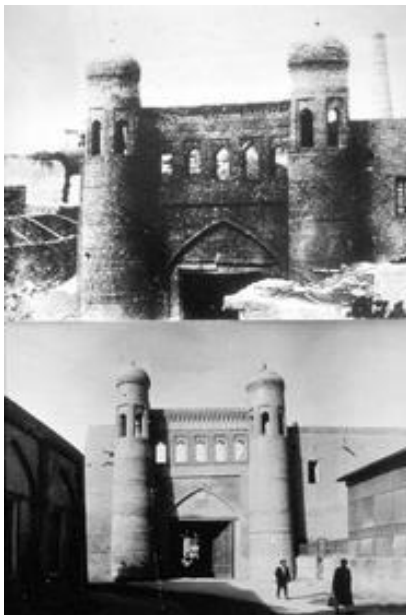


Fig.174: Khīva, Palvan-darvaza, 1995
Source: Reha Günay, Archnet [Accessed on 1 December 2009]



Fig.175: Khīva, Tash-darvaza
Source:
http://www.orexca.com/images/fotogallery/img_full/1214899673_2919.jpg [Accessed on 1 December 2009]

²⁵⁸ ICOMOS, World Heritage List, No 543, *Khiva*, Identification 17 October, 1989.

²⁵⁹ Madaminov et al.: *Khiva*, 2001, p.28.

There are 54 historical monuments within the walls of the *Itchan-kala*. These include 23 madrasas, 6 mosques, 1 caravansarays, 6 mausoleums, 1 trading dome, 1 working hammam.

Several madrasas are based on the four-*īwān* plan: Allāh Qulī Khān Madrasa (1834-1835 AD), Qutlugh Murad Inaq Madrasa (1804-1812 AD), Shergazi Khān Madrasa (1718-1726 AD). The first two madarsas form a *kosh* (Fig.176) and will be covered in Chapter V.3.3. on the *kosh* principle of a madrasa versus a madrasa based on the four-*īwān* plan. The Shergazi Khān Madrasa forms a *kosh* with the mausoleum of Pahlavān Mahmūd (Fig.177), the latter being one of the most sacred buildings in Khīva and related to the cult position of Pahlavān Mahmūd. This *kosh* is also discussed in Chapter V.1.2. on the *kosh* of a madrasa versus a mausoleum.



Fig.176: Khīva, *Kosh* of the Allāh Qulī Khān Madrasa and the Qutlugh Murad Inaq Madrasa
Source: Google Earth [Accessed on 1 May 2009]

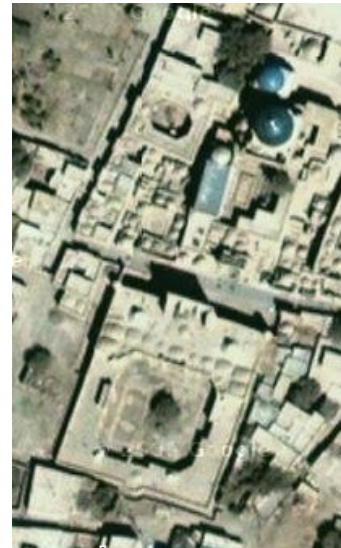


Fig.177: Khīva, *Kosh* of the Shergazi Khān Madrasa and the Pahlavān Mahmūd Mausoleum
Source: Google Earth [Accessed on 1 May 2009]

IV.7 Bukhārā

Bukhārā (Fig.178) is the most sacred city in Transoxania. According to Frye²⁶⁰ the name is derived from the Sanscrit *viḥāra*²⁶¹, meaning a Buddhist monastery. Probably the site of the city has been the home of several Buddhist sanctuaries prior to Islam. In line with the *architectural palimpsest*, major Islamic sanctuaries have been erected in Bukhārā on the remains of the Buddhist and Zoroastrian temples and the city has been transformed into an Islamic sacred ground. Gangler, Gaube and Petruccioli refer to Bukhārā as the “Dome of Eastern Islam”²⁶². Nowadays, the whole urban fabric is characterised by numerous madrasas, mosques and *khānaqāhs*.

According to Barthold²⁶³ the first mosque in Bukhārā would have been built by Qutayba ibn Muslim in 712/713 AD in place of a Buddhist temple.

“In the version of the *History of Bukhara* edited by C. Schefer, in the chapter dedicated to the construction of the mosque by Qutayba, it is written: Qutayba ibn Muslim founded a great mosque in the city of Bukhara in the year 94. That place had been a temple of idols [literally: *botkhane* “house of the idols”].”²⁶⁴

During the 10th c. AD, there was also a market called *Makh* where Buddhist images²⁶⁵ were still sold. Further, there was a fire temple erected in the market, whilst the city had already mosques and madrasas. To prove this, Narshakhi, the 10th c. AD author of “History of Bukhara”, reports that the Fardjek Madrasa was ruined during the great fire in 937²⁶⁶ AD.

“After reporting the origin of the name of the *Makh bazar*, Narshakhi says that in it had been built a *atesh-khane*, literally a “house of fire,” i.e., a fire temple. According to Narshakhi:...then this place [the *Makh bazar*] became a fire temple. During the market, when the people assembled, they went into the fire temple to worship fire. That fire temple was still there in the time of Islam. When the Muslims prevailed, they built that mosque [the *Makh* one] and even now it is a famous mosque of Bukhārā.”²⁶⁷

²⁶⁰ Frye, R.: “Notes on the History of Transoxiana”. In *JSTOR*, Electronic edition: <http://www.jstor.org/pss/2718491> [Accessed on 5 April 2010]

²⁶¹ However, his theory has been challenged by Altheim, F.: *Aus Spätantike und Christentum*. Tübingen, 1951, pp.111-112.

²⁶² The title of their book from 2004.

²⁶³ Quoted by Compareti: *Buddhist Art in Sogdiana*, 2008, note 19. In the Russian version of his 1898 authoritative work, W. Barthold would have recorded other information on the construction of a mosque in Samarqand in the place of the “temple of idols” (not explicitly called Buddhist). His source was another Muslim author, al-Idrisi, active after the time of Narshakhi. However, this passage does not appear in the 1977 English translation of Barthold: P. Bernard and F. Grenet and M. Isamiddinov, “Fouilles de la mission franco-soviétique à l'ancienne Samarqand (Afrasiab): première campagne, 1989,” 1990, 370, n. 32. W. Barthold, *Turkestan down to the Mongol Invasion*, 1977, pp. 107–108.

²⁶⁴ Compareti: *Buddhist Art in Sogdiana*, 2008, note 24.

²⁶⁵ See Compareti: *Buddhist Art in Sogdiana*, 2008, note 20. W. Barthold, *Turkestan down to the Mongol Invasion*, 1977, pp. 107–108.

²⁶⁶ Quoted by Nemceva, N.: “History of the Madrasa in Central Asia”. In *The Role of the City of Samarqand in the World's Cultural History*. Tashkent-Samarqand, 2007, pp.235-241. (Russian edition)

²⁶⁷ Quoted by Compareti: *Buddhist Art in Sogdiana*, 2008.

The above presented historical record proves that as late as the 10th c. AD Buddhism, Zoroastrism and Islam coexisted in Bukhārā. All these religious beliefs have most surely influenced the details and the plans of the sacred buildings erected at that time in Bukhārā.

By analysing the topography of Bukhārā, Gangler, Gaube, Petruccioli²⁶⁸ make a very convincing assumption about the oldest part of the city in the 10th c. AD. They define the *shahristan* or the *madīna* which was a square in form with two almost orthogonal axes marked by two main streets along the northsouth and the eastwest direction (Fig.181). These streets, situated approximately along the cardinal points, crossed almost in the middle of the *madīna*. Based on clefts along the presumable city walls, the authors try to define the position of possible gates, which can be placed in the middle of all four walls. There are three extra clefts in the western wall: two in the northwestern quadrant and one in the southwestern quadrant. Gangler, Gaube, Petruccioli point out that these clefts mark the traces of streets.



Fig.178: Bukhārā, aerial view of the old city, present situation, 2010
Source: Google Earth [Accessed on 1 April 2010]

²⁶⁸ Gangler, Gaube, Petruccioli: *Bukhara*, 2004, pp.40-44.

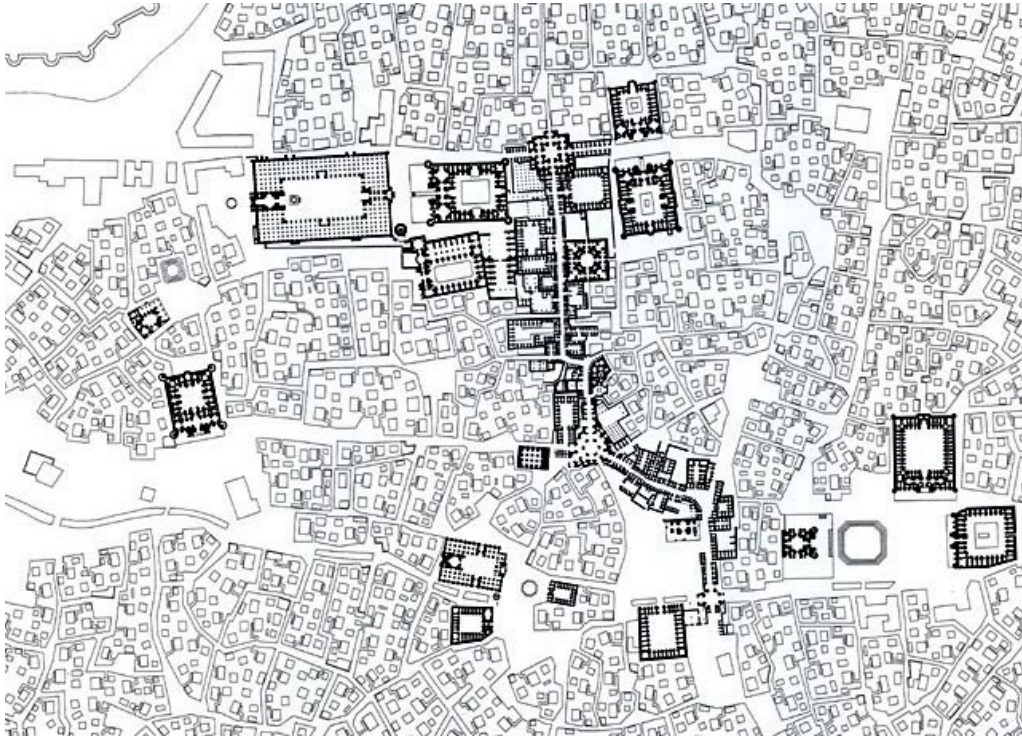


Fig.179: Bukhārā, reconstructed plan of the city center in the 17th c. AD, showing the bazaar and the adjacent commercial and religious buildings after Herdeg
Source: Herdeg, K.: *Formal Structure in Islamic Architecture of Iran and Turkistan*. New York: Rizzoli, 1990, p.59.
Archnet [Accessed on 19 November 2008]



Fig.180: Bukhārā, current aerial view corresponding to the above city plan, 2010
Source: Google Earth [Accessed on 1 April 2010]

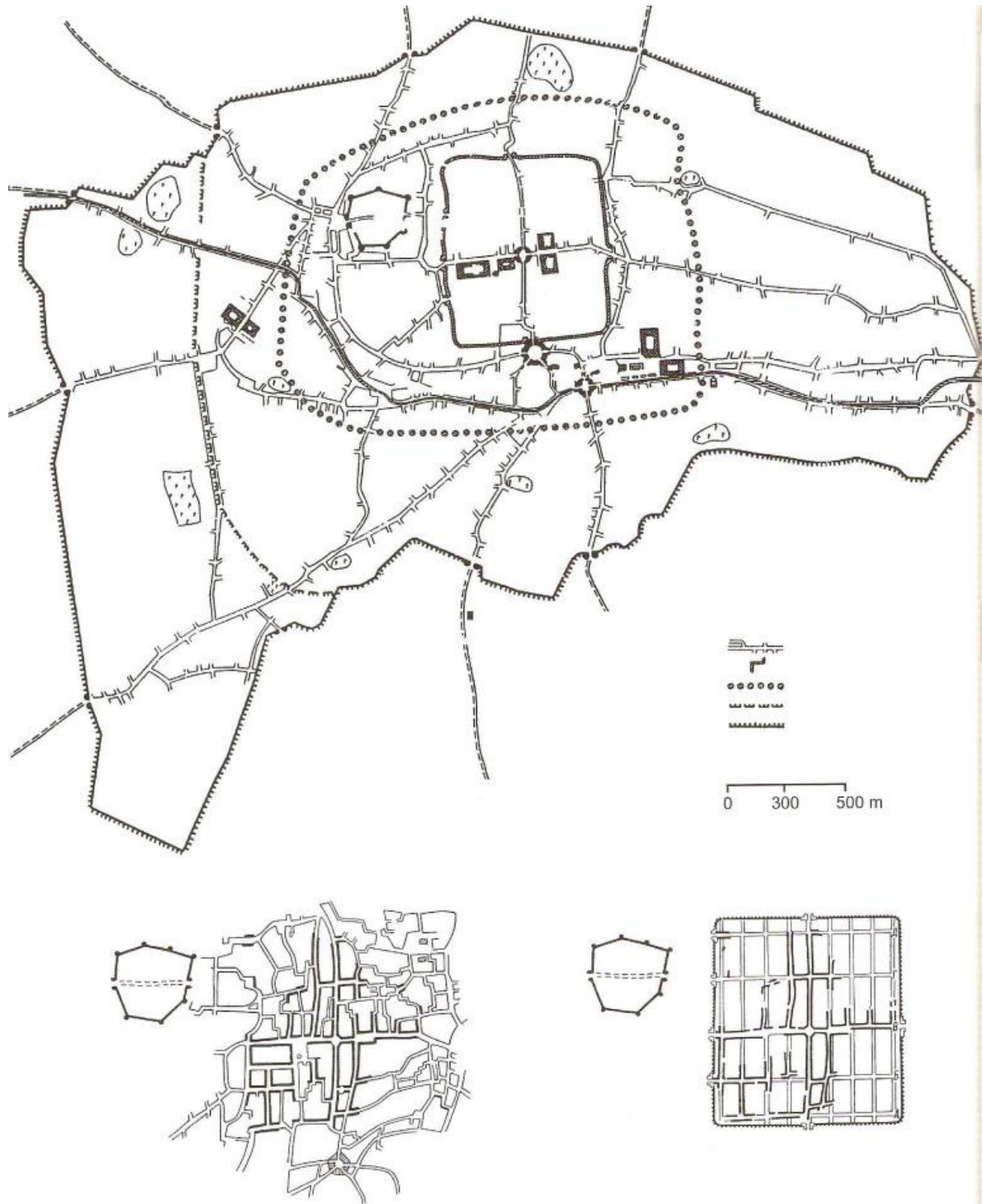


Fig.181: Bukhārā, urban development after Gangler, Gaube and Petruccioli
Source: Gangler, Gaube and Petruccioli: *Bukhara*, 2004, p.38

Narshakhi²⁶⁹, wrote that the first walls around the *shahristan* in Bukhārā were built in the 8th c. AD, during the reign of the Tahirids. The territory of the prospering city grew and in 849-850 AD new walls were erected to encompass the Ark Citadel and the *shahristan*. Towards the 12th c. AD, under the reign of Arslan-Khān of the Karakhānid dynasty, the walls were reinforced by clay fortifications in 1102-1130 AD. Another wall of baked brick was built around Bukhārā in 1164-1165 AD under the reign of Ma'sud Klich Tamgach Khān. However, in 1220 AD the walls were destroyed during the invasion of the Mongol hordes of Chingiz Khān.

The topography of Bukhārā reveals a second, older crossing in the northwestern quadrant, which according to Gangler, Gaube, Petruccioli is an earlier, smaller settlement with the northern gate being the oldest.

At present, only two gates dating back to the 16th c. AD survive: the Talipach gate (Fig.176,177) in the north and the Karakul gate in the southwest (Fig.178,179). Some remains of the city wall can be also seen (Fig.180,181).



Fig.176: Bukhārā, Talipach gate, September 2006
Source: Author's photograph



Fig.177: Bukhārā, Talipach gate
Source:
<http://www.advantour.com/img/uzbekistan/Bukhārā/old-city-gate.jpg> [Accessed on 1 November 2009]

²⁶⁹ http://www.pagetour.org/Bukhārā/bu/Ancient_rampart.htm [Accessed on 1 November 2009]



Fig.178: Bukhārā, Karakul city gate

Source:

http://www.pagetour.org/Bukhārā/bu/Karakul_Gate.htm
[Accessed on 1 November 2009]



Fig.179: Bukhārā, detail of the Karakul city gate

Source:

http://www.pagetour.org/Bukhārā/bu/Karakul_Gate2.htm
[Accessed on 1 November 2009]



Fig.180: Bukhārā, remains of the old city wall, September 2006

Source: Author's photograph



Fig.181: Bukhārā, remains of the old city wall, September 2006

Source: Author's photograph



Fig.182: Bukhārā, an aerial view of the Citadel, 2010

Source: Google Earth [Accessed on 1 April 2010]



Fig.183: Bukhārā, aerial view of the the Citadel

Source: <http://www.visit-uzbekistan.com> [Accessed on 26 November 2008]



Fig.184: Bukhārā, a street in the Citadel, September 2006
Source: Author's photograph



Fig.185: Bukhārā, the main gate to the Citadel at the Rīgistān, September 2006
Source: Author's photograph



Fig.186: Bukhārā, the Citadel, throne-room of the Bukhārān amīr, September 2006
Source: Author's photograph



Fig.187: Bukhārā, the Citadel, marble throne "takht" from 1669 AD, wooden canopy on fretted marble pillars, made by Nuratian masters, September 2006
Source: Author's photograph

The Citadel (Fig.182-187) is situated in the western corner of the *shahristan*, adjacent to the northwestern quadrant. Its location resembles the Medieval enlargement of Harāt, in which the Medieval city was located also to the west of the Parthian capital. The main entrance gate (Fig.183,185) situated at the Rīgistān Square is to the west.

IV.7.1 Sāmānid Mausoleum (892-943 AD), Bukhārā

The Sāmānid Mausoleum (Fig.188-202) was built between 892 and 943 AD as the resting-place of Ismail Samani – the founder of the Sāmānid dynasty, the last Persian dynasty to rule in Central Asia. The Mausoleum is the oldest surviving Islamic domed mausoleum. It has a square plan with four doorways on each wall, formed by arched shallow recesses.



Fig.188: Bukhārā, Sāmānid Mausoleum, aerial view, 2010
Source: Google Earth [Accessed on 1 April 2010]



Fig.189: Bukhārā, exterior view of the Sāmānid Mausoleum, September 2006
Source: Author's photograph

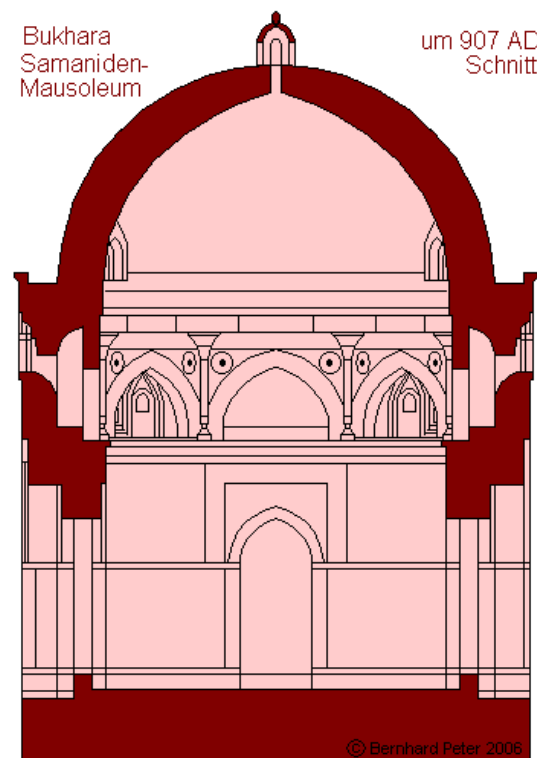


Fig.190: Bukhārā, cross section of the Sāmānid Mausoleum after Peter
Source: Website of B. Peter
<http://www.bernhardpeter.de/Usbekistan/usbekistan.htm>
[Accessed on 1 November 2009]



Fig.191: Bukhārā, sarcophagus in the Sāmānid Mausoleum, September 2006
Source: Author's photograph

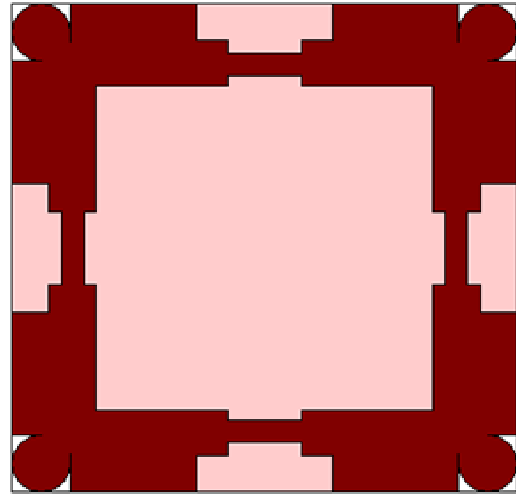


Fig.192: Bukhārā, plan of the Sāmānid Mausoleum after Peter
Source: Website of B. Peter
<http://www.bernhardpeter.de/Usbekistan/usbekistan.htm> [Accessed on 1 November 2009]



Fig.193: Bukhārā, main entrance to the Sāmānid Mausoleum, September 2006
Source: Author's photograph

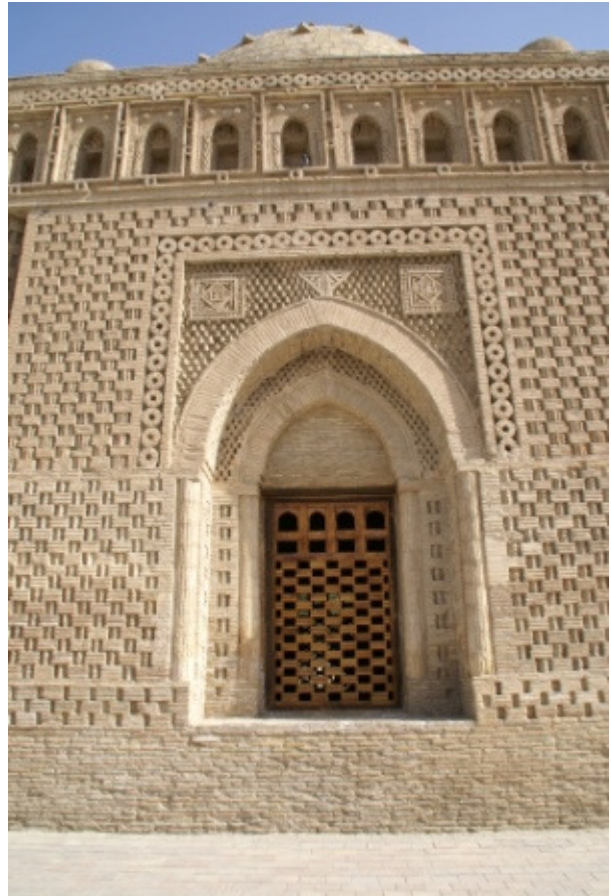


Fig.194: Bukhārā, arched doorway recess of the Sāmānid Mausoleum, September 2006
Source: Author's photograph



Fig.195: Bukhārā, interior view of the dome of the Sāmānid Mausoleum, September 2006
Source: Author's photograph



Fig.196: Bukhārā, exterior view of the dome of the Sāmānid Mausoleum, September 2006
Source: Author's photograph



Fig.197: Bukhārā, detail of the dome squinches of the Sāmānid Mausoleum, September 2006
Source: Author's photograph



Fig.198: Bukhārā, detail of a corner dome squinch of the Sāmānid Mausoleum, September 2006
Source: Author's photograph

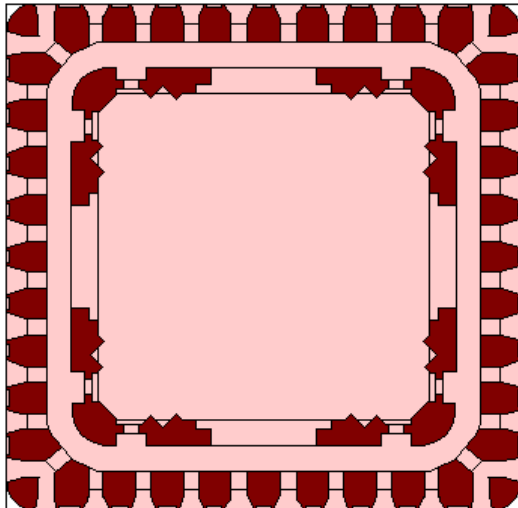


Fig.199: Bukhārā, plan of the upper tambour zone of the Sāmānid Mausoleum after Peter
Source: Website of B. Peter
<http://www.bernhardpeter.de/Usbekistan/usbekistan.htm> [Accessed on 1 November 2009]

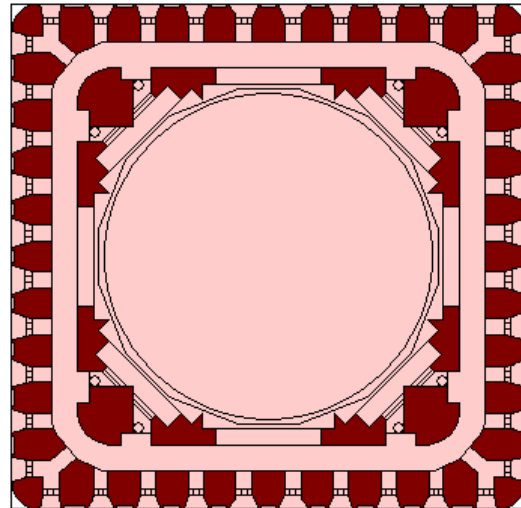


Fig.200: Bukhārā, plan of the lower tambour zone of the Sāmānid Mausoleum after Peter
Source: Website of B. Peter
<http://www.bernhardpeter.de/Usbekistan/usbekistan.htm> [Accessed on 1 November 2009]

The Sāmānid Mausoleum has clear non-Islamic features in its architecture. The central dome (Fig.195,196) is surrounded by four smaller domes at the four corners (Fig.196), which

resemble very much the Buddhist stupas, analysed in the previous chapter (Fig.111,112,115).

On the surface of historiography, the influence of Buddhism on the Sāmānid iconography can be explained with the attempt to claim independence from the 'Abbāsīd Caliphate. However, a more plausible explanation will be the immediate influence of Buddhism across the territories of Central Asia for centuries even after the advent of Islam. On the territory of Old Termez, Chaganian, Shuman, Khavamaran and Kobadian, in the 7th c. AD operated tens of Buddhist monasteries, and even in the early 8th c. AD in Tokharistan "king and elite, and people" confessed Buddhism²⁷⁰. The Arab expansion caused total migrations of the Buddhists eastwards, first of all, to Eastern Turkistan where Buddhism became mass religion.

Buddhist iconography can be also found in the Sāmānid Mausoleum. On each of the four walls, the doorways are flanked by a relief (Fig.202) that can be analysed as a microcosmic version of the macrocosmic world and resembles very much the geometry of a mandala, combining the hierophany of the square (representating the earth) and the hierophany of the circle (representing the Heavens). There are four inscribed squares with a circle in the middle (Fig.202). According to Arapov²⁷¹, analogues of this symbol can be found in China, in wall paintings of the caves of Dunhuang - the biggest early medieval Buddhist centre of Eastern and Central Asia. The same sign crowns the ceiling of the world "tent" in the caves dated from the 6th c. AD also depicting scenes from the Buddhist mythology. Arapov summarises:

"Since the Dunhuang variant is more detailed, it gives a key to the interpretation of semantic meaning of Dunhuang-Samanid mandala. Central ("green") square presents the Earth = Field of Life. The Earth (Field) contains in its centre the inseminated (seeds inside the circle) Yin (round). From this centre towards all orientations (4 basic directions + 4 diagonal) Life (vegetative element of the outer contour is richer than of the inner) is developing."

This relief can be also seen as the plan of the mausoleum itself (Fig.192) and its cupola (Fig.199,200), whose major elements, similar to all Islamic mausoleums, consist of a square, represented by the cube and the circle, represented by the dome. Arapov further points out the analogy between the 40 "pearls" of the relief and the 40 arches of the mausoleum (Fig.201).

²⁷⁰ Arapov, A.: *Buddhist Mandalas and Symbolics of the Samanids*. Electronic edition: http://www.sanat.orexca.com/eng/4-02/history_art4.shtml [Accessed on 1 April 2009]

²⁷¹ Ibid.



Fig.201: Bukhārā, detail of the arches of the Sāmānid Mausoleum, September 2006
Source: Author's photograph



Fig.202: Bukhārā, detail of Buddhist iconography on the Sāmānid Mausoleum, September 2006
Source: Author's photograph

The Sāmānid Mausoleum combines universal hierophanies, such as the square and the circle, the four openings in the walls, the four smaller domes surrounding the central dome, etc. and presents them in a clearly political statement on the walls of an Islamic dynastic mausoleum. The Buddhist iconography can be interpreted as part of the *architectural palimpsest*, represented by the Islamic Sāmānid Mausoleum in Bukhārā.

The origin of the plan of the Sāmānid Mausoleum and its decorative programme, based on Buddhist iconography should not be sought within the Islamic cultural tradition. To stress this point even further, I would like to present the Shiva temple of Pandrethan (Fig.203-208) from almost the same period, namely 9th-10th c. AD, since it is situated in a completely different region, in Srinagar in Kashmir. Yet, the similarities in the design between the Sāmānid Mausoleum and Pandrethan are striking. What is more, Pandrethan can be attributed to a chain of earlier cross-axial Hindu temples in the Wangut valley (Fig.210,211). However, they are dated approximately from the same period as Pandrethan. Another earlier example is the Surya temple at Martand in Kashmir (Fig.209), from the second quarter of the 8th c. AD. All these examples show that the square plan with four gates along the four cardinal points, based on the hierophany of the Cosmic Cross and the *Axis Mundi*, was spread in the region of Kashmir during the 8th-10th c. AD.



Fig.203: Temple of Pandrethan, view from the southwest, 1870
Source: <http://ignca.nic.in/asp/showbig.asp?projid=rar1>
Architectural survey of India, Kashmir 1870

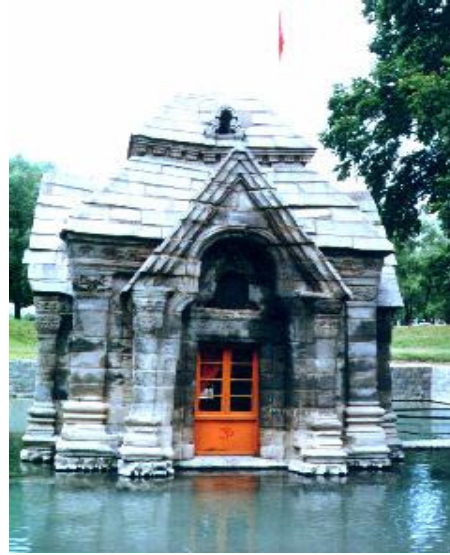


Fig.204: Temple of Pandrethan nowadays
Source: <http://www.koausa.org/SamsarChandKoul/amarnath.html>

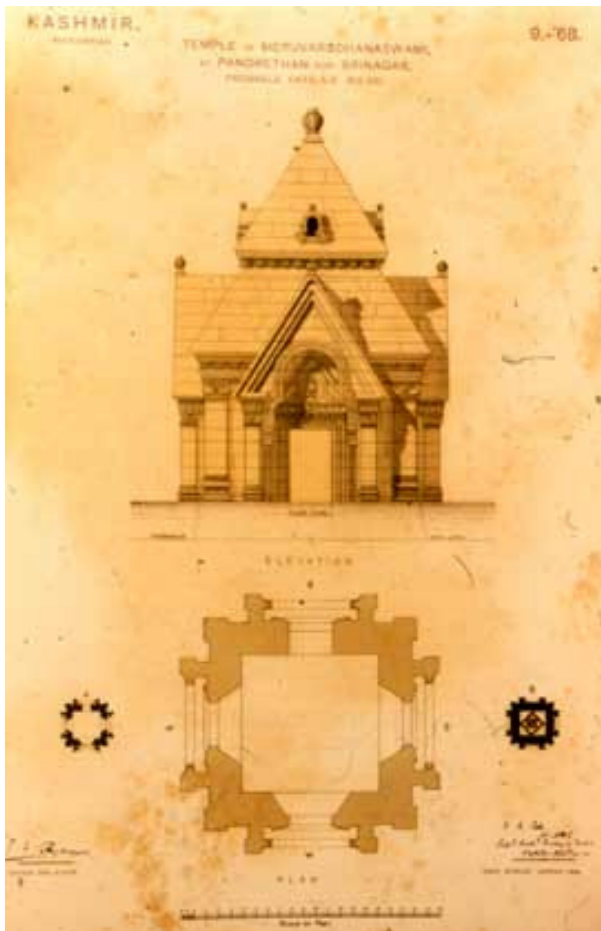


Fig.205: Plan of the temple at Pandrethan
Source: <http://ignca.nic.in/asp/showbig.asp?projid=rar1>
[Accessed on 1 June 2004]

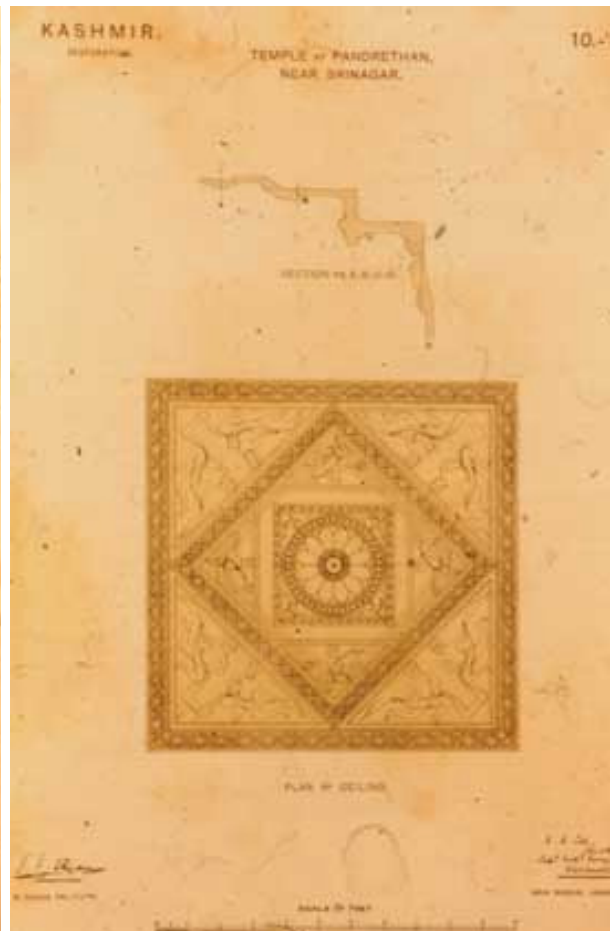


Fig.206: Plan of the roof of the temple at Pandrethan
Source: <http://ignca.nic.in/asp/showbig.asp?projid=rar1>
[Accessed on 1 June 2004]

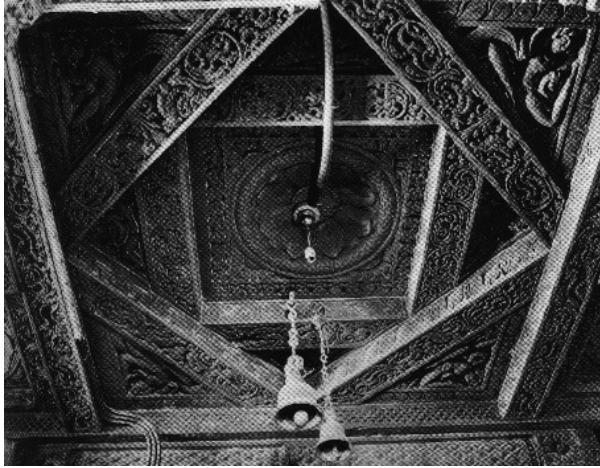


Fig.207: Lakshana Devi temple at Brahmor, 8th c. AD
Source: Michell: *Hindu Architecture*, 2000, Fig.45

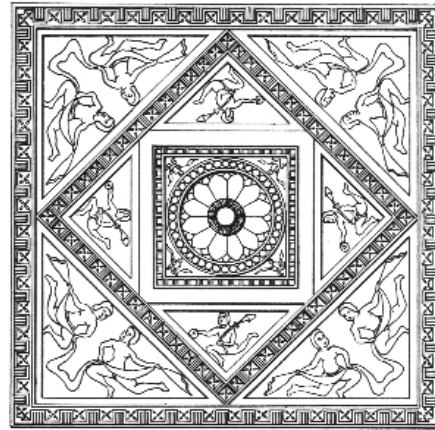


Fig.208: Ceiling of the temple Pandrethan
Source: Michell: *The Hindu Temple*, 1977, Fig.34



Fig.209: Surya temple at Martand in Kashmir, 8th c. AD
Source: Michell: *Hindu Architecture*, 2000, Fig.43



Fig.210: Wangut temple, 9th-10th c. AD
Source: <http://ignca.nic.in/asp/showbig.asp?projid=rar1> [Accessed on 1 June 2004]



Fig.211: Wangut temple, 9th-10th c. AD
Source: <http://ignca.nic.in/asp/showbig.asp?projid=rar1> [Accessed on 1 June 2004]

The main shrine at Pandrethan (Fig.203-206) consists of a single square chamber, similar to the Sāmānid Mausoleum. Externally, a facet is added on each side, which is hollowed out into a trefoil-arched niche; the front one, being open, serves as entrance to the sanctum. According to Michell²⁷², temples of the *mandapa*, or "bower" type, like Pandrethan and the Payar temples, being open on all four sides, have naturally four doorways; while temples of the *vimana* type, such as the Avantisvami temple, have only one entrance. The Sāmānid Mausoleum can be ascribed to the *vimana* type temples, since only one of its doorways is open and used as an entrance.

The ceiling of Pandrethan (Fig.208) consists of superimposed diminishing squares²⁷³. The second square was reduced by a series of four stone beams which rested upon the first four. This process was repeated until a single square stone of sufficient dimensions was found to

²⁷² Michell, G.: *The Hindu Temple. An Introduction to Its Meaning and Forms*. London: Paul Elek, 1977, p.83.

²⁷³ *Ibid.*, p.83.

span the whole gap at the top. The triangular spaces resulting from this construction were filled with carved figures of flying *Yakshas*, and the apex was decorated with a full-blown lotus flower. Another example of this kind of ceiling, apart from the temple at Pandrethan, is the ceiling of the Lakshana Devi temple at Brahmor (Fig.207) from the 8th c. AD. The cosmological aspect of the ceiling lies in the fact that there is a chain of repetition of three rotating squares, whose sides together form the number 12, which is a holy number, representing the whole cosmos. The cosmos in its totality comprises the quaternity of the square (i.e. the architectural representation of the earth) and the circle (i.e. the architectural representation of the sky and the Heavens).

The geometry of the ceiling of Pandrethan and the Lakshana Devi temple is identical with the “mandala” details (Fig.202) on each side of the doorways of the Sāmānid Mausoleum, discussed above. Obviously, the Hindu and the Buddhist iconography has influenced their origin as well.

The aim of this brief excursion is to show on one example how the plan and iconography of Islamic mausolea and tombs have evolved in a combination of the *architectural* and the *hierophanic palimpsests*. The *architectural palimpsest* denotes the layers of religious sanctuaries, such as Hindu, Buddhist and Islamic temples that have influenced each other during the 8th-9th c. AD, while Islam was still establishing itself as a major religion in Central Asia. The *hierophanic palimpsest* denotes the interplay of different hierophanies, such as the hierophany of the four doorways, four side cupolas, etc. based on the Cosmic Cross along the cardinal points and the hierophany of the *Axis Mundi*, in its architectural representation, i.e. the dome.

IV.7.2 Bahauddin Bliss Bukhari Complex (16th c. AD), near Bukhārā

The increasing political and religious importance of the Sufi *Naqshbandiyya* order in Bukhārā in the 16th c. AD lead to the construction of several monumental four-*īwān khānaqāhs*. The most important four-*īwān khānaqāh* near Bukhārā is of Bahauddin Bliss Bukhari (Fig.212-221,226) and dates back to 1594 AD. It is situated in the big memorial complex of Bahauddin (born in 1317 AD in a Hindu village close to Bukhārā), the founder of the Sufi *Naqshbandiyya* order. The memorial complex, which has been restored in the last two decades, is in the vicinity of Bukhārā and was reopened for pilgrims in 1989.



Fig.212: Fig.: Near Bukhārā, domed four-*īwān khānaqāh* of Bahauddin Bliss Bukhari, exterior view
Source: <http://www.visit-uzbekistan.com/uzbekistan/gallery.php> [Accessed on 26 November 2008]



Fig.213: Fig.: Near Bukhārā, domed four-*īwān khānaqāh* of Bahauddin Bliss Bukhari, the necropolis
Source: <http://www.visit-uzbekistan.com/uzbekistan/gallery.php> [Accessed on 26 November 2008]

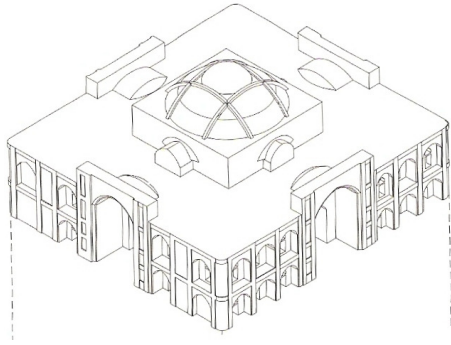


Fig.214: Near Bukhārā, domed four-īwān khānaqāh of Bahauddin Bliss Bukhari, isometry after Gangler, Gaube and Petruccioli
Source: Gangler, Gaube and Petruccioli: *Bukhara*, 2004, p.150



Fig.215: Near Bukhārā, domed four-īwān khānaqāh of Bahauddin Bliss Bukhari, exterior view, September 2006
Source: Author's photograph



Fig.216: Near Bukhārā, domed four-īwān khānaqāh of Bahauddin Bliss Bukhari, exterior view, September 2006
Source: Author's photograph



Fig.217: Near Bukhārā, domed four-īwān khānaqāh of Bahauddin Bliss Bukhari, exterior view, September 2006
Source: Author's photograph



Fig.218: Near Bukhārā, main entrance īwān of the Bahauddin khānaqāh, September 2006
Source: Author's photograph



Fig.219: Near Bukhārā, side īwān of the Bahauddin khānaqāh, September 2006
Source: Author's photograph



Fig.220: Near Bukhārā, exterior detail of the Bahauddin *khānaqāh*, September 2006
Source: Author's photograph



Fig.221: Near Bukhārā, corner of the Bahauddin *khānaqāh*, September 2006
Source: Author's photograph



Fig.222: Near Bukhārā, necropolis of the Bahauddin complex, September 2006
Source: Author's photograph



Fig.223: Near Bukhārā, necropolis of the Bahauddin complex, September 2006
Source: Author's photograph



Fig.224: Near Bukhārā, necropolis of the Bahauddin complex, September 2006
Source: Author's photograph



Fig.225: Near Bukhārā, necropolis of the Bahauddin complex, September 2006
Source: Author's photograph



Fig.226: Near Bukhārā, Bahauddin complex, main path leading to the Bahauddin *khānaqāh*, September 2006
Source: Author's photograph

The choice of the architectural layout of the Bahauddin *khānaqāh* (Fig.212-222) could not have been random, since it is situated on one of the holiest sites for Sufi pilgrims and must have followed some distinguished architectural examples from the past.

Yusupova²⁷⁴, attributes the four-*īwān* plan of the Bahauddin *khānaqāh* to the new earthquake-proof techniques, used during the Tīmūrid period, in the second half of the 15th c. AD. She explains that:

“[...] four powerful arches overlapped the space, leaving some distance in the corners. They rested on eight massive buttresses located on the side of each axis of the construction. This

²⁷⁴ Yusupova, M.: “Evolution of Architecture of the Sufi Complexes in Bukhara”. In: *Bukhara: The Myth and the Architecture*, ed. A. Petruccioli. Cambridge, Massachusetts: The Aga Khan Program for Islamic Architecture, 1999, p.128.

made deep niches in the hall axes at the sides that gave the structure of the building its cross shape and enlarged its square.”

Although this constructional rationalization seems convincing, we cannot interpret the choice of the four-*īwān* plan only in terms of earthquake-proof solutions. What is important to us is that the Bahauddin *khānaqāh* had obviously a considerable endowment and it was situated near the tomb of the most renowned *Naqšbandiyya* Sufi in Central Asia. The large ceremonial hall, the domed *ziyarat khaneh*, has a cross-shaped plan formed by the axes of the four *īwāns*. The huge dome might have followed the example of the Ulugh Beg *Khānaqāh*, yet we do not have proof of that. However, there is an obvious link between the choice of the ground plan and the Sufi paradisiacal cosmology.

The plan of the Sufi domed *khānaqāh*, e.g. the Ulugh Beg *Khānaqāh* in Samarqand or the Bahauddin *Khānaqāh* and the Nadir Divanbaigi *Khānaqāh* in Bukhārā, can be also interpreted as a representation of the relationship between Heaven and man. In architectural terms, this is done by squaring the circles and moving from the single point of the circular dome to the square tomb chamber or the *khānaqāh*. The large dome is supported by four *īwāns*, which can be allegorically read as the four angels, holding the Throne of God.

In Sufi terms, the four pillars are associated with the four pillars of the temple of righteousness: Pillar one: the Quran, is the Word of God; Pillar two is study of the Life of the Prophet; Pillar three is study the examples/lives of the Saints; Pillar four is the personal experience (the spiritual pilgrimage).

In later mystical treatises, the four holders of the Throne of God have as their symbolic counterparts the four *Awtad*, or the four terrestrial “poles” in the Sufi hierarchy of saints²⁷⁵. Corbin²⁷⁶ explains that according to esoteric Shī‘a theology, the spiritual order of the world is sustained by the cosmic hidden Imam, who is conceived metaphorically as the *Axis Mundi* of the entire created universe – called *Quth al-Aqtab*, or “Pole of Poles”. In many Shī‘a mystical treatises, the four *Awtad* are equated symbolically with the four archangels, as well as with the four pillars of the Throne of God. All these representations are based on the hierophany of the Cosmic Cross.

In the case of the four-*īwān* plan, the four angels can be associated with the four *īwāns* as the most distinguished exterior and interior feature of the compounds. In the domed four-

²⁷⁵ Begley, W.E.: “The Myth of the Taj Mahal and a New Theory of Its Symbolic Meaning”. In: *The Art Bulletin*, 61, 1979, pp. 7-37.

²⁷⁶ Corbin, H.: *Creative Imagination in the Sufism of Ibn-‘Arabi*. Bollingen Series XCI. Princeton: Princeton University Press, 1969, p. 45.

īwān compounds, such as the Sufi *khānaqāhs*, the *īwāns* are also structurally carrying the load of the dome, which symbolises the Throne of God. Yet, this tectonic function is not represented by any visible vaults or buttresses. The *īwāns* have a smooth surface, decorated only by the different majolica tiles. In general, the basic frame of the *īwāns* is not distinguished by any ranks, although the *īwāns* are all different in size and decoration. Sometimes, the entrance *īwān* and the *īwān* housing the *mīhrāb* are larger and have inscriptions referring to Paradise. However, in most of the cases the *īwāns* simply underline the equality of the four cardinal points.

The Bahauddin *khānaqāh* is situated to the right of the main entrance to the complex (Fig.226). It is not directly spatially connected to the tomb of Bahauddin.

The tomb of Bahauddin (Fig.227) is situated in the courtyard of the female mosque and it is the most sacred site of the complex. The courtyard is lower and the arcade of the mosque is elevated (Fig.230). The most sanctified element of the tomb is the black stone²⁷⁷ incorporated into the stone masonry (Fig.228). The pilgrims circumbulate the tomb in a clockwise fashion and touch the stone everytime they pass by (Fig.227). Next to the tomb, there is a pole with a horse's tail (Fig.231). The horse's tail is a pagan symbol that is usually associated with the nomadic heritage of Central Asia. However, in my view, the horse's tail next to a tomb or in a mausoleum (as is the case with Gūr-i Amīr in Samarqand), is related to the symbolism of the horse as a chthonic creature and mediator that helps the hero or the deceased to access the hereafter. Similar symbolism of the horse (*Burāq*) is also connected with the *miraj* of Muhammad.

Although the courtyard of the mosque is not based on the four-*īwān* plan, two spacial elements evoke paradisiacal symbolism, based on the hierophany of the Cosmic Cross – the pond of still water (Fig.233), in the middle of the courtyard, and the square structure with four *īwān* openings and four corner minarets situated in front of the entrance to the female mosque (Fig.232). Even though it looks like a covered fountain, this structure does not have any flowing water in it. It has only a round, basin-like hole in the middle, under the dome, and the pilgrims throw coins in it (Fig.236).

²⁷⁷ The black stone and the circumbulations are reminiscent of the black stone of the Ka'ba.



Fig.227: Near Bukhārā, man touching the black stone of Bahauddin's tomb in the courtyard of the mosque, Bahauddin complex, September 2006
Source: Author's photograph



Fig.228: Near Bukhārā, the black stone of Bahauddin's tomb in the courtyard of the mosque, Bahauddin complex, September 2006
Source: Author's photograph



Fig.229: Near Bukhārā, the tomb stone of Bahauddin in the courtyard of the mosque, Bahauddin complex, September 2006
Source: Author's photograph



Fig.230: Near Bukhārā, corner view of the tomb stone of Bahauddin with platform of the mosque, Bahauddin complex, September 2006
Source: Author's photograph



Fig.231: Near Bukhārā, a horse tail on a pole next to the tomb stone of Bahauddin in the courtyard of the mosque, Bahauddin complex, September 2006
Source: Author's photograph



Fig.232: Near Bukhārā, a square structure with four *īwān* openings and four corner minarets, Bahauddin complex, September 2006
Source: Author's photograph



Fig.233: Near Bukhārā, a water pool at the courtyard of the mosque in the Bahauddin complex, September 2006
Source: Author's photograph



Fig.234: Near Bukhārā, courtyard of the mosque with the tomb stone of Bahauddin as seen from the arcade of the sanctuary, Bahauddin complex, September 2006
Source: Author's photograph



Fig.235: Near Bukhārā, a square structure with four *iwān* openings and four corner minarets in the courtyard of the mosque at the tomb stone of Bahauddin, Bahauddin complex, September 2006
Source: Author's photograph



Fig.236: Near Bukhārā, detail of the round opening in the middle of the square structure, Bahauddin complex, September 2006
Source: Author's photograph



Fig.237: Near Bukhārā, detail of the exquisitely carved ceilings of the mosque around the tomb stone of Bahauddin, Bahauddin complex, September 2006
Source: Author's photograph



Fig.238: Near Bukhārā, detail of the exquisitely carved ceilings of the mosque around the tomb stone of Bahauddin, Bahauddin complex, September 2006
Source: Author's photograph



Fig.239: Near Bukhārā, wooden pillars in the arcade of the mosque around the tomb stone of Bahauddin, Bahauddin complex, September 2006
Source: Author's photograph



Fig.240: Near Bukhārā, wooden pillars and wall treatment in the arcade of the mosque around the tomb stone of Bahauddin, Bahauddin complex, September 2006
Source: Author's photograph



Fig.241: Near Bukhārā, *mihrāb* of the mosque, situated around Bahauddin's tomb, Bahauddin complex, September 2006
Source: Author's photograph



Fig.242: Near Bukhārā, interior of the mosque, situated around Bahauddin's tomb, Bahauddin complex, September 2006
Source: Author's photograph

The pilgrimage to the Bahauddin's tombstone is extremely popular among the Uzbeks. The highpoint of the pilgrimage is the touching the black tomb stone. Elderly Sufis (Fig.250) are engaged in performing prayers for good fortune and health around the tombstone. These men walk around the compound and are asked to pray in exchange of some gifts. It is quite remarkable that both women and men pray together around the Sufi shaykhs. The gender separation takes place in the mosques but not in the open courtyard around the tombstone of the Sufi.

The tomb of Bahauddin's mother is also situated within the compound and attracts mainly the female pilgrims (Fig.243). The celebration of the mother and the holy son in the same sanctified setting is also very old and has a pagan origin. Apart from the Muslim prayers carried almost anywhere in the complex, the pilgrims are engaged in other pagan practices as well. However, all types of worship are under the eagesis of Bahauddin, i.e. of Islamic theology; the pilgrims do not realize the pagan nature of most of the practices. For example, in the courtyard of the mosque, next to Bahauddin's mother tombstone, there is an old tree trunk (Fig.244) which is believed to bring good health, fortune and fertility. Women tie pieces of white cloth to the trunk (Fig.245) and try to cut off some small parts of it to take home. Men, women and children try to walk under the trunk to redeem their sins (Fig.246-249).



Fig.243: Near Bukhārā, female pilgrims at the Bahauddin complex, September 2006
Source: Author's photograph



Fig.244: Near Bukhārā, women praying for health and fertility at an old tree trunk at the Bahauddin complex, September 2006
Source: Author's photograph



Fig.245: Near Bukhārā, white pieces of cloth at an old tree trunk left by women praying for health and fertility at the Bahauddin complex, September 2006
Source: Author's photograph



Fig.246: Near Bukhārā, women trying to cut pieces of an old tree trunk left as a symbol for health and fertility at the Bahauddin complex, September 2006
Source: Author's photograph



Fig.247: Near Bukhārā, men and women praying for health and fertility a tree trunk in the Bahauddin complex, September 2006
Source: Author's photograph



Fig.248: Near Bukhārā, men and women trying to bend under an old tree trunk as a symbol for health and fertility at the Bahauddin complex, September 2006
Source: Author's photograph



Fig.249: Near Bukhārā, a child trying to bend under an old tree trunk as a symbol for health and fertility at the Bahauddin complex, September 2006
Source: Author's photograph



Fig.250: Near Bukhārā, men and women in prayer at Bahauddin's tomb at the Bahauddin complex, September 2006

Source: Author's photograph



Fig.251: Near Bukhārā, young woman in prayer at the female mosque opposite Bahauddin's tomb at the Bahauddin complex, September 2006

Source: Author's photograph



Fig.252: Near Bukhārā, one of the men performing prayers, standing at the staircase of the Bahauddin *khānaqāh* at the Bahauddin complex, September 2006

Source: Author's photograph



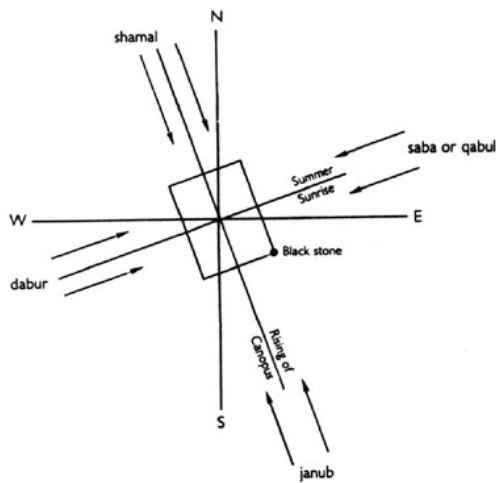
Fig.253: Near Bukhārā, Bahauddin complex, to the left Mr Domlo Gafurdgon - the imam of Bukhārā, September 2006

Source: Author's photograph

The imam of Bukhārā, Mr Domlo Gafurdgon (Fig.253) was also visiting the Bahauddin complex in September 2006. I met him at two of the most important spots of the complex: first he was talking to the pilgrims on their way to the female mosque in the courtyard with Bahauddin's tomb and then he was standing in front of the main entrance to the Bahauddin complex and was shaking hands with all pilgrims streaming into the gate. It is quite obvious that the orthodox Islam (in the face of the imam) and the Sufi practices (all pilgrims visiting Bahauddin's tomb) go hand in hand these days. The imam clearly accepts or at least tolerates the pagan rituals performed by the pilgrims. Actually, the boundaries between the Islamic and the Sufi practices are blurred.

I was delighted to meet the imam of Bukhārā after I had measured the most significant *mihṛābs* by compass and concluded that none of them was directed towards Mecca. Mr Domlo Gafurdgon was not surprised by my find. He explained that the *Hanafī* School of Sunnī Islam (the major denomination in Bukhārā) allows for the orientation of the *mihṛābs* towards the summer and winter solstices and not directly to Mecca. This statement is essential for the current thesis since it gives a religious explanation to a significant pagan practice of orienting holy settings towards the solstices. It should be also further explored

what was exactly the orientation of the solstices in the 15th and 16th c. AD in Bukhārā and compare these orientations with the already accumulated measurements.



Representation of the four winds and of the direction of the summer sunrise according to the orientation of the Ka'ba

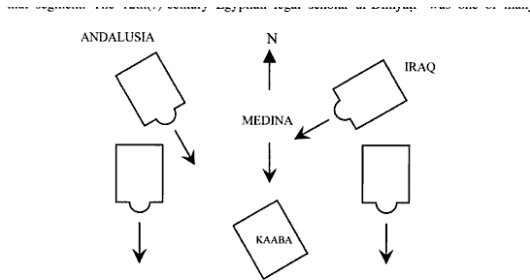


Fig. 2.2.1: Early mosques in al-Iraq and al-Andalus were oriented so that their qibla-walls were 'parallel' to the appropriate wall of the Ka'ba, or so that they were facing the direction adopted by the Prophet Muhammad in Medina, namely, due south. (From King, "Orientation", p. 256.)

Representation of the direction of the mosques in the West and in the East according to the orientation of the Ka'ba after King: Early mosques in al-Iraq and al-Andalus were oriented so that their qibla-walls were "parallel" to the appropriate wall of the Ka'ba or so that they were facing the direction adopted by the Prophet Muhammad in Medina, namely, due south.

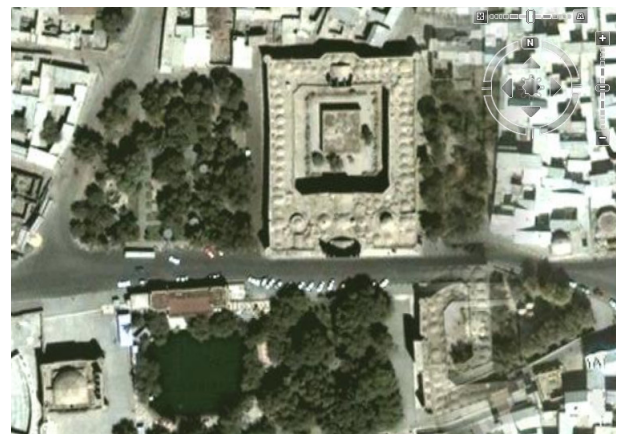
Source: King: *World Maps*, 1999, Fig.2.2.1



Kosh: Kalān Mosque - Mīr-i 'Arab Madrasa, Bukhārā



Kosh: Ulugh Beg Madrasa - 'Abd al'Azīz Khān Madrasa, Bukhārā



Kosh: Labi Hauz Square, Bukhārā

Fig.254: Comparison between the orientation of the major four-īwān compounds in Bukhārā with the orientation of the Ka'ba and the summer sunrise

At present, we can only compare the orientation of the major four-īwān compounds in Bukhārā (Fig.254) with the orientation of the Ka'ba and some traditions related to the *qiblas* of early mosques. King summarises that early mosques in al-Iraq and al-Andalus were

oriented so that their *qibla* walls were “parallel” to the appropriate wall of the Ka’ba or so that they were facing the direction adopted by the Prophet Muhammad in Medina, namely, due south. The comparison presented above (Fig.254) shows that the *qibla* walls of the compounds in Bukhārā are, indeed, relatively parallel to the eastern wall of the Ka’ba, Bukhārā being to the northwest of Mecca. Also the direction of the summer sunrise at Mecca is approximately perpendicular to the *qibla* walls in Bukhārā. However, all *qibla* walls in Bukhārā have different orientations and if they had been built according to the *Hanaʿī* School, they should have been identical. I propose a hypothesis, according to which, the *qiblas* in Bukhārā from the middle of the 15th c. AD onwards followed not prescribed by religion orientations but the orientation of compounds erected earlier, with which the respective patrons wanted to be associated. For example, the Kalān Mosque follows the orientation of the Ulugh Beg Madrasa and differs only by 2° from the orientation of the Bībī Khānum Mosque in Samarqand. The orientation of the summer mosque of the ‘Abd al’Azīz Khān Madrasa follows the orientation of the Bībī Khānum Mosque and the orientation of its winter mosque follows the *qibla* of the opposite *kosh* madrasa of Ulugh Beg. These comparisons between existing buildings can shed more light on the phenomenon of orienting *qiblas* and *mihlrābs* than trying to fit them into prescribed by religious law orientations.

IV.8 Shahr-i Sabz

During the rule of Tīmūr, his birthplace Kish²⁷⁸ or Shahr-i Sabz²⁷⁹, the “verdant city”²⁸⁰ or “green city”, was fortified²⁸¹ and became his summer residence²⁸² and the political centre of the Barlas tribe. In 1378 AD the city was surrounded by a rectangular wall and a deep moat with drawbridges leading to the gates²⁸³. The fortification had towers on every 60m. There was a huge gate in the middle of all four sides of the city wall marking the four cardinal points. Two additional gates, one to the north and one in the southeastern corner, provided extra access to the city. The four major streets stretched from the respective gates to the city centre and thus formed a cruciform urban plan (Fig.225). In 1380 AD Shahr-i Sabz was proclaimed as the second capital of Tīmūr²⁸⁴.

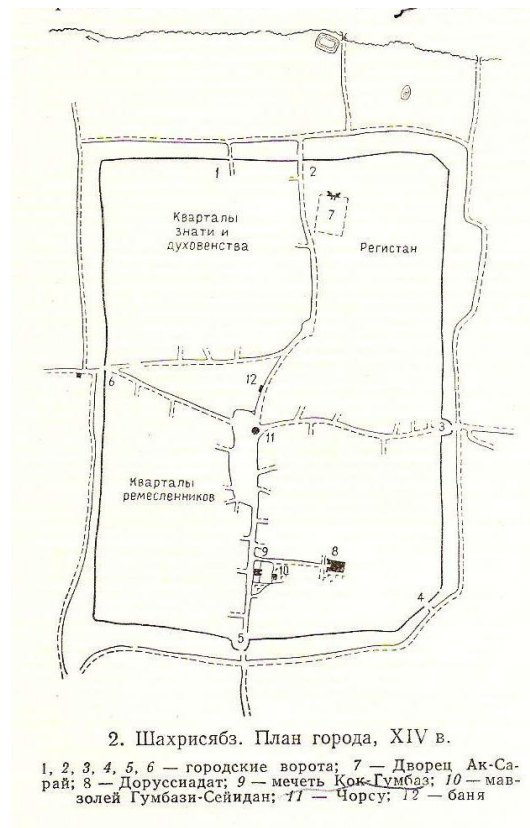


Fig.255: Shahr-i Sabz, urban plan in the 14th c. AD: 1,2,3,4,5,6 – city gates, 7 - Āq Sarāy, 8 - Dār al-Siyādat, 9- Kōk Gunbad Mosque, 10 - Gumbazi-Sayidon, 11 – *čahār-suq*, 12- public bath
Source: Baranov et al: *Encyclopaedia*, 1969, p.279

²⁷⁸ Or Kesh (meaning “Heart-pleasing”).

²⁷⁹ Tīmūr was born on 9 April 1346 AD, in the village of Hodja-Ilgar, close to Shahr-i Sabz.

²⁸⁰ Clavijo: *The Embassy*, 2005, note on p.123.

²⁸¹ Baranov et al: *Encyclopaedia*, 1969, pp.278-279.

²⁸² King: *World Maps*, 1999, p.153.

²⁸³ Clavijo: *The Embassy*, 2005, p.123.

²⁸⁴ King: *World Maps*, 1999, p.153.

There was a market place (*čahār-suq*) at the intersecting point of the two orthogonal main streets (Fig.255,11 on the map). In the southeastern quadrant, Tīmūr erected a large mausoleum known as the Dār al-Siyādat for his beloved eldest son Jahangir (died 1372 AD) (Fig.255,8 on the map). Later, in 1394 AD another son of Tīmūr, Umar Shaykh was also buried there. Next to it, along the northsouthern main axis of the city, Ulugh Beg erected the congregational mosque Kōk Gunbad (Fig.255,9 on the map). The mausoleum of Shaykh Shamsiddin Kulal is situated opposite it. These buildings will be separately dealt with in the following paragraphs.



Fig.256: Shahr-i Sabz, detail of the fortified wall
Source: http://www.advantour.com/img/uzbekistan/shakhrisabz/ak_saray_walls.jpg [Accessed on 24 November 2008]



Fig.257: Shahr-i Sabz, detail of the fortified wall, September 2006
Source: Author's photograph

IV.8.1 Āq Sarāy (1380-1404 AD), Shahr-i Sabz

Tīmūr's palace Āq Sarāy²⁸⁵ (White Palace) (1380-1404 AD)²⁸⁶ was erected in the northeastern quadrant, forming part of the central Rigistān Square (Fig. 255,7 on the map). The living quarters of the aristocracy and the clergy were situated in the northwestern quadrant, adjacent to the Āq Sarāy (Fig.255). Although, only the main portal of Āq Sarāy has remained until present (Fig.262-269), we can say with near certainty that the palace had a four-īwān plan and was situated almost according to the ideal cardinal points, being slightly rotated to the northeast. The entrance portal is to the north pointing to the direction of Samarqand, the sanctuary and the main palace building would have been to the south.

²⁸⁵ For a detailed description of the remaining entrance portal, please refer to Golombek and Wilber: *Timurid Architecture*, 1988, pp.271-275.

²⁸⁶ These years can be found on the plaque outside Āq Sarāy. However, Golombek and Wilber: *Timurid Architecture*, 1988, date the palace 1379-1396, p.271 although they point out that the palace was not completed in 1404 when Clavijo visited it.

Calculation of the proportions of the surviving elements of the site makes it fairly certain that the height of the main portal reached 70m. It was topped by arched pinnacles (*ko'ngra*), while the corner towers on a multifaceted pedestal were at least 80m high. The main entrance portal was 50m wide, and the arch had the largest span in Central Asia of 22,5m²⁸⁷.



Fig.258: Shahr-i Sabz, main square with Tīmūr's monument
Source: Google Earth [Accessed on 1 April 2010]



Fig.259: Shahr-i Sabz, main square with Tīmūr's monument, picture taken from the roof of the main portal of Āq Sarāy, September 2006
Source: Author's photograph



Fig.260: Shahr-i Sabz, monument of Tīmūr in front of the main portal of Āq Sarāy, September 2006
Source: Author's photograph



Fig.261: Shahr-i Sabz, remaining main portal of Āq Sarāy, September 2006
Source: Author's photograph

²⁸⁷ Khakimov, Z.: *The architectural masterpieces of the emerald city*, 2002. Electronic edition: <http://www.sanat.orexca.com/archive.shtml> [Accessed on 1 April 2010]



Fig.262: Shahr-i Sabz, detail of a blind arched niche of the remaining main portal of the Āq Sarāy, September 2006
Source: Author's photograph



Fig.263: Shahr-i Sabz, detail of the decoration of the remaining main portal of the Āq Sarāy with a corner *guldasta*, September 2006
Source: Author's photograph



Fig.264: Shahr-i Sabz, detail of the remaining main portal with a corner *guldasta* of the Āq Sarāy, picture taken from the roof, September 2006
Source: Author's photograph



Fig.265: Shahr-i Sabz, detail of the remaining main portal with a corner *guldasta* of the Āq Sarāy, September 2006
Source: Author's photograph



Fig.266: Shahr-i Sabz, detail of the tiling above the arched recess of the remaining main portal of the Āq Sarāy, September 2006
Source: Author's photograph



Fig.267: Shahr-i Sabz, detail of the remaining main portal of the Āq Sarāy, representing the square of the earth and the circle of the Heavens, September 2006
Source: Author's photograph



Fig.268: Shahr-i Sabz, original glazed tiles at the main portal of the Āq Sarāy, September 2006
Source: Author's photograph



Fig.269: Shahr-i Sabz, detail of the original glazed tiles at the main portal of the Āq Sarāy, also described by Clavijo, September 2006
Source: Author's photograph

Clavijo²⁸⁸ provides a description of the Āq Sarāy²⁸⁹:

“On Friday they [the ambassadors] were taken to see some great palaces, which the lord has ordered to be built, and they say that they have been working at them every day, for twenty years, and many workmen are still employed on them. These palaces had a long entrance, and **a very high gateway**. On each side there were arches of brick, covered with glazed tiles, and many patterns in various colours. These arches formed small recesses, without doors, and the ground was paved with glazed tiles. They are made for the attendants to sit on, when the lord is here.”

The arched recesses without doors (Fig.262,265,266) and the glazed tiles (Fig.268,269) can be still seen today. Clavijo²⁹⁰ continues:

“In front of the first entrance there was another gateway, leading to a **great court yard** paved with white stones and surrounded by **doorways** of very rich workmanship. **In the centre** of the court there was a **great pool of water**, and this court was three hundred paces wide. The court

²⁸⁸ Clavijo: *The Embassy*, 2005, p.124.

²⁸⁹ All indentations are mine.

²⁹⁰ *Ibid.*, p.124.

led to the body of the building, by a very broad and lofty **doorway**, ornamented with gold and blue patterns of glazed tiles, richly and beautifully worked.”

Clavijo uses the words “doorways of very rich workmanship” to describe the courtyard and he calls the entrance *īwān* to the main centrally domed building also a doorway, e.g. “a broad and lofty doorway”. We can assume that he refers to a four-*īwān* courtyard with the “doorways” being *īwāns*. This courtyard could have been most likely based on the cross-axial *čahār-bahr* pattern with a central “great pool of water”.

Golombek and Wilber²⁹¹ quote the historian Fasihi, who described Āq Sarāy as the “Green Dome” (*qubbat al-khadrā*), a reference to the palace of al-Mansur in Baghdad. Also a Persian poem on the entrance portal of Āq Sarāy mentions the *qubbat al-khudra*. This reference to Baghdad could have been in line with Tīmūr’s attempt to legitimise his reign based on the ideology that staged him as an heir to the ‘Abbāsīd Caliphate²⁹², which will be further discussed in the following chapters.

The dimensions of the central courtyard of the Āq Sarāy would have been impressive, restoration reconstituted from the micro relief shows that the courtyard was 120m-125m wide and 240m-250m long²⁹³. Unfortunately, the majority of the building substance was destroyed during the 16th c. AD by ‘Abdallāh Khān II, the amīr of Bukhārā, who was attempting to seize the Shaybānīd throne.

Clavijo²⁹⁴ provides a very vivid description of the doorway to the main palace, at the south end of the four-*īwān* courtyard, which must have been the entrance to the main sanctuary:

“On the top of this doorway there was the figure of a lion and a sun, which are the arms of the lord of Samarcand; and, though they say that Timour Beg ordered these palaces to be built, I believe that the former lord of Samarcand gave the order; because the sun and lion, which are here represented, are the arms of the lords of Samarcand; and those which Timour Beg bears, are three circles like O’s, drawn in this manner and this is to signify that he is lord of the three parts of the world.”

The above description summarises the essence of Āq Sarāy: it was meant to impress and it was the utmost architectural representation of Tīmūr’s ambition to be remembered and feared as the conqueror of the world and not only of Samarcand.

²⁹¹ Vol.III, p.141 in Golombek and Wilber: *Timurid Architecture*, 1988, p.272.

²⁹² Golombek, L.: “Discourses of an Imaginary Arts Council in Fifteenth-Century Iran”. In *Timurid Art and Culture: Iran and Central Asia in the Fifteenth Century*, ed. L. Golombek and M. Subtelny. Leiden: E.J. Brill, 1992.

²⁹³ http://www.advantour.com/jp/uzbekistan/shakhrisabz/ak_saray.htm [Accessed on 24 November 2008].

²⁹⁴ Clavijo: *The Embassy*, 2005, p.124.

IV.8.2 Dār al-Siyādat Ensemble (14th c.-15th c. AD), Shahr-i Sabz

IV.8.2.a Jahangir's Mausoleum (1375-1404 AD), Shahr-i Sabz

Tīmūr's firstborn son Jahangir²⁹⁵ (died 1372 AD) and father Amīr Taraghay²⁹⁶ are buried in Shahr-i Sabz. Jahangir's Mausoleum (1375-1404 AD) is situated in the south-eastern quadrant of the Tīmūrid city in the memorial complex Dār al-Siyādat ("Seat of Power and Might"). It is built in the courtyard of the Hazrat Imam Mosque (Fig.284,285), which is the burial place of the 8th c. AD imam from Iraq Hazrat-i Imam ("Holy Imam"). Jahangir's Mausoleum (Fig.270-283) is one of the earliest Tīmūrid buildings and is based on a cruciform plan with a conical dome. The domed cross-shaped sanctuary (*ziyarat khaneh*) has four shallow arched niches (Fig.278-281). Although Clavijo²⁹⁷ calls Jahangir's Mausoleum a mosque, it should not be mistaken with the Hazrat Imam Mosque:

"The firstborn son of Timour Beg is also interred in this mosque, named Jehanghir. This mosque, with its chapels, was very rich, and beautifully ornamented in blue and gold, and within it there was a large court, with trees, and ponds of water."

The Dār al-Siyādat²⁹⁸ memorial complex was intended for the whole Tīmūrid dynasty and was founded after the untimely death of Tīmūr's eldest son, Jahangir, at the age of 20. Several years later, an extremely tall building, Jahangir's Mausoleum, was erected over the prince's grave with the help of craftsmen from Khorezm. Tīmūr's court chronicler, Yazdi, wrote²⁹⁹:

"On both the right and the left-hand side of the facade of that edifice he ordered that the building of makbarats (burial vaults) and new khazira should be completed for the emir-zade Jahangir and other descendants and nobles."

Although Khakimov³⁰⁰ states that "a vault intended for Tīmūr himself was located on the mausoleum's longitudinal axis beneath the conical dome", we should be very careful with the location of Tīmūr's tomb³⁰¹, since it is situated close to the Jahangir's Mausoleum but seems to be a separate structure, definitely away from the conical dome of the mausoleum. Yet, the discrepancy in the scale between the imposing Dār al-Siyādat memorial complex and the minute Tīmūr's crypt is puzzling.

²⁹⁵ Manz argues that Jahangir might not have been Tīmūr's firstborn son.

²⁹⁶ Taraghay was head of the Barlas tribe, a nomadic tribe that traced its origin to the Mongol commander Qarachar Barlas. Taraghay was the great-grandson of Karachar Nevian and, distinguished among his fellow-clansmen as the first convert to Islam, Taraghay might have assumed the high military rank which fell to him by right of inheritance; but like his father Burkul he preferred a life of retirement and study. Tīmūr's father had retired to a Muslim monastery.

²⁹⁷ Clavijo: *The Embassy*, 2005, p.123.

²⁹⁸ Khakimov: *The emerald city*, 2002.

²⁹⁹ Ibid.

³⁰⁰ Ibid.

³⁰¹ Covered below.

Tīmūr's second son, Umar Shaykh, who died at 29³⁰², is also buried in the Dār al-Siyādat complex. The Dār al-Siyādat buildings were destroyed when the forces of the Shaybānīd ruler 'Abdallāh Khān II entered Shahr-i Sabz in the second half of the 16th c. AD. Of the ground-level structures, only the mausoleum of Jahangir survived. The multi-chamber mosque of Hazrat-i Imam (Fig.284,285) with a domed hall and a painted raised veranda, was built next to it in the middle of the 19th c. AD. There were living quarters around the courtyard.



Fig.270: Shahr-i Sabz, tomb of Jahangir, restoration works in 1997
Source: Archnet [Accessed on 1 November 2009]



Fig.271: Shahr-i Sabz, tomb of Jahangir in 1924-25
Source: Ernst Cohn-Wiener, Archnet [Accessed on 1 November 2009]



Fig.272: Shahr-i Sabz, exterior view of the tomb of Jahangir in 1960
Source: Lisa Golombek, Archnet [Accessed on 1 November 2009]



Fig.273: Shahr-i Sabz, Jahangir's tomb, sarcophagus of Jahangir in the ziyarat khaneh, September 2006
Source: Author's photograph

Jahangir's tomb has a square cross-axial plan with four shallow arched recesses on each side (Fig.178-281) and a semi-octagonal niche that acts as a *mihrāb* to the west. According

³⁰² He was killed in 1393/1394 during the siege of the fortress of Kurd in Iran and his body was brought to Shahr-i Sabz from Shiraz.

to Golombek and Wilber³⁰³ the *ziyarat khaneh* was covered by three domes, an external tent dome on a high drum (which has been most likely destroyed), a conical brick dome on squinches (the one to be seen nowadays) (Fig.274) and a plaster shell of *muqarnas* ornament.



Fig.274: Shahr-i Sabz, tomb of Jahangir (1380-1404) , September 2006
Source: Author's photograph



Fig.275: Shahr-i Sabz, tomb of Jahangir, Kufic inscriptions on the exterior wall, September 2006
Source: Author's photograph



Fig.276: Shahr-i Sabz, detail of the exterior arched niches with *muqarnas* and current entrance to Jahangir's tomb, September 2006
Source: Author's photograph



Fig.277: Shahr-i Sabz, exterior arched niches with *muqarnas* and current entrance to Jahangir's tomb, September 2006
Source: Author's photograph

³⁰³ Golombek and Wilber: *Timurid Architecture*, 1988, p.276.

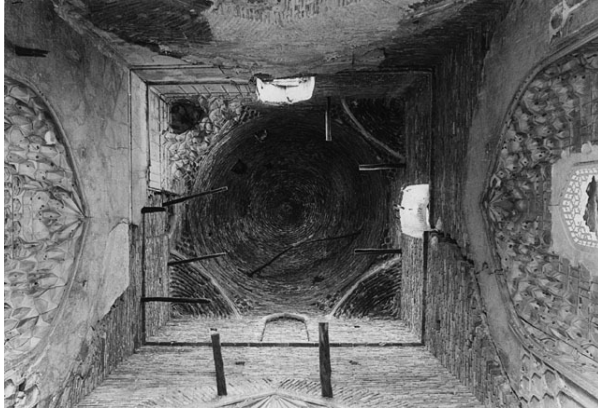


Fig.278: Shahr-i Sabz, interior view of tomb chamber showing dome with zone of transition with squinches in 1960
Source: Lisa Golombek, Archnet [Accessed on 1 November 2009]



Fig.279: Shahr-i Sabz, conical dome of the *ziyarat khaneh*, Jahangir's tomb, September 2006
Source: Author's photograph



Fig.280: Shahr-i Sabz, Jahangir's tomb, interior view of tomb chamber showing *muqarnas* crown of niche on wall in 1960
Source: Lisa Golombek, Archnet [Accessed on 1 November 2009]



Fig.281: Shahr-i Sabz, Jahangir's tomb, interior view of tomb chamber showing *muqarnas* crown of niche on wall in September 2006
Source: Author's photograph



Fig.282: Shahr-i Sabz, Jahangir's tomb, interior detail, brick squinch, 1960
Source: Lisa Golombek, Archnet [Accessed on 1 November 2009]



Fig.283: Shahr-i Sabz, Jahangir's tomb, detail dome squinches of the *ziyarat khaneh*, September 2006
Source: Author's photograph



Fig.284: Shahr-i Sabz, courtyard of the Hazrat Imam Mosque, Jahangir's tomb in the background, September 2006

Source: Author's photograph



Fig.285: Shahr-i Sabz, detail of the wooden capitals and ceilings of the Hazrat Imam Mosque, September 2006

Source: Author's photograph

IV.8.2.b Tīmūr's Crypt (14th c.-15th c. AD), Shahr-i Sabz

Tīmūr intended to be buried in Shahr-i Sabz, close to his father Amīr Taraghay, his spiritual advisor Shamsiddin Kulal and his sons. In 1933 a crypt was discovered 35m to the west of Jahangir's tomb, aligned with the central axis of its entrance *īwān* (Fig.292). It contained two unidentified corpses³⁰⁴. The crypt is believed to be built by Tīmūr for himself. Clavijo³⁰⁵ renders the following information about this building project of Tīmūr:

"There is also another great chapel, which Timour Beg has ordered to be built, for his own body, and it was not finished. They say that when he was here, a month ago, he did not like this chapel, saying that the door was low, and ordering it to be raised, and they are now working on it."

Clavijo visited Shahr-i Sabz on 28th August 1404, so we can assume that the construction of the crypt was going on at that time. Since Tīmūr died on 19th February 1405, it might be possible that the crypt remained unfinished and fell into oblivion after his death and subsequent burial in Gūr-i Amīr in Samarqand. The fact that Tīmūr was not buried in Shahr-i Sabz deprived the city of a potential pilgrimage shrine, which might have contributed to the prosperity of the city, as probably envisaged by Tīmūr.

The small jurta-shaped crypt (Fig.288,292) is built underground with a square plan and four axial arched recesses in the walls surrounding the sarcophagus (Fig.289-291), placed in the

³⁰⁴ <http://en.wikipedia.org/wiki/Shahrisabz> [Accessed on 1 April 2009]

³⁰⁵ Clavijo: *The Embassy*, 2005, p.123.

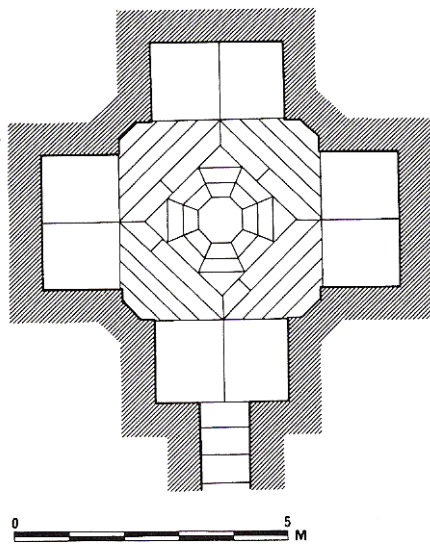
middle. The cruciform plan puts the crypt also in the group of anthropomorphic settings denoting the four corners of the world. However, the scale of the building is a bit puzzling given the grandeur projects of Tīmūr at that time. The miniature crypt does not represent the ambitions of Tīmūr as a world conqueror and its jurta proportions are rather suitable for a nomadic tribesman. We can try to explain this with the nomadic origin of Tīmūr and the fact that he always regarded Shahr-i Sabz as his home base, connected with the history of the Barlas tribe. It is also possible that the crypt was meant as part of a grandeur compound that was supposed to be erected on top of it and was not completed as a result of Tīmūr's death in 1405 AD. The interior consists only of simple slabs of white limestone and sandstone (Fig.290). The lack of any decoration, despite Koranic inscriptions (Fig.287) on the arches and details of Tīmūr's life on the sarcophagus, also points out to the unfinished state of the crypt.



Fig.286: Shahr-i Sabz, current entrance to Tīmūr's crypt, September 2006
Source: Author's photograph



Fig.287: Shahr-i Sabz, Tīmūr's crypt, inscription, September 2006
Source: Author's photograph



40. (Cat. No. 40) Plan of crypt



Fig.288: Shahr-i Sabz, Tīmūr's crypt, plan after Golombek and Wilber
Source: Golombek and Wilber: *Timurid Architecture*, 1988, Fig.40

Fig.289: Shahr-i Sabz, Tīmūr's crypt with the sarcophagus, September 2006
Source: Author's photograph

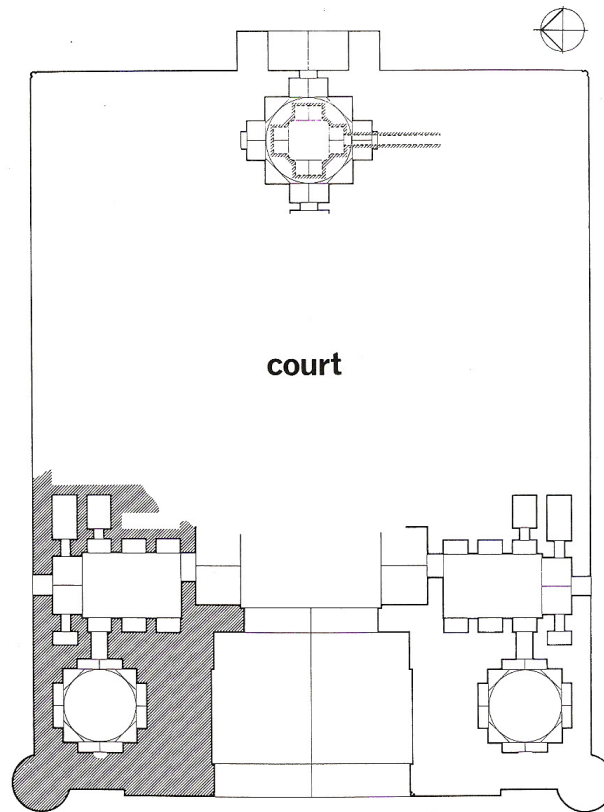


Fig.290: Shahr-i Sabz, staircase leading to Tīmūr's crypt, September 2006
Source: Author's photograph



Fig.291: Shahr-i Sabz, Tīmūr's crypt with the sarcophagus, September 2006
Source: Author's photograph

Another explanation can be that the crypt in Shahr-i Sabz was meant only for the heart of Tīmūr and not for his body. The entrails of Tīmūr might have been interred in Shahr-i Sabz and his body buried in Gūr-i Amīr in Samarqand. This separation of the heart and the body of great rulers was common in Europe during the Middle Ages. In this case, the heart was kept separately in an intimate tomb (i.e. in Shahr-i Sabz) and the body was buried in the imperial capital. With Tīmūr of course, the imperial capital was Samarqand.



39. (Cat. No. 40) Shahr-i Sabz. Dar al-Siyadah, mausoleum of Jahangir ("Hazrat Imam"). Plan

Fig.292: Shahr-i Sabz, plan of the Dār al-Siyādat Ensemble, Tīmūr's crypt at the top, Jahangir's Mausoleum at the bottom left after Golombek and Wilber

Source: Golombek and Wilber: *Timurid Architecture*, 1988, Fig.39

When he refers to Tīmūr's crypt, Clavijo³⁰⁶ calls it a "great chapel" and based on his description we can conclude that the crypt was intended as a chapel among several chapels within the "grand mosque", which was not completed during Clavijo's visit to Shahr-i Sabz in 1404; the Jahangir's tomb being the only remaining edifice of it nowadays. The importance of this "mosque" was also underlined by the fact that the ambassadors were directly "conducted to this mosque"³⁰⁷ upon their arrival in Shahr-i Sabz.

"This mosque, with its chapels, was very rich, and beautifully ornamented in blue and gold, and within it there was a large court, with trees, and ponds of water. In this mosque the lord gives twenty boiled sheep every day, for the souls of his father and son, who lie buried there."³⁰⁸

Although, there is no direct evidence about the layout of the courtyard of that mosque, we do have Clavijo's description according to which the chapels of Tīmūr, Jahangir and Amīr Taraghay, Tīmūr's father, belonged to the same building with a "large court". Golombek and

³⁰⁶ Clavijo: *The Embassy*, 2005, p.123.

³⁰⁷ Ibid., p.124.

³⁰⁸ Ibid., p.123.

Wilber³⁰⁹ state that “the two parts [Jahangir’s Mausoleum and Tīmūr’s crypt] were originally contained within a single building which had a central court” (Fig.292).

Given the distance of 35m between Tīmūr’s crypt and Jahangir’s Mausoleum and the reconstructed plan suggested by Golombek and Wilber (Fig.292), the whole courtyard compound must have been very impressive in its scale and was oriented along the ideal cardinal points. Most likely, there was a planned building above Tīmūr’s crypt with a similar imposing entrance *īwān*, which mirrored or even surpassed the entrance *īwān* to Jahangir’s Mausoleum. The other corner of the compound (to the right of the proposed plan by Golombek and Wilber) might have been meant for the mausoleum for Tīmūr’s son Umar Shaykh. In this way, the father Tīmūr would have occupied the main sanctuary along the longitudinal axes and the two sons would have been interred in the two corner mausolea, as symbolic watchers and pillars of the imperium built by Tīmūr. Tīmūr’s crypt would have occupied the holiest site, above which there might have been a planned mosque. The “mosque” in Shahr-i Sabz was probably conceived as an architectural representation of Tīmūr’s imperium, spreading along the four corners of the world, i.e. represented by the hierophany of the Cosmic Cross and oriented along the ideal cardinal points.

So far, this “imaginary” layout does resemble the layout of the Bībī Khānum Mosque in Samarqand, where there are three separate mosques with three entrance *īwāns* that form the interior of the four-*īwān* courtyard (the fourth *īwān* being the backside of the main entrance). Bībī Khānum was the greatest building project of Tīmūr and it was based on the four-*īwān* plan with the main sanctuary along the longitudinal axis. It does make sense that the second most important mosque in his empire, the “grand mosque” of Shahr-i Sabz would have had a similar plan. It might be that due to the unexpected death of Tīmūr, the chapel above Tīmūr’s crypt was never completed and what was meant as a two or a four-*īwān* courtyard remained unfinished.

³⁰⁹ Golombek and Wilber: *Timurid Architecture*, 1988, p.275.



Fig.293: Samarqand, Bībī Khānum Mosque

Source: <http://www.orexca.com/photogalleryfull/183> [Accessed on 1 November 2009]

Bābur, quoted by Golombek and Wilber³¹⁰, states that

“Tīmūr Beg also built in Kesh a college and a mausoleum, in which are the tombs of Jahangir Mirza and others of his descendants.”

Bābur refers to Jahangir’s tomb as a college, i.e. madrasa. In this case, the large courtyard, described by Clavijo might have contained a mosque and a funerary madrasa. This would even more support the hypothesis that it might have been based on the four-īwān plan, whereby the mosque and the madrasa would have had a separate entrance īwāns each.

IV.8.3 Dār al-Tilavah Ensemble (14th c.-15th c. AD), Shahr-i Sabz

The Dār al-Tilavah Ensemble (14th c.-15th c. AD) developed to the southwest of the Dār al-Siyādat Ensemble on the edge of an ancient cemetery. Tīmūr’s father Amīr Taraghay, who died in 1360/1361, was originally buried there³¹¹.

The ensemble consists of the Mausoleum of Shamsiddin Kulal, the Kōk Gunbad Mosque of Ulugh Beg and the Mausoleum of Ulugh Beg’s Descendants. Between the Dār al-Siyādat and the Dār al-Tilavah Ensembles, there was an old cemetery, where members of the local aristocracy and the clergy were buried³¹².

The Dār al-Tilavah memorial complex was formed after the death of the renowned religious leader Shamsiddin Kulal in 1370/1371. He was the Sufi spiritual mentor of Amīr Taraghay and of Tīmūr himself, and the teacher of Bahauddin *Naqšbandiyya*³¹³, the founder of the

³¹⁰ Golombek and Wilber: *Timurid Architecture*, 1988, p.277.

³¹¹ Khakimov: *The emerald city*, 2002

³¹² Ibid.

³¹³ The memorial complex of Bahauddin *Naqšbandiyya* is covered in Chapter IV.7.3.

Naqshbandiyya Sufi order. His grave immediately became a place of reverence and a pilgrimage site for his numerous disciples and followers.

IV.8.3.a Ulugh Beg's Congregational Mosque Kōk Gunbad (1435-1436 AD), Shahr-i Sabz

The Kōk Gunbad (Blue Dome) Mosque (Fig.296) was built opposite the mausoleum of Shamsiddin Kulal and on the same longitudinal axis in 1435-1436 AD³¹⁴. Thus, the mosque and the mausoleum form a "*kosh*"³¹⁵. An inscription on its portal indicates that the mosque was built by Ulugh Beg on behalf of his father, Shāh Rukh. It is also known as the Friday Mosque of Shahr-i Sabz. The few remaining tiles of the foundation inscription³¹⁶ include the phrase *hadha l-jāmi'* (this [is a] congregational mosque).



Fig.294: Shahr-i Sabz, Ulugh Beg's Kōk Gunbad Mosque as seen from the roof of the Āq Sarāy, September 2006
Source: Author's photograph

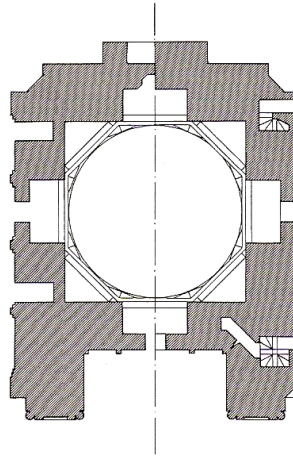


Fig.295: Shahr-i Sabz, Ulugh Beg's Kōk Gunbad Mosque (with the entrance iwān) as seen from the road in front of the Tīmūr's crypt, September 2006
Source: Author's photograph

³¹⁴ Dates provided by Golombek and Wilber: *Timurid Architecture*, 1988, p.279.

³¹⁵ The *kosh* as an important Tīmūrid urban model will be covered in the following Chapter V.

³¹⁶ O'Kane: *Timurid Architecture in Khurasan*, p.29, note 120.



42. (Cat. No. 42) Shahrīsabz. Dar al-
Tilāvah, masjid-i jami' Gok Gunbad.
Plan

Fig.296: Shahr-i Sabz, Ulugh Beg's Kök Gunbad Mosque, plan after Golombek and Wilber
Source: Golombek and Wilber: *Timurid Architecture*, 1988, Fig.42

The fact that Ulugh Beg and Shāh Rukh built the Congregational Mosque of Shahr-i Sabz, the summer capital of the Tīmūrid empire across a major Sufi tomb and that the mausoleum, adjacent to the Sufi tomb was intended for Tīmūrid descendants illustrates two very important trends. Firstly, the immediate descendants of Tīmūr constructed their most representative buildings as a *kosh* consisting of a Tīmūrid building (be it a mosque e.g. Kök Gunbad or a madrasa e.g. Ulugh Beg Madrasa in Samarqand and Shāh Rukh's madrasa close to the Citadel in Harāt) and a Sufi shrine (a *khānaqāh* e.g. on the Rigistān in Samarqand or a Sufi mausoleum). This represents their efforts to appeal to the increasingly more influential Sufis and to win them on their side in the battle for political and administrative dominance across the weakened post-Tīmūrid empire. Secondly, it was a clear signal to the masses, who paid their homage to the Sufi shaykhs, that the post-Tīmūrid rulers accepted and tolerated Sufi beliefs. In this way, the descendants of Tīmūr tried to win support and acceptance also among the lower social stratum, including also other ethnical non-Muslim minorities that tolerated Sufi beliefs.

The fact that the Kök Gunbad Mosque in Shahr-i Sabz is the only major mosque commissioned and built by Ulugh Beg speaks for the importance of this building project.



Fig.297: Shahr-i Sabz, entrance *īwān* of the Kōk Gunbad Mosque, September 2006
Source: Author's photograph



Fig.298: Samarqand, Bībī Khānum Mosque, entrance *īwān* to the main sanctuary, September 2006
Source: Author's photograph



Fig.299: Shahr-i Sabz, entrance *īwān* of the Kōk Gunbad Mosque, from northeast, 1960
Source: Lisa Golombek, Archnet [Accessed on 1 November 2009]



Fig.300: Samarqand, Entrance *īwān* to the Ulugh Beg Madrasa, September 2006
Source: Author's photograph



Fig.301: Shahr-i Sabz, backside of the Kōk Gunbad Mosque, September 2006
Source: Author's photograph



Fig.302: Shahr-i Sabz, Kōk Gunbad Mosque, south elevation showing the high drum and shallow dome 1924-1925
Source: Ernst Cohn-Wiener, Archnet [Accessed on 1 November 2009]



Fig.303: Shahr-i Sabz, detail of the arcade of the Kōk Gunbad Mosque, September 2006
Source: Author's photograph

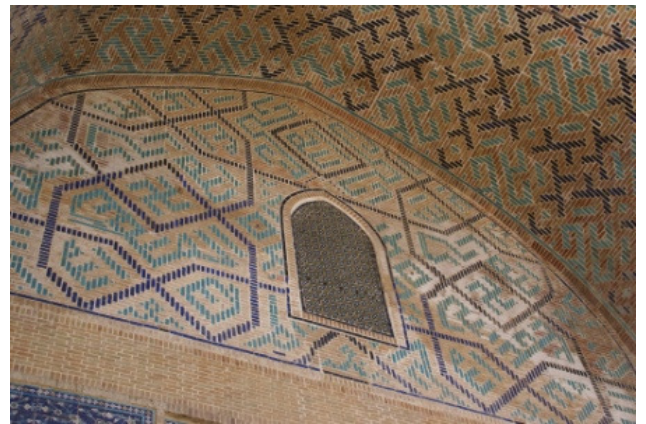


Fig.304: Shahr-i Sabz, detail Kufic inscription of the entrance ĩwān of the Kōk Gunbad Mosque, September 2006
Source: Author's photograph

Unfortunately, only the main sanctuary of the mosque with the *mihrāb* remains (Fig.296). The imposing entrance *ĩwān* (Fig.297,299) tries to repeat the monumentality of the entrance *ĩwān* to the sanctuary of the Bībī Khānum Mosque in Samarqand (Fig.298), however the proportions and the architectural scale are different. The mosque in Shahr-i Sabz is smaller and surrounded by other buildings (i.e. Shamsiddin Kulal's tomb and the Mausoleum of Ulugh Beg's Descendants), which affect its visual perception. Whereas, Tīmūr made sure that there were no other buildings casting their shadow upon his great mosque in Samarqand. We can conclude that the Kōk Gunbad Mosque was never intended as a grandeur architectural endeavour but as part of an architectural ensemble, a *kosh*. That is why, the scale of the dome and the entrance *ĩwān* fit with the scale of Shamsiddin Kulal's tomb and the mausoleum.

Herewith, a short remark is presented about the current restoration of the main entrance. When Golombek visited Shahr-i Sabz in 1960, she took a picture of the entrance *ĩwān* (Fig.299), from which we can see that the scale and the dimensions of the *ĩwān* were

different than the present restored version (Fig.297). The *īwān* from 1960 resembles more the main entrance *īwān* to the Ulugh Beg Madrasa in Samarqand (Fig.300): it is flanked with two bands with shallow niches and the tympanum is rather low. By placing two extra niches on each side and by increasing the height of the tympanum with a band of Koranic inscriptions (Fig.297), the current restorers have tried to allege the resemblance with the sanctuary *īwān* of the Bībī Khānum Mosque (Fig.298). Yet, the intended similarity between the two is rather dubious and alters the scale of the whole architectural ensemble of the *kosh* in Shahr-i Sabz as originally conceived by Ulugh Beg.



Fig.305: Shahr-i Sabz, entrance *īwān* of the Kōk Gunbad Mosque, September 2006
Source: Author's photograph

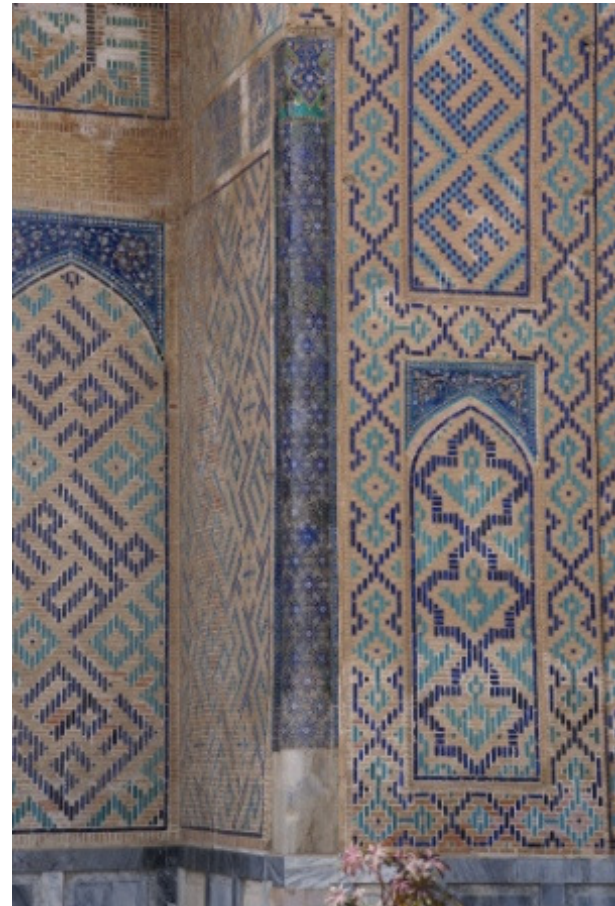


Fig.306: Shahr-i Sabz, detail Kufic inscription and mosaic entrance *īwān* of the Kōk Gunbad Mosque, September 2006
Source: Author's photograph



Fig.307: Shahr-i Sabz, entrance *iwān* and detail of the dome of the Kōk Gunbad Mosque, September 2006
Source: Author's photograph



Fig.308: Shahr-i Sabz, detail of the junction between the *iwān* and dome of the Kōk Gunbad Mosque, September 2006
Source: Author's photograph



Fig.309: Shahr-i Sabz, entrance *iwān* and dome of the Kōk Gunbad Mosque, September 2006
Source: Author's photograph



Fig.310: Shahr-i Sabz, detail of the entrance *iwān* of the Kōk Gunbad Mosque, September 2006
Source: Author's photograph



Fig.311: Shahr-i Sabz, Kufic inscriptions inside the entrance *iwān* of the Kōk Gunbad Mosque, September 2006
Source: Author's photograph



Fig.312: Shahr-i Sabz, Kufic inscriptions inside the entrance *iwān* of the Kōk Gunbad Mosque, September 2006
Source: Author's photograph



Fig.313: Shahr-i Sabz, dome of Kōk Gunbad Mosque, September 2006
Source: Author's photograph



Fig.314: Shahr-i Sabz, detail of the dome of Kōk Gunbad Mosque, September 2006
Source: Author's photograph

Measured from the centre of the building, the *mīhrāb* (Fig.315,316) and the north-western niche are oriented 280°N to the northwest, the north-eastern niche is 8°N to the northeast, the south-eastern niche is 94°N to the southeast and the south-western niche is 190°N to the southwest.



Fig.315: Shahr-i Sabz, *mihrāb* of Kōk Gunbad Mosque, September 2006
Source: Author's photograph



Fig.316: Shahr-i Sabz, detail of the *mihrāb* of Kōk Gunbad Mosque, September 2006
Source: Author's photograph



Fig.317: Shahr-i Sabz, detail of the side *īwān* recesses of the Kōk Gunbad Mosque, September 2006
Source: Author's photograph



Fig.318: Shahr-i Sabz, Koranic inscriptions of the Kōk Gunbad Mosque, September 2006
Source: Author's photograph



Fig.319: Shahr-i Sabz, detail side niches of the Kōk Gunbad Mosque, September 2006
Source: Author's photograph



Fig.320: Shahr-i Sabz, detail Koranic inscriptions of the Kōk Gunbad Mosque, September 2006
Source: Author's photograph

Against the *aniconism*³¹⁷, e.g. the Islamic rules of visual representations of living beings, the interior of the Kōk Gunbad Mosque is covered with square stuccos (Fig.321-324) representing paradisiacal scenes, water profusion and rich flora. Cypresses and palm trees are surrounded by birds. The trees are covered with juicy fruit. Some of these representations can be found on both sides of the *mihrāb*. This shows that the symbolism and the visual representation of Paradise had stronger traditions than the prescribed Islamic rules forbidding them.



Fig.321: Shahr-i Sabz, paradisiacal stuccos of the Kōk Gunbad Mosque, September 2006
Source: Author's photograph



Fig.322: Shahr-i Sabz, paradisiacal stuccos of the Kōk Gunbad Mosque, September 2006
Source: Author's photograph

³¹⁷ This term is coined by Allen: "In view of this likely division of sentiment, which contrasts with Byzantine iconoclasm, I prefer to term the Islamic phenomenon not iconoclasm, the rejection of images, but *aniconism*, the nonuse of images." Allen, T.: *Five Essays on Islamic Art*. Solipsist Press, 1988, p.20.



Fig.323: Shahr-i Sabz, paradisiacal stuccos of the Kök Gunbad Mosque, September 2006
Source: Author's photograph



Fig.324: Shahr-i Sabz, paradisiacal stuccos of the Kök Gunbad Mosque, September 2006
Source: Author's photograph

The ideally square plan and the four arched recesses on each wall architecturally relate Ulugh Beg's Mosque to Kulal's Mausoleum and the Mausoleum of Ulugh Beg's Descendants, situated across the road. All three buildings belong, thus, to the cross-axial square sanctuaries evoking the imagery of Paradise and representing the hierophany of the Cosmic Cross. Their four arched recesses represent the four gates of Paradise and their visual programme of plenitude recreates the abundance of the promised delights in the Hereafter.

IV.8.3.b Mausoleum of Shaykh Shamsiddin Kulal (1373-1374 AD) and Gumbazi-Sayidon, Mausoleum of Ulugh Beg's Descendants (1437-1438 AD), Shahr-i Sabz

In 1373-74 AD Tīmūr constructed a mausoleum for Shaykh Shamsiddin Kulal (Fig.325-327), a politically influential Sufi leader, a pir of the Bukhārān shaykh and the spiritual advisor of his father. The remains of Amīr Taraghay, who died in 1361 and was primarily buried in a family mausoleum³¹⁸, were then moved to the mausoleum of his Sufi mentor, opposite the Dār al-Tilavah Madrasa. During the reign of Tīmūr, Shaykh Shamsiddin Kulal's tomb was faced with slabs of onyx marble.

The original mausoleum had an orthogonal square plan (Fig.327) and four arched niches on each side which were open as doorways. The main entrance was to the west. The cruciform plan and the four open doorways puts also the Shamsiddin Kulal' mausoleum in the category of anthropomorphic cosmic buildings, denoting the four cardinal points, based on the hierophany of the Cosmic Cross.

³¹⁸ Barthold, 1958 quoted by Golombek and Wilber: *Timurid Architecture*, 1988, p.278.

Later, under the rule of Ulugh Beg, a domed mausoleum was erected over the site of the Shamsiddin Kulal's burial and on the remains of the earlier single-chambered and more modest building.

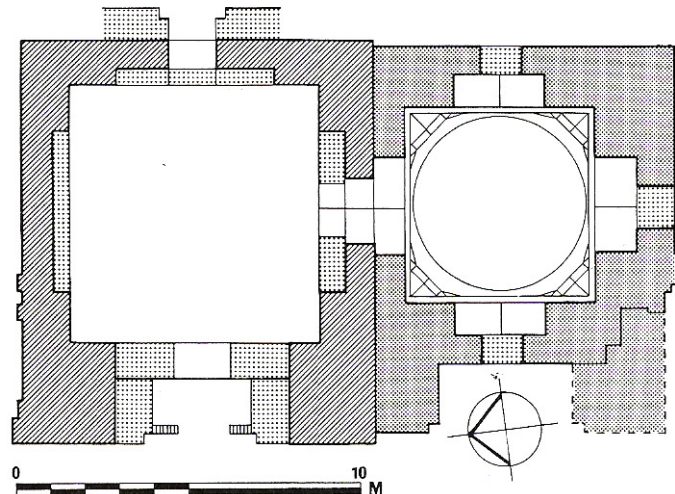
In the 17th c. AD a *khānaqāh* was built behind the Shamsiddin Kulal's mausoleum and all niches that were open as doorways were closed. Only the niche connecting to the Gumbazi-Sayidon was left open. Nowadays it is covered with a wooden screen (Fig.348).



Fig.325: Shahr-i Sabz, Shaykh Shamsiddin Kulal's mausoleum (to the left) and Gumbazi-Sayidon, Mausoleum of Ulugh Beg's Descendants (to the right), September 2006
Source: Author's photograph



Fig.326: Shahr-i Sabz, Shaykh Shamsiddin Kulal's mausoleum (to the left) and side view of the Gumbazi-Sayidon, Mausoleum of Ulugh Beg's Descendants (to the right), September 2006
Source: Author's photograph



41. (Cat. Nos. 41, 43) Shahr-i Sabz. Dar al-Tilavah, shrine of Shaykh Kulal and mausoleum of Ulugh Beg's descendants. Plan

Fig.327: Shahr-i Sabz, Shaykh Shamsiddin Kulal's Mausoleum (to the left) and Mausoleum of Ulugh Beg's Descendants (to the right), plan after Golombek and Wilber
Source: Golombek and Wilber: *Timurid Architecture*, 1988, Fig.41.

In 1437-1438 AD, approximately two years after the construction of the Kōk Gunbad Mosque, Ulugh Beg built a burial vault (*makbarat*) for the descendants and members of the Tīmūrīd clan, beside the south wall of the Shamsiddin Kulal's Mausoleum. Among the marble gravestones of the 15th c.-17th c. AD transferred to the burial vault at various times from the neighbouring cemetery, there are several examples that mention the names of the Termez Sayyids. Their burial explains the origin of the name of the second mausoleum, the Gumbazi-Sayidon³¹⁹ ("Dome of the Sayyids").

The dome of the Shaykh Shamsiddin Kulal's Mausoleum has been obviously rebuilt in the last ten years (Fig.328,329) without any Kufic inscriptions which do exist on the dome of the Gumbazi-Sayidon (Fig.332). Golombek and Wilber³²⁰ visited the site in 1960 and mention that the dome was replaced by a wooden roof at that time.

³¹⁹ Golombek and Wilber: *Timurid Architecture*, 1988, use the name "Gunbad-i Sayyidan", p.279.

³²⁰ *Ibid.*, p.278.



Fig.328: Shahr-i Sabz, dome of Gumbazi-Sayidon, Mausoleum of Ulugh Beg's Descendants (to the left), dome of the Shaykh Shamsiddin Kulal's mausoleum (in the middle) and dome of Kōk Gunbad (to the right), September 2006
Source: Author's photograph



Fig.329: Shahr-i Sabz, dome of Gumbazi-Sayidon, Mausoleum of Ulugh Beg's Descendants (to the left), missing dome of the Shaykh Shamsiddin Kulal's mausoleum and dome of Kōk Gunbad (to the right)
Source: http://www.visit-uzbekistan.com/uzbekistan/gallery.php?img=shakhrisabz_kok_gumbaz_1 [Accessed on 1 November 2009]



Fig.330: Shahr-i Sabz, Shaykh Shamsiddin Kulal's mausoleum, sarcophagus of Kulal, September 2006
Source: Author's photograph



Fig.331: Shahr-i Sabz, Shaykh Shamsiddin Kulal's mausoleum, sarcophagus and wall recesses, September 2006
Source: Author's photograph

The Mausoleum of Ulugh Beg's Descendants has also a square chamber and is oriented on an east-western axis; the portal facing west towards the Ulugh Beg's Kōk Gunbad Mosque. There are four deep arched recesses in the walls and according to Golombek and Wilber³²¹ these recesses were originally open and had a grillwork (*panjareh*).

³²¹ Golombek and Wilber: *Timurid Architecture*, 1988, p.280.



Fig.332: Shahr-i Sabz, Gumbazi-Sayidon, Mausoleum of Ulugh Beg's Descendants, detail of the dome with Kufic inscriptions of the *shahada*, September 2006
Source: Author's photograph



Fig.333: Shahr-i Sabz, Gumbazi-Sayidon, Mausoleum of Ulugh Beg's Descendants, detail of the dome tiling, September 2006
Source: Author's photograph

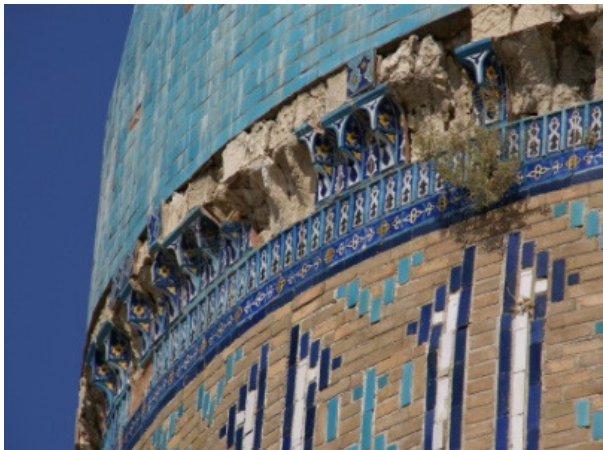


Fig.334: Shahr-i Sabz, Gumbazi-Sayidon, Mausoleum of Ulugh Beg's Descendants, detail of the dome, September 2006
Source: Author's photograph



Fig.335: Shahr-i Sabz, Gumbazi-Sayidon, Mausoleum of Ulugh Beg's Descendants, detail of the dome, September 2006
Source: Author's photograph

The inner dome rests on an octagonal squinch zone.



Fig.336: Shahr-i Sabz, Gumbazi-Sayidon, Mausoleum of Ulugh Beg's Descendants, detail of the interior dome, September 2006
Source: Author's photograph



Fig.337: Shahr-i Sabz, Gumbazi-Sayidon, Mausoleum of Ulugh Beg's Descendants, detail of the interior, squinch and arched recess, September 2006
Source: Author's photograph



Fig.338: Shahr-i Sabz, Gumbazi-Sayidon, Mausoleum of Ulugh Beg's Descendants, interior view of the backside of the entrance *īwān*, September 2006
Source: Author's photograph

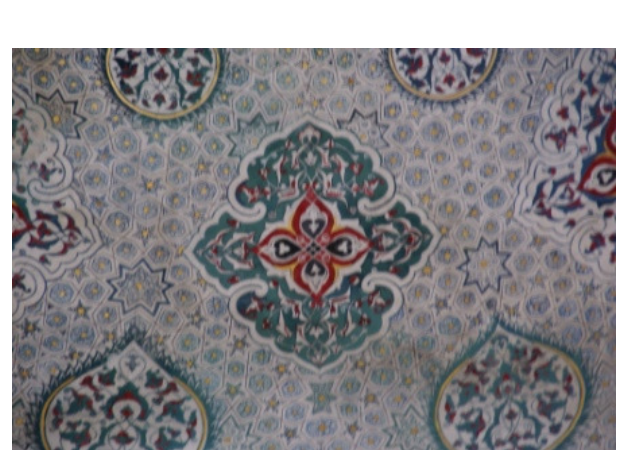


Fig.339: Shahr-i Sabz, Gumbazi-Sayidon, Mausoleum of Ulugh Beg's Descendants, details of the dome decoration, September 2006
Source: Author's photograph



Fig.340: Shahr-i Sabz, Gumbazi-Sayidon, Mausoleum of Ulugh Beg's Descendants, interior view of the three arched wall recesses, September 2006
Source: Author's photograph



Fig.341: Shahr-i Sabz, Gumbazi-Sayidon, Mausoleum of Ulugh Beg's Descendants, arched niche of the main entrance *īwān* and niche connecting with Shaykh Kulal's mausoleum, September 2006
Source: Author's photograph



Fig.342: Shahr-i Sabz, Gumbazi-Sayidon, Mausoleum of Ulugh Beg's Descendants, green glazed tiles along the walls, similar to the tiling in the Kōk Gunbad Mosque, September 2006
Source: Author's photograph



Fig.343: Shahr-i Sabz, Gumbazi-Sayidon, Mausoleum of Ulugh Beg's Descendants, green glazed tiles along the walls, similar to the tiling in the Kōk Gunbad Mosque, September 2006
Source: Author's photograph



Fig.344: Shahr-i Sabz, Gumbazi-Sayidon, Mausoleum of Ulugh Beg's Descendants, wall panel with floral ornaments, September 2006
Source: Author's photograph



Fig.345: Shahr-i Sabz, Gumbazi-Sayidon, Mausoleum of Ulugh Beg's Descendants, wall panel with floral ornaments, September 2006
Source: Author's photograph



Fig.346: Shahr-i Sabz, Gumbazi-Sayidon, Mausoleum of Ulugh Beg's Descendants, sarcophagi, September 2006
Source: Author's photograph



Fig.347: Shahr-i Sabz, Gumbazi-Sayidon, Mausoleum of Ulugh Beg's Descendants, sarcophagus, September 2006
Source: Author's photograph



Fig.348: Shahr-i Sabz, Gumbazi-Sayidon, Mausoleum of Ulugh Beg's Descendants, sarcophagi, niche with a wooden screen connecting with the Shaykh Kulal's mausoleum, September 2006
Source: Author's photograph



Fig.349: Shahr-i Sabz, Gumbazi-Sayidon, Mausoleum of Ulugh Beg's Descendants, sarcophagus, September 2006
Source: Author's photograph



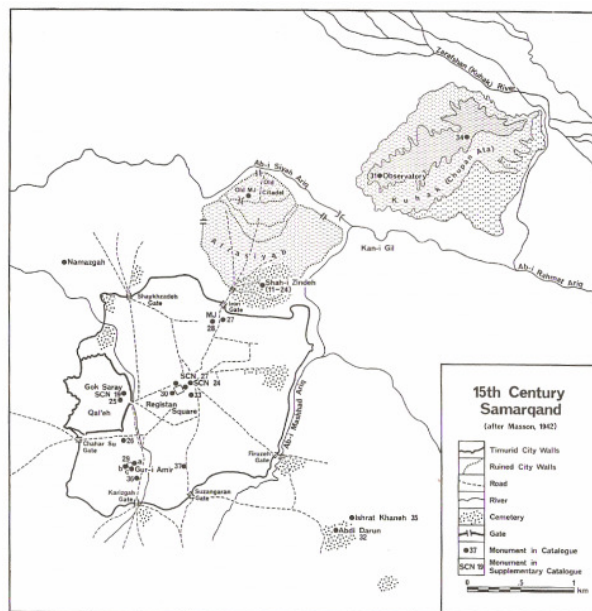
Fig.350: Shahr-i Sabz, Gumbazi-Sayidon, Mausoleum of Ulugh Beg's Descendants, cemetery in the backyard, September 2006
Source: Author's photograph



Fig.351: Shahr-i Sabz, Gumbazi-Sayidon, Mausoleum of Ulugh Beg's Descendants, cemetery in the backyard, September 2006
Source: Author's photograph

IV.9 Samarqand

Geographically, Samarqand is the capital of the province Transoxiana and has always been known for its plenitude and richness. Tīmūr was the first one to make it his capital and commission considerable urban renewal changes that will represent his megalomaniac idea of the perfect imperial city, based on his ideas of urban regularity³²². In 1370³²³ AD the outer city (the *rabad*), the whole territory to the south of the Afrasiyab (Fig.352,353), was surrounded by new massive city walls and a moat; with the new Citadel being erected to the west in 1371-1372 AD³²⁴. Samarqand, thus, acquired an almost square form, which was called “*hisar*” (fort). Eight gates³²⁵ were erected along the new city walls. Double gates were placed along the eastern and the southern city walls, in front of the first one, there was a bridge that led directly to the new Rigistān³²⁶. The main urban axes sprang from the northern gate, the Ahanin to the gate that lead to Bukhārā. As a result, the urban fabric, including markets, stalls and squares developed along this compositional axes.



Map 6. Samarqand (monuments)

Fig.352: Samarqand during the 15th c. AD after Golombek and Wilber
Source: Golombek and Wilber: *Timurid Architecture*, 1988, Map 6

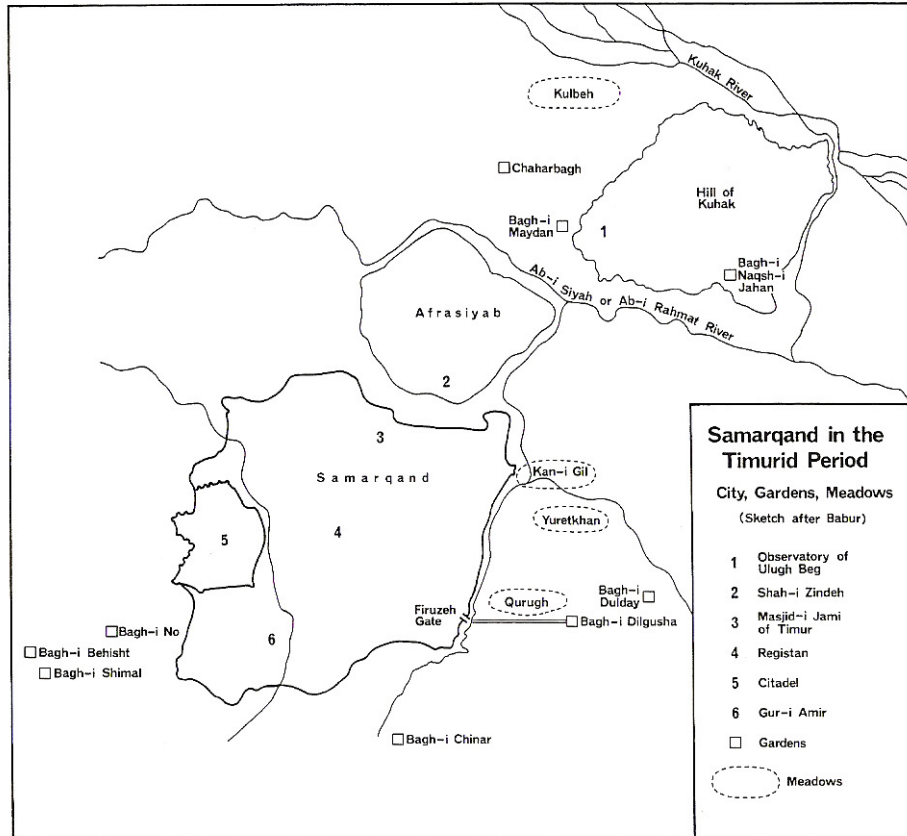
³²² Пугаченкова, Г.А.: *Архитектурное наследие Темура*. Ташкент: Главная редакция энциклопедий.1996, стр.50 (Pugachenkova, G.A.: *Timurid Architectural Heritage*. Tashkent: Main encyclopaedic editorial office, 1996, p.50)

³²³ Baranov et al: *Encyclopaedia*, 1969, p.277.

³²⁴ Arapov, A.: *Samarkand*. Tashkent: SAN'AT, 2004, p.22.

³²⁵ Pugachenkova: *Timurid Architectural Heritage*, 1996, p.50.

³²⁶ The current layout of the Rigistān Square, the Ulugh Beg Madrasa and *Khānaqāh* will be dealt with in Chapter V.4.1. on the *kosh* principle.



Map 7. Samarqand (city, gardens, meadows)

Fig.353: Samarqand in the Timurid Period after Golombek and Wilber
Source: Golombek and Wilber: *Timurid Architecture*, 1988, Map 7.

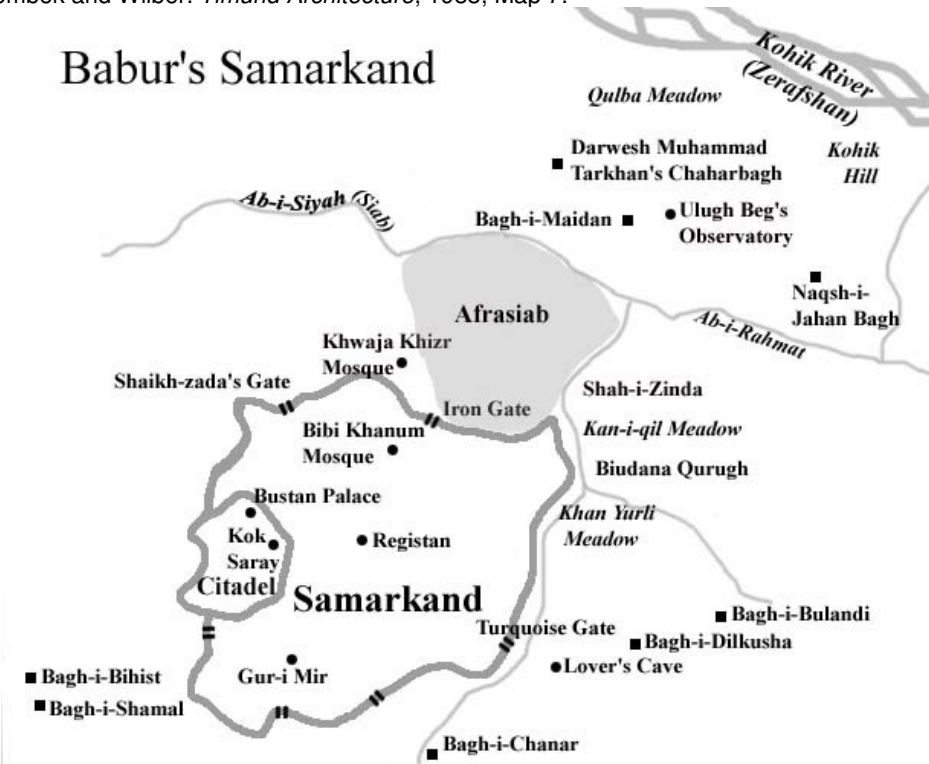


Fig.354: Samarqand at the time of Bābur
Source: http://depts.washington.edu/silkroad/maps/cities/Samarqand/Samarqand_Bābur.html [Accessed on 1 November 2009]

Clavijo³²⁷ reports extensively on Samarqand.

“This city is so large, and so abundantly supplied, that it is wonderful; and the name of Samarcand or Cimes-quinte is derived from the two words *cimes* great, and *quinte* a town...[...] The lord had so strong a desire to enoble this city, that he brought captives to increase its population, from every land which he conquered, especially all those who were skilful in any art...[...] they are said to have amounted to one hundred and fifty thousand persons, of many nations, Turks, Arabs, and Moors, Christian Armenians, Greek Catholics, and Jacobites, and those who baptize with fire in the face, who are Christians with peculiar opinions.”

The different ethnic groups living in Samarqand contributed to a diverse spectrum of beliefs, some of them religious, some of them still pagan. The Arabic traveller Ibn Khaukal³²⁸, who visited Samarqand in the second half of the 10th c. AD, wrote that one could see sculptural images of animals: horses, bulls, camels, wild goats, carved from cypress on squares. A wooden idol from the Sardova village, a carved column from the Obburdon village and a wooden altar from the Iskodar village (Upper Zeravshan) belong to the carving art monuments, which retain signs of Pre-Islamic traditions of fine arts.

In his memoirs *The Baburnama*, Bābur³²⁹ provides a vivid description of post-Tīmūrid Samarqand (Fig.354). What is important to the current thesis is that the “people are all Sunnīs and orthodox followers of religious law”³³⁰. It seems that by the time Bābur visited Samarqand in 1497 AD, the obvious signs of pagan beliefs were replaced or erased by Sunnī Islamic orthodoxy.

IV.9.1 Urban Changes Commissioned by Tīmūr

Two large four-storied buildings were erected by Tīmūr in Samarqand: the pavilion Kōk Sarāy (Fig.354) (which housed the state treasury, trophies³³¹, the prison and several workshops) and the Buston Sarāy - the royal residence, both were situated in the Citadel.

Tīmūr planned the urban layout of Samarqand very carefully. In order to visualise his ideas of wide streets and large markets, he ruthlessly destroyed most of the existing urban fabric in the *rabad*, even without reimbursing the owners. Samarqand was to become the “first city in the world”³³². The importance of Samarqand and the subordinate place of the other major Islamic capitals of that time is best exemplified by the fact that Tīmūr erected several villages

³²⁷ Clavijo: *The Embassy*, 2005, p.170.

³²⁸ Quoted by Ruziev, M.: *Traditional Decorative and Applied Arts of the Tajiks*. Electronic edition, http://arzhang.tajik.net/index.php?theme=5&id_lang=2 [Accessed on 21 Jan 2010]

³²⁹ Babur: *The Baburnama, Memoirs of Babur, Prince and Emperor*. Translated, edited and annotated by W.M.Thackston. New York: The Modern Library, 2002, pp.55-64.

³³⁰ Ibid., p.55.

³³¹ Including a throne, captures from the defeated Ottoman Sultan Bayezid I.

³³² Barthold: *Four Studies*. Volume I, p.60.

around Samarqand and named them after these capitals: Baghdad, Damascus, Misr (Cairo), Shiraz and Sultaniya³³³. In this sense, Samarqand was at the centre of the Islamic world and the splendour of the other Islamic capitals was metaphorically reduced to a village status.

IV.9.2 The Gardens of Tīmūr

The wealth of Samarqand was reflected in its gardens (Fig.353,354). Their abundance, scale and rich decoration were extensively described by Clavijo³³⁴ who visited the city in 1404 AD and by Yazdi in The *Zafarnama*.

“The city is surrounded on all sides by many gardens and vineyards, which extend in some directions a league and a half, in others two leagues, the city being in the middle...[On the south of Samarqand is the garden of paradise, and the plane tree garden. On the east is the heart delighting garden, from which there is a public avenue planted with trees, all the way to the turquoise gate]...[.].Another garden is named the miniature of the world. - Baber's Memoirs³³⁵.”

Samarqand was undoubtedly designed as Tīmūr's primary capital, i.e. as an imperial city representing his imperial prestige by constant appearance in paradisiacal backdrops. According to Golombek³³⁶, there is record of the following gardens:

- *Bagh-i Bihisht* (Paradise Garden) built in 1378 to the west of Samarqand. It combined twelve existing gardens, “as many as the zodiac” into one. There was a loft pavilion (*qasr*) erected in it. Tīmūr founded it in the name of his young new bride Tuman-Aka. Tīmūr visited the garden in 1399³³⁷ and 1404.
- *Bagh-i Shimal* (Garden of the North) already existed when in 1379 Tīmūr ordered the building of a palace (*qasr*) there, which he personally supervised. “Paradise abounds in the lapis of its inscriptions”. Golombek relates the structure of the palace to the Āq Sarāy in Shahr-i Sabz.
- *Bagh-i Buland* (The Exalted Garden) might be attributed to Tīmūr's wife Chulpan-Aka.
- *Bagh-i Chanar* (The Plane-Tree Garden) might be attributed to Tīmūr's chief wife Saray Malik Khānum.
- *Naqsh-i Jahan* (Image of the World) might be attributed to Tīmūr's wife Chulpan-Aka.
- *Bagh-i Dilgusha* (Heart's Delight Garden) was constructed in 1396 on the occasion of Tīmūr's marriage to Tukul Khānum, daughter of Khizr Khvajeh Khān Chaghatay in

³³³ Barthold.: *Four Studies*. Volume I, p.60.

³³⁴ Clavijo: *The Embassy*, 2005, pp.130-163.

³³⁵ Ibid., note 1 on pp.169-170.

³³⁶ Golombek, L.: “The Gardens of Timur: New Perspectives”. In *Muqarnas: An Annual on Islamic Art and Architecture*, ed. O. Grabar, Volume 12. Leiden: E.J. Brill, 1995, pp.137-147.

³³⁷ In 1399 Tīmūr came back from the campaign in India. In 1404 he came back from the campaign in Anatolia.

1397. It was suppose to supersede all other gardens ever built in Samarqand. Tīmūr visited it in 1399 and 1404.

- *Bagh-i Naw* was the last one, built after Tīmūr's return in 1404. Clavijo refers to it as the "New Garden". It might have been dedicated to Tīmūr's wives Munduz-Aka or Jawhar-Aka.

Golombek³³⁸ makes the very interesting observation that each dynastic marriage of Tīmūr was accompanied by the building of a garden. The importance of the respective garden, as recorded by the chronicles, reflects the interest of Tīmūr in the respective wife. All marriages, celebrated by the construction of paradisiacal gardens were used to legitimise Tīmūr's rule. It was through these marriages that Tīmūr gained the right to be called *gurgān*, "son-in-law" of the Mongol Khān. Saray Malik Khānum was the "lynchpin" as put by Golombek to Tīmūr's claim to legitimacy³³⁹, since she was the daughter of the Chaghatayid Khān Qazan and became Tīmūr's chief wife after the defeat of Amīr Husayn in 1370³⁴⁰; Saray Malik Khānum was most likely older than the thirty-four year old Tīmūr at that time. Tarkan-Aka was the granddaughter of the powerful chief of the Qara'unas clan and sister to Amīr Husayn. Dilshad-Aka represented the powerful Dughlat tribe of Moghulistan. Tuman-Aka, who was twelve-years old when she married the forty-two-year old Tīmūr, was daughter of the powerful Amīr Musa Taychiut. Chulpan Malik-Aka and Tukel Khānum were princesses.

It might be possible that the Paradise gardens around Samarqand were built as the home base of each of the chief wives, who were of course supposed to secure posterity. Tīmūr created the gardens not only as places for joy and profession of royal might but as a safe heaven for his posterity, which was supposed to be created in the in-turn created by Tīmūr Paradise settings. So, Tīmūr saw himself not only as a creator of places but also as a creator of posterity, legitimised by royal marriages and conceived in paradisiacal settings. However, the main and aging wife Saray Malik Khānum, who accompanied Tīmūr on most of his military campaigns never bore him a child and neither did the young Tuman-Aka. Another assumption is that Tīmūr married two types of women: those, like Saray Malik Khānum, who were previously married to an important ruler or young virgins, who were supposed to secure posterity. Further fact is that the chief wives who accompanied Tīmūr during his campaigns, to legitimise not only his rule but also the military deeds, such as Saray Malik Khānum and Tuman-Aka did not bear children. Three of Tīmūr's four sons Umar Shaykh, Mīrānshāh and Shāh Rukh were born by concubines.

³³⁸ Ibid., pp.142-145.

³³⁹ This issue will be further discussed in Chapter V.2.1.

³⁴⁰ When Tīmūr also took over his *harem*.

The names of the gardens had clear references to Paradise (e.g. *Bagh-i Bihisht* meaning Paradises³⁴¹, *Bagh-i Buland* meaning The Exalted Garden, *Bagh-i Dilgusha* meaning Heart's Delight Garden). So, the royal capital was conceived as the centre of the world, surrounded by paradisiacal gardens. It was exactly in these paradisiacal gardens, where the emperor not only conceived his posterity but spent most of his time and in which he welcomed his foreign guests. Thus, the gardens can be seen as the paradisiacal "dwelling" of Tīmūr, since he rarely visited his royal residences at Kōk Sarāy and Buston Sarāy, situated within the Citadel. The emperor resided in enormous pavilions and tents erected in the gardens and constantly moved from one to another.

O'Kane³⁴² summarises one such itinerary based on the descriptions of Clavijo in 1404:

"He [Timur] entered Samarqand in early August and stayed in the Bagh-i Chinar, making a visit to the madrasa of Muhammad Sultan to order a mausoleum to be built. [...] Meanwhile his wife Tuman Agha had been making her way back to Samarqand and had camped in the Bagh-i Bihisht, where he now joined her. Next, several days were spent in the Bagh-i Shumal, followed by supervision of the building of the tomb of Muhammad Sultan, i.e., the Gur-i Mir, including the construction of a small garden around it. From there he moved to the madrasa of Saray Malik Khanum, where as we have seen, he resided in tents in its courtyard to oversee the building of the Friday mosque. He then went in turn to the Bagh-i Chinar, the Bagh-i Dilgusha, and the Bagh-i Shumal."

O'Kane explains these constant moves of Tīmūr as a visual representation of his royal presence, since his entourage was accompanied by ceremonies and processions that also emphasised the ceremonial axes of the city. The royal presence was carefully staged and represented the imperial prestige. It might be also possible that the constant movement of the royal camp marked the territory of the empire. The ruler on the move can be analysed as a metaphor for the ubiquity of his power. Similar to God, the ruler is everywhere and his royal presence marks the territory as holy and sacred. Every move of the ruler and his royal tent attribute "divine presence" to the respective area. The royal tent can be analysed as a spatial representation of the *Axis Mundi*, which marks the centre of the world on macrocosmic level and the centre of the empire on a microcosmic level.

Further, it was the royal presence of Tīmūr that transformed the gardens into "a garden of paradise"³⁴³. These paradise gardens were most likely *čahār-bahrs*, based on an orthogonal

³⁴¹ Name, later adopted by one of the gardens of Shah Abbas in Isfahān.

³⁴² O'Kane: *From Tents to Pavilions*, 1993, p.253.

³⁴³ Thackston: *A Century of Princes*, 1989, p.89.

plan with four *īwāns*. The *Zafarnama*³⁴⁴ provides a very clear description of the building of the most splendid *Bagh-i Dilgusha* garden in 1396 AD to the east of Samarqand (see Fig.354):

“expert engineers and skilled builders, who had been gathered in the caliphal capital from every country and region, in accordance with the sublime command laid the foundation at an auspicious hour and under an auspicious ascendant for a four-sided garden, each side 1,500 cubits in length. In the middle of each of the four sides opened a lofty gateway, the arches of which surpassed the stalactited roof of the celestial sphere and which were ornamented with beautiful tile work of every description. [...] The garden was laid out geometrically with four-sided pathways (*guzar*), hexagonal and triangular plots. [...] In the middle [of the garden] the foundations were laid for a structure that comprised three tall arches and a sturdy dome lofty in station and stable in beauty and magnificence.”

In Samarqand, Tīmūr created concentric paradisiacal garden circles representing his omnipotence on urban scale. On the one hand, there is the outer circle of gardens and Tīmūr acting as their centre when residing in them in the central royal pavilions (e.g. an imaginary *Axis Mundi*). On the other hand, there is the city, with its regularity, main crossing roads and numerous markets, where Tīmūr administered justice and created magnificent buildings. The outer circle of gardens had temporary buildings – tents and pavilions, the inner circle of the imperial city had solid built mosques, madrasas, *khānaqāhs* and mausoleums.

Samarqand was staged as being in the centre of Paradise. And the Rīgistān, the most representational square, was in the centre of that city.

³⁴⁴ Ibid., pp.85-86.

IV.9.3 The Tīmūrid Rīgistān

The Tīmūrid Rīgistān was situated exactly in the middle of Samarqand, at the intersecting points of all roads and urban axes. The Rīgistān Square had gone through many architectural changes before its current layout was formed. In the 14th c. AD, the Rīgistān was the main market place (*čahār-suq*), which was the centre of trade in Samarqand during the reign of Tīmūr (1360-1405 AD). Six main streets radiated from the square³⁴⁵. The first building, a domed passage, was erected by the wife of Tīmūr, Tuman-Aka, at the beginning of the 15th c. AD.

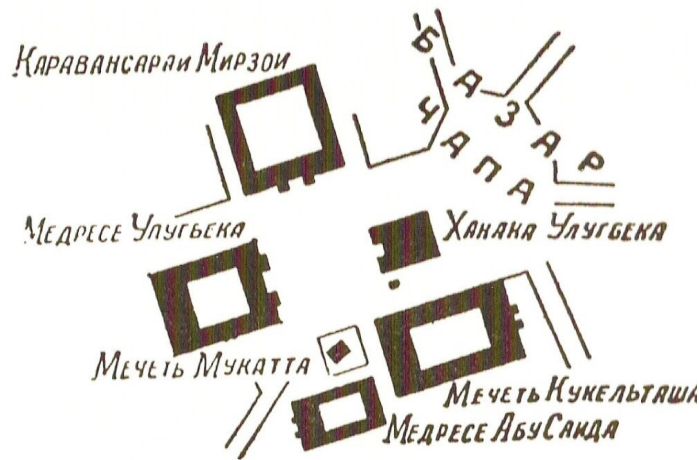


Fig.355: Samarqand, Rīgistān Square in the 15th c. AD after Pugachenkova and Rempel
Source: Brandenburg: *Samarkand*, 1966, p.157.

³⁴⁵ Pugachenkova: *Samarkand, Bukhara*, 1968, p.99.

Conclusion

All of the above presented cities have been imperial capitals which have several geometrical elements in common. They all have a rectangular (in the case of Harāt and Parthian Marv, a square) urban plan, divided into four quadrants by four main roads stretching between four gates in the middle of each city wall. These roads and the position of the gates are oriented along the ideal cardinal points. The streets are defined also by a geometrical grid and sometimes follow the natural flow of local rivers or canals, thus reinforcing the imagery of Paradise and the hierophany of the Cosmic Cross.

The citadel or the palace are located within the north-western part of the city wall and there is a special road that leads to the citadel.

The aristocracy and the clergy occupied the northern quadrants and the tradesmen occupied the southern quadrants of these cities. This means that the two orthogonal roads played also a role in the separation of the social strata in these imperial capitals.

In the centre of the intersecting orthogonal axes, represented by the roads, there is a (covered) market place, also with an orthogonal, cruciform plan.

In all of the discussed capitals, there are four-*īwān* mosques, madrasas and *khānaqāhs*, and cross-axial mausolea.

For any future references, it will be interesting to analyse all major Tīmūrid cities and compile a comprehensive study covering their urban plans, any four-*īwān* complexes and the orientation of their *mihrābs*. The current study is limited only to several cities and monuments on the territory of present-day Uzbekistan. That is why, due to time and format restrictions the current dissertation cannot cover all these examples.

V The Four-*Īwān* Kosh Principle

The *kosh* principle is an urban layout presumably unique to Central Asia, consisting of two large buildings that face each other, whereby, their main entrance *īwāns* are symmetrically aligned along the same compositional axis, leaving enough space for the creation of a square between them. Gangler, Gaube and Petruccioli³⁴⁶ date back the origin of the *kosh* to the mid 16th c. AD and name as a prototype the Kalyān Mosque (completed in 1514 AD) and the Mīr-i ‘Arab Madrasa (1535-1536 AD) in Bukhārā.

However, in the current thesis, the *kosh* will not be analysed as a separate architectural phenomenon typical only of Bukhārā but as an important architectural medium to represent power aspirations and religious affiliations across Central Asia. Furthermore, the special emphasis will be on the fact that the most important two-fold and three-fold *kosh* examples in Uzbekistan are based on the four-*īwān* plan. A two-fold *kosh* consists of two buildings situated across the same road. The three-fold *kosh* consists of three buildings around a square. An attempt will be made to classify the *kosh* compounds according to 1) their function (madrasa, mosque, *khānaqāh*) and 2) their situation in the urban fabric (*kosh* ensemble, *kosh* square). The purpose of the study is to present a broader array of examples that will illustrate the importance of the *kosh* in the medieval city of Central Asia starting from the 11th c. AD in Samarqand and continuing until the 19th c. in Khīva.

The selected buildings are, of course, already widely popular and have been analysed by the standard surveys carried out by the western scholars such as Golombek and Wilber³⁴⁷, O’Kane³⁴⁸ and by their Russian colleagues Pugachenkova³⁴⁹, Rempel³⁵⁰, Mankovskaya³⁵¹, Nemceva³⁵², Bulatov³⁵³. Yet, no one has pointed out the obvious fact that the four-*īwān* plan has been widely used throughout the *kosh* ensembles in Uzbekistan and that the mere urban classification of two buildings as a *kosh* does not necessarily illustrate the political and religious background in which the *kosh* has been established. Not to mention the fact that the majority of the *kosh* compounds were established through the centuries (i.e. the second or

³⁴⁶ Gangler, Gaube and Petruccioli: *Bukhara*, 2004, p. 113.

³⁴⁷ O’Kane: *Timurid Architecture*, 1987, p.19.

³⁴⁸ *Ibid.*, p.19.

³⁴⁹ Pugachenkova: *Samarqand, Bukhara*, 1968.

³⁵⁰ Rempel: *Architectural ornament of Uzbekistan*, 1961.

³⁵¹ Mankovskaya, L.Y.: *Typological Basis of the Architecture of Central Asia 9th-20th c.* Tashkent, 1980.

³⁵² Немцева, Н.Б., Шваб, Ю.З.: *Ансамбль Шах-и Зинда. Историко-архитектурный очерк.* Ташкент: Гафур-Гулям, 1979. (Nemceva, N.B., Schwab, J.Z.: *The ensemble of Shāh-i Zinda.* Historical-architectural survey. Tashkent: Gafur-Guliam, 1979.)

³⁵³ Булатов, М. С.: *Геометрическая гармонизация в архитектуре Средней Азии IX-XV вв.*, Москва Издательство Наука, 1978. (Bulatov, M.C.: *Geometrical harmonisation in the architecture of Central Asia 9-15th c.*, Moscow: Science publishing house, 1978.)

third *kosh* building was added much later). That is why, it is inappropriate from a historical point of view to analyse the *kosh* as a whole ensemble based only on the compositional urban solution of erecting two buildings across each other.

The architecture of the *kosh* unifies the two buildings (in the two-fold *kosh*) or the three buildings (in the three-fold *kosh*) and the urban space between them. Usually, the first *kosh* in a city is erected on the most prominent site, which can be either a sacred mausoleum or a martyr's site, that ascribe holiness to the city (e.g. Samarqand - *kosh* Shāh-i Zinda; Khīva - *kosh* Pahlavān) or the intersecting point of the two orthogonal axes that urbanistically define the cosmic city (e.g. Bukhārā - *kosh* Kalyān-Mīr-i 'Arab). The architecture of the two or three buildings that form the *kosh* can be conceived as a positive element and the architecture of the empty urban space between them as a negative element. When the *kosh* buildings are based on the four-*īwān* plan, the same paradigm is repeated within the courtyard of the four-*īwān* compound, in which the interior of the building (the positive) is perceived as exterior when viewed from within the courtyard (the negative). So, the rhythm and the symmetry of positive and negative architectural substance are conveyed both outside and inside the *kosh* ensemble.

The *īwāns* are the transitional zones, which architecturally define the flow: on the one hand, from the openness of the urban square, into the closeness of the building and on the other hand, from the openness of the courtyard into the closeness of the building itself. Peter³⁵⁴ compares the two *kosh* entrance *īwāns* facing each other across the street/square to concave elements of the positive substance (the building) and convex elements of the negative substance (the street/square). The *kosh* entrance *īwāns* also determine the boundaries of holiness. On the *kosh* square, the *īwāns* act as thresholds to the holy zone of the mosque, madrasa, *khānaqāh* or mausoleum as opposed to the profanity of the street. Once inside the compound, the courtyard *īwāns* also define the boundaries of holiness within the architectural ensemble, the *īwān* leading to the main sanctuary with the *qibla* wall being the holiest one. So, the *īwāns* mark and architecturally define the procession to the most sacred architectural element, the *mihrāb*.

The *kosh* façade is the most prominent façade of the building, which is most lavishly decorated. In few *kosh* ensembles, the two façades are symmetrical (e.g. Bukhārā, Madar-i Khān), in the majority, though, the two façades have different height, number of arched niches and floors (e.g. Bukhārā - Kalyān, 'Abd al-'Azīz Khān Madrasa). This architectural

³⁵⁴ Peter, B.: *Das Kosh-Prinzip in der Architektur*. Electronic edition: <http://www.kultur-in-asien.de/Usbekistan/architektur/kosh.htm> [Accessed on 19 August 2009].

phenomenon can be very well explained in the frame of the shorter-cycle theme *Boasting Façades* by Mekking³⁵⁵. The façades can be analysed as the architectural statements of the patrons. The terminology of “boastful” refers to the non-functionality of their height. Whereby, the main message is to impress the viewer and to represent the administrative or religious power of the patron, mainly within the local elite.

In general, the whole *kosh* principle is based on the representation and legitimisation of power. Necipoğlu³⁵⁶ analyses the Islamic architectural ensembles as symbols of power and defines three palatine paradigms. In the first one, the **palace-cum-mosque complex** that spread during the rule of the Umayyad and 'Abbāsīd dynasties, between the 7th and 8th c. AD, the palace (the *dār al-imāra*) was “juxtaposed to the congregational mosque, forming a single unit”^{357,358}. This paradigm represented the role of the caliph both as a monarch and a religious leader. The complex had a monumental courtyard with axially aligned *īwāns* and an imposing throne room, situated in most of the cases also in the most lavishly decorated and tallest *īwān* with a domed sanctuary.

In the second paradigm, which emerged during the 9th and 10th c. AD, the “sprawling extra urban palatine complexes” were “no longer attached to the congregational mosques”³⁵⁹. This new paradigm can be explained with the changed role of the 'Abbāsīd and later of the Fatimid caliphs, who lead only the Friday prayers in a ritual procession from the palace to the mosque in order to profess overtly their power.

The third paradigm is the urban setting of the **citadel-palace complex**, which emerged in the early 11th c. AD and spread with the Saljūqs in Iran, Iraq, Anatolia, Syria and Egypt. These citadels had a palace complex with administrative and residential functions, baths, barracks and a mosque. They represented the new Islamic reality, in which the urban citadel acted as a fortress to protect the military ruler from internal disputes and external armed attacks. Further, it represented the radical division between the political and religious functions that were earlier unified in the figure of the caliph. In this case, the rulers also “sought to span the gap between themselves and the populace by sponsoring foundations that serviced the population”³⁶⁰. As a result, the post-Saljūq rulers endowed charitable foundations such as madrasas and *khānaqāhs*, which were “often lined up along a processional avenue linked to

³⁵⁵ Mekking: *Architectural Representation of Realities*, 2009, pp.39-41.

³⁵⁶ Necipoğlu, G.: “An outline of shifting paradigms in the palatial architecture of the pre-modern Islamic World”. In *Ars orientalis* 23: 1993, pp.3-24.

³⁵⁷ Ibid., pp.5-6.

³⁵⁸ Please see Chapter IV.4.1.

³⁵⁹ Ibid., p.6.

³⁶⁰ Bacharach quoted by Necipoğlu, Ibid., p.12.

the citadel-palace”³⁶¹. They had a dual function: on the one hand, to praise the military ruler and financially secure his ancestors and on the other hand, to legitimise their power among the ‘*ulamā*’, the Sufi shaykhs and the public, which was mostly comprised of different cultural and social strata.

In the current dissertation I argue, that the ***kosh* ensemble** can be seen as a fourth non-palatial paradigm, representing the further developments and shifts in power in the Islamic world up to the 19th c. AD. The *kosh* was the tool both of the imperial ruler (Tīmūr: Bībī Khānum, Ulugh Beg: Rigistān) and the local aristocracy (khāns of Bukhārā and Khīva) to represent and legitimise their power. The *kosh* had two main characteristics: the location and the scale. The location was of primary importance as it represented the significance of the building defined by its position within the urban fabric, mostly at the heart of the *shahristan* or aligned with a holy mausoleum. Since most of the *kosh* ensembles emerged throughout the span of several centuries, a key factor was to build across an already existing building erected by a famous ruler or a dynasty. The location of the *kosh* legitimised the patron, his power and financial means, as he rivalled with the manifestation of power by a previous, established and celebrated ruler. The second characteristic of the *kosh*, the scale, served to legitimise the power of the patron in the eyes of the population, the ‘*ulamā*’ and the Sufi shaykhs. By erecting a broader façade or a larger and higher entrance *īwān*, the new patron, commissioning the second *kosh* building, showed off with their financial might and capacity to attract better and more skilful builders and to decorate with more spectacular ornamentation. In the case of the *madrassa-khānaqāh kosh* (built by Ulugh Beg in Samarqand and by Shāh Rukh and his amīrs in Harāt), the patron paid tribute both to the ‘*ulamā*’ and the Sufi shaykhs at the same time. The *kosh* was a political statement, acknowledging the religious power of the ‘*ulamā*’ and the arising economic and political power of the Sufis.

The majority of the four-*īwān kosh* ensembles were built on sites previously occupied by other sacred buildings. As such, the site was used in the frame of the *architectural palimpsest* and offered new rendering of religious views, both of orthodox Islam and Sufism. Some Sufi sites were used for *kosh* buildings of orthodox Islam and vice versa. The fact that building material of one building was reused for another (*kosh*) building can be analysed within the framework of the *architectural palimpsest* as well.

The *kosh* ensembles were erected on major urban axes that defined the market routes. These market routes were essential for the economies of the cities and were seen as the

³⁶¹ Ibid., p.13.

main representational arena of the political relations between local ruling dynasties and the growing economic and political power of the Sufi shaykhs.

The intersection of the longitudinal axis of the two-fold *kosh* ensembles and the axis of the trading routes formed a new urban *Axis Mundi*. This new *Axis Mundi* transferred the urban importance from the old palatial structures, defined by the citadel, to the new non-palatial structures, e.g. the *kosh* ensembles, that developed along the new trading routes. The citadel as an isolated domain of the ruler was substituted by the *kosh* ensembles erected by the ruler along commercial junctions, joining forces with the Sufi shaykhs. The rulers did not build isolated palaces anymore; instead they built religious institutions such as mosques, madrasas and *khānaqāhs* in the thriving economic centres of the new growing cities. These non-palatial compounds reflected the shifts of power from the old image of the ruler as a sole representative of God on earth to the pious ruler who needed the support of the multi-cultured population in order to avoid unrest, as well as the support of the economically influential Sufi shaykhs in order to secure the booming trade and its revenues and the support of the *‘ulamā* in order to promote their political ideology (including Sunni revival). Here it should be noted that Sufism and orthodox Islam coexisted peacefully and contradictory affiliations were quite common, given the close connection of *‘ulamā* to Sufism.

One of the most relevant questions is where and who built the first *kosh*. In my opinion, one of the first *kosh* complexes in Central Asia is formed by one of the oldest four-*īwān* madrasa, namely the Madrasa of Tabghach Bughra Khān from 1066 AD and the mausoleum of Quthām b. ‘Abbās in the Shāh-i Zinda complex in Samarqand³⁶². However, the madrasa has not survived. Nemceva³⁶³ convincingly describes it as a four-*īwān* building; Ettinghausen³⁶⁴ et al express their doubts about the four *īwāns*. Yet, the ensemble remains one of the oldest *kosh* examples. The other, more obvious examples in Central Asia should be the two-*īwān* madrasa and the cruciform domed *khānaqāh* of Gūr-i Amīr in Samarqand from around 1401³⁶⁵, followed by the four-*īwān* madrasa and cruciform domed *khānaqāh* of Ulugh Beg also in Samarqand from around 1420³⁶⁶, the latter two originally conceived as two buildings facing each other on the Rigistān Square.

³⁶² Please see Chapter V.1.1.

³⁶³ Nemceva and Schwab: *Shāh-i Zinda*, 1979.

³⁶⁴ Ettinghausen et al: *Architecture of Islam*, 2001, pp.314-315.

³⁶⁵ Please see Chapter V.5.1.

³⁶⁶ Please see Chapter V.4.1.

V.1 The Two-fold *Kosh*: Madrasa versus Mausoleum

V.1.1 Madrasa of Tamghach Bughra Khān (1066 AD) versus the Mausoleum of Quthām b. ‘Abbās (11th c.-14th c. AD), Samarqand

The royal *Hanafi* Madrasa of Tamghach Bughra Khān from 1066 AD (Fig.357) at the Shāh-i Zinda Complex (Fig.356) in Samarqand was located at the southern end of the Citadel of Afrasiyab (Fig.353,359), directly across the alley from the Mausoleum of Quthām b. ‘Abbās. During the 11th-12th c. AD, the Mausoleum of Quthām b. ‘Abbās was the main sanctuary of Samarqand. It is possible³⁶⁷ that at that period the pilgrimage to the mausoleum was equivalent to the *hadj* in Mecca.

In the 11th-12th c. AD the Madrasa of Tamghach Bughra Khān and the Mausoleum of Quthām b. ‘Abbās formed the holiest site within the Medieval centre Afrasiyab, including the holy Islamic pilgrimage site (the mausoleum), the royal madrasa and the first Qarakhānid necropolis of the city’s religious and secular elite. The madrasa and the mausoleum defined the main architectural north-southern axis of Afrasiyab, which was later substituted by the Tīmūrid east-west main road. During the Mongol invasion in 1220 AD the population of Afrasiyab was killed and parts of the madrasa were probably destroyed. Only the Mausoleum of Quthām b. ‘Abbās remained intact.

The Madrasa of Tamghach Bughra Khān was constructed by Ibrahim bin Nasr Tamghach Bughra Khān, the first Turkish ruler (1040-1068 AD) of the Qarakhānids. He was the first khān of the Western Khānate who proclaimed Samarqand almost immediately as his capital³⁶⁸. There are two *waqf* documents from 1066 AD³⁶⁹ that describe the foundation of the Tamghach Bughra Khān; one of them was discovered in Alexandria, Egypt. This fact only underlines the importance of the royal madrasa. According to the *waqf*, the madrasa offered religious (studies of the Koran and the *hadīth*) and secular (literature, ethics) education. The *waqf* also describes the rooms in the madrasa: a mosque, a *darskhana* (room for the studying of the *Sharī‘a*), a large room for Koran readings, not very large *hujras*, a library, a courtyard and a garden.

³⁶⁷ Немцева, Н. Машада Кусама, сб. Культурные ценности -2004-2006. Санкт –Петербург, 2008 г. (Nemceva, N.: *Mashad Qusam in Samarqand*. Edition Cultural values -2004-2006. Sanct Petersburg, 2008)

³⁶⁸ Nemceva, N.: *Mashad Qusam*

³⁶⁹ Большаков, О.Ф.: “Два вакфа Ибрахима Тамгач-хана в Самарканде”. *Страны и народы Востока*, 1971, с.172. (Bolshakov, O.F.: “Two waqf of Ibrahim Tamghach Khan in Samarkand”. In *Countries and people of the East*, 1971, p.172) quoted by Nemceva.

The Tamghach Bughra Khān Madrasa was extensively excavated and studied by Nemceva³⁷⁰ in the 1970s. The main eastern façade (44m wide) was aligned with the entrance to the Mausoleum of Quthām b. ‘Abbās (Fig.357). Remnants (of approx. 0,7m-2,8m) of the south-eastern quadrant give the madrasa's approximate measurements and architectural elements. Built of brick (*kirpich*), the madrasa was rectangular with four rounded corner buttresses (*guldasta*) and a four-*īwān* courtyard (Fig.358). The exterior measurements were approximately 55m by 44-45m. The entrance *īwān* to the east was flanked by three blind niches decorated with brick bonding. The *īwān* was decorated with terra cotta Naskhi inscriptions and framed a small porch which lead to the four-*īwān* courtyard. The courtyard measured approximately 30m by 20m and was lined with *hujras*. In the corners, there were square domed halls (*darskhana*, mosque, library also mentioned in the *waqf* from 1066).

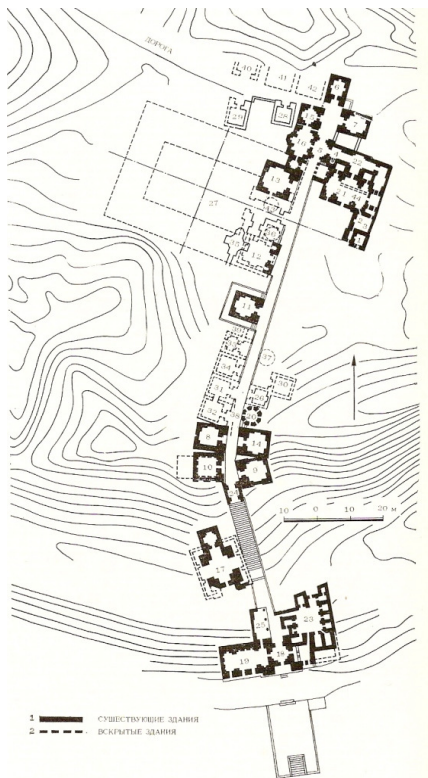


Fig.356: Samarqand, Shāh-i Zinda, plan of the complex after Nemceva
Source: Nemceva: *Shah-i Zinda*, 1979, p.19, Fig.22

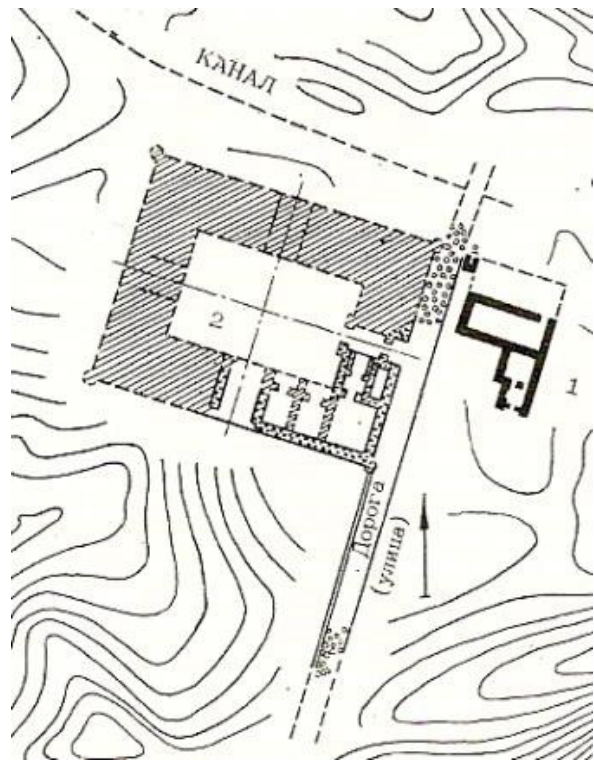


Fig.357: Samarqand, Shāh-i Zinda, plan of the *kosh* Tamghach Bughra Khān Madrasa and Quthām b. ‘Abbās Mausoleum after Nemceva
Source: Nemceva: *Shah-i Zinda*, 1979, p.29, Fig.27

³⁷⁰ Nemceva and Schwab: *Shāh-i Zinda*, 1979.

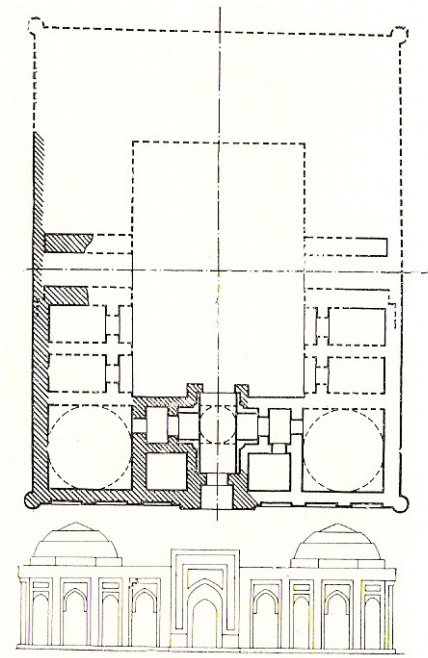


Fig.358: Samarqand, Shāh-i Zinda, plan and façade of the Tamghach Bughra Khān Madrasa 11th c. AD after Nemceva
Source: Nemceva: *Shah-i Zinda*, 1979, p.42, Fig.36

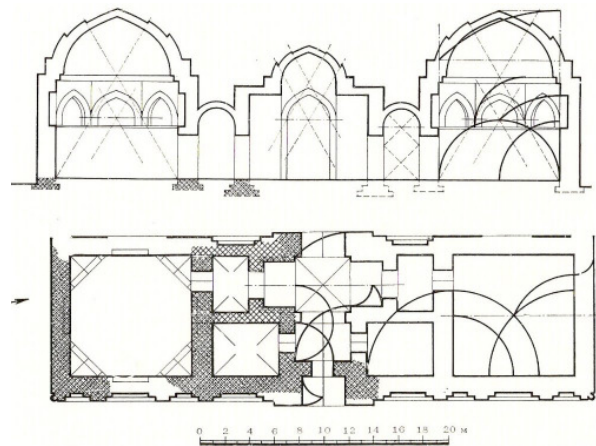


Fig.359: Samarqand, Shāh-i Zinda, reconstruction of the eastern façade of the Tamghach Bughra Khān Madrasa 11th c. AD, plan and cross section after Nemceva
Source: Nemceva: *Shah-i Zinda*, 1979, p.94, Fig.108, 109

In the second half of the 14th c. AD the first major Tīmūrid restoration and extension of the funerary complex Shāh-i Zinda took place. On the site of the Qarakhānid necropolis above the grave of Quthām b. ‘Abbās, a new Tīmūrid one-chamber domed mausoleum was built (Fig.385). Although there are no direct references to the cult of Quthām b. ‘Abbās during the 14th c. AD, it might be possible that the importance was shifted to the several royal tombs that were erected during the 1380s and 1390s. These tombs were mainly for the female relatives of Tīmūr and his amīrs. It is recorded in *The Zafarnama*³⁷¹ that Tīmūr visited the grave of Quthām b. ‘Abbās on a Wednesday in 1399 after he came back from the campaign in India.

During that period building material from the Qarakhānid ensemble from the 11th-12th c. AD was reused in the mausoleum of amīr Burunduk (Fig.362) and parts of the south-eastern corner of the Madrasa Tamghach Bughra Khān were integrated in the mausoleum of the Unknown II from the 14th c. AD (Fig.360,361,363,369,370). This process is exemplary for the *architectural palimpsest*, in which the importance of one building is transformed onto another by reusing the building material and by redeveloping the building site for key buildings of the new ruling dynasty. In this way, the legitimacy of the Tīmūrid amīrs and the importance of the

³⁷¹ Golombek: *The Gardens of Timur*, 1995, note 33.

Tīmūrīd Turkish ancestry is reinforced by reusing the same site of the royal Qarakhānīd madrasa of Tamghach Bughra Khān.



Fig.360: Samarqand, Shāh-i Zinda, Mausoleum of the Unknown I to the left and Mausoleum of the Unknown II to the right, 1976
Source: Williams, Archnet [Accessed on 1 November 2009]



Fig.361: Samarqand, Shāh-i Zinda, Mausoleum of the Unknown I and Mausoleum of the Unknown II, September 2006
Source: Author's photograph

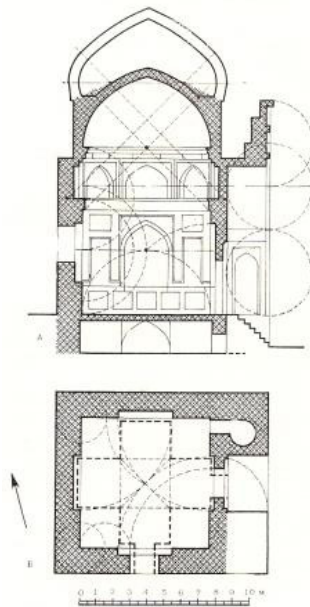


Fig.362: Samarqand, Shāh-i Zinda, plan and cross section of the amīr Burunduk Mausoleum after Nemceva
Source: Nemceva: *Shah-i Zinda*, 1979, p.123, Fig.156

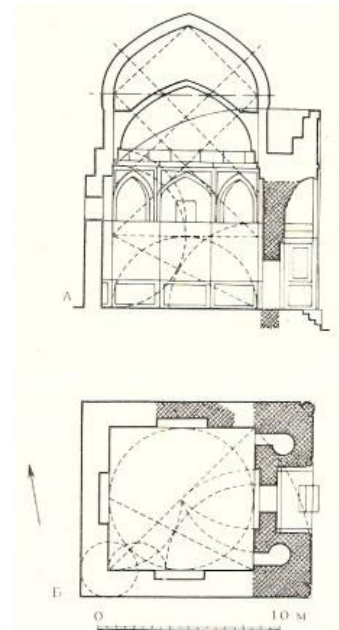


Fig.363: Samarqand, Shāh-i Zinda, plan and cross section of the Unknown II Mausoleum after Nemceva
Source: Nemceva: *Shah-i Zinda*, 1979, p.121, Fig.155



Fig.364: Samarqand, Shāh-i Zinda, Mausoleum of the Unknown I, restored, September 2006
Source: Author's photograph



Fig.365: Samarqand, Shāh-i Zinda, Mausoleum of the Unknown I, main entrance *iwān*, restored, September 2006
Source: Author's photograph



Fig.366: Samarqand, Shāh-i Zinda, Mausoleum of the Unknown I, majolica detail on the main entrance *iwān*, restored, September 2006
Source: Author's photograph



Fig.367: Samarqand, Shāh-i Zinda, Mausoleum of the Unknown I, majolica detail on the main entrance *iwān*, restored, September 2006
Source: Author's photograph



Fig.368: Samarqand, Shāh-i Zinda, majolica details, restored, September 2006
Source: Author's photograph



Fig.369: Samarqand, Shāh-i Zinda, Mausoleum of the Unknown II, main entrance *iwān*, restored, September 2006
Source: Author's photograph



Fig.370: Samarqand, Shāh-i Zinda, Mausoleum of the Unknown II, restored wall panel with stellar ornaments at the entrance, September 2006
Source: Author's photograph



Fig.371: Samarqand, Shāh-i Zinda, majolica restored wall panel, September 2006
Source: Author's photograph



Fig.372: Samarqand, Shāh-i Zinda, detail of the restored entrance *īwān*, built by Ulug Beg, September 2006
Source: Author's photograph



Fig.373: Samarqand, Shāh-i Zinda, general view from the south, September 2006
Source: Author's photograph



Fig.374: Samarqand, Shāh-i Zinda, general view from the south with the entrance *īwān* built by Ulug Beg, September 2006
Source: Author's photograph



Fig.375: Samarqand, Shāh-i Zinda, backside of the entrance *īwān* built by Ulug Beg, September 2006
Source: Author's photograph



Fig.376: Samarqand, Shāh-i Zinda, recent graves, September 2006
Source: Author's photograph



Fig.377: Samarqand, Shāh-i Zinda, double-domed mausoleum, September 2006
Source: Author's photograph



Fig.378: Samarqand, Shāh-i Zinda, double-domed mausoleum, dome of the *gurkhana*, September 2006
Source: Author's photograph

The role of the Mausoleum of Quthām b. ‘Abbās in the *kosh* ensemble at Shāh-i Zinda is enormous. The site is known as Mashhad Qusam³⁷² and is connected to the martyr death of Quthām b. ‘Abbās, who was a blood relative of the Prophet Muhammad. Qusam and Muhammad were presumably cousins. The real Quthām b. ‘Abbās came to Samarqand at the end of the 7th c. AD with the Arab armies. He was killed in Samarqand and was buried in the first Arabic burial place of Banu-Nahija in Afrasiyab in 667-677 AD. Banu-Nahija became the core of the Shāh-i Zinda necropolis and although it was known in the 12th c. AD, the only certainty we have is that it was not far away from the present Qusam complex.

The architectural complex of Quthām b. ‘Abbās acquired the status of a mashhad in the 11th c. AD, three centuries after the actual death of the one of the first Islamic missionaries. The “Mashhad” (a place of a martyr’s death) is a type of a pilgrimage site that evolved at the advent of Islam in Central Asia. The sites of mashhad starting gaining importance during the 11th-12th c. AD and were architecturally developed as part of the saint cults. The importance of the Mashhad Qusam was so prominent in the pre-Mongol history of Samarqand, so that the term “mashhad” was used to describe the city’s geology. The south gate of Afrasiyab, the Kesh Gate, was known in the 11th-12th c. AD also as the Mashhad Gate, the canal in the south-eastern part of Afrasiyab is called until today Obi-Mashhad. The quarters to the south of Samarqand, where he was buried, were called Mashhad Qusam in the 11th-12th c. AD according to the *waqf* from 1066 AD. With the erection of the Tamghach Bughra Khān Madrasa in 1066 AD across the Mashhad Qusam Mausoleum, the previous pilgrimage site with its cult status gained also a state importance attested by the royal madrasa of the Qarakhānids and turned into the cultural and educational centre of Samarqand.

The archaeological excavations³⁷³ showed that there is no burial from the 7th c. AD in the *gurkhana* in the Mausoleum of Quthām b. ‘Abbās. Under the majolica cenotaph from the end of the 14th c. AD there are also no traces of a burial from the 11th c. AD when the mausoleum was first built. The real grave of Quthām b. ‘Abbās in the Banu-Nahija necropolis was obviously neglected as the time went by and the new site of the mausoleum gained the importance and the holy status of the actual burial place. What is more, the whole complex of Shāh-i Zinda that evolved around this fictional burial site became the most venerated and privileged necropolis in Samarqand. During the 11th-12th c. AD several monumental mausoleums of Samarqand shaykhs and possibly of Qarakhānid amīrs were erected in the vicinity of the Mashhad Qusam. Also during the Mongol reign, Mashhad Qusam was the

³⁷² Nemceva: *Mashad Qusam*, 2008.

³⁷³ Carried out by Nemceva in the 1970s, see also Nemceva: *Mashad Qusam*, 2008.

holiest site in Samarqand. Ibn Batuta³⁷⁴ reports that “every evening on Mondays and Fridays, the citizens of Samarqand visit the Mashhad Qusam. The Tartars also go there and bring gifts and money, even when the Tartars were still pagans, they did not change anything in this mausoleum and even started venerating it.”

The current Mausoleum of Quthām b. ‘Abbās has been built and rebuilt several times. The oldest remains are from the 11th c. AD when the main entrance was to the north, towards the canal that flew down that part of the city (Fig.386). This canal was still functioning in the 1330s when Ibn Batuta visited Shāh-i Zinda. The entrance used today (Fig.379-382) was established in the 15th c. AD. The complex includes a *gurkhana*, a *ziyarat khaneh* (Fig.389,391-396) and a mosque (remains of an older mosque were founded under the current mosque from the 15th c. AD) (Fig.383,384) and a small minaret (Fig.385). From the 11th c. AD until 1380s, there was an ebony cenotaph with silver corners in the *gurkhana* and three silver candelabras described also by Ibn Batuta. The stepped majolica cenotaph (Fig.397), which can be seen today in the *gurkhana*, is from the end of the 14th c. AD (Fig.385) and was built during the reign of Tīmūr. It mentions the death of Quthām b. ‘Abbās in 676/677 AD.



Fig.379: Samarqand, Mausoleum of Quthām b. ‘Abbās, entrance gates (1404-1405 AD), September 2006
Source: Author's photograph



Fig.380: Samarqand, Mausoleum of Quthām b. ‘Abbās, entrance gates (1404-1405 AD), detail, September 2006
Source: Author's photograph

³⁷⁴ Quoted by Nemceva: *Mashad Qusam*, 2008.



Fig.381: Samarqand, Mausoleum of Quthām b. ‘Abbās, detail inscription above the entrance gates (1404-1405 AD), September 2006
Source: Author's photograph



Fig.382: Samarqand, Mausoleum of Quthām b. ‘Abbās, detail inscription on the left entrance gate (1404-1405 AD), September 2006
Source: Author's photograph



Fig.383: Samarqand, Mausoleum of Quthām b. ‘Abbās, *mihrāb* in the mosque from the 14th c. AD, September 2006
Source: Author's photograph



Fig.384: Samarqand, Mausoleum of Quthām b. ‘Abbās, interior of the 14th c. AD mosque with the *mihrāb* at the back, September 2006
Source: Author's photograph

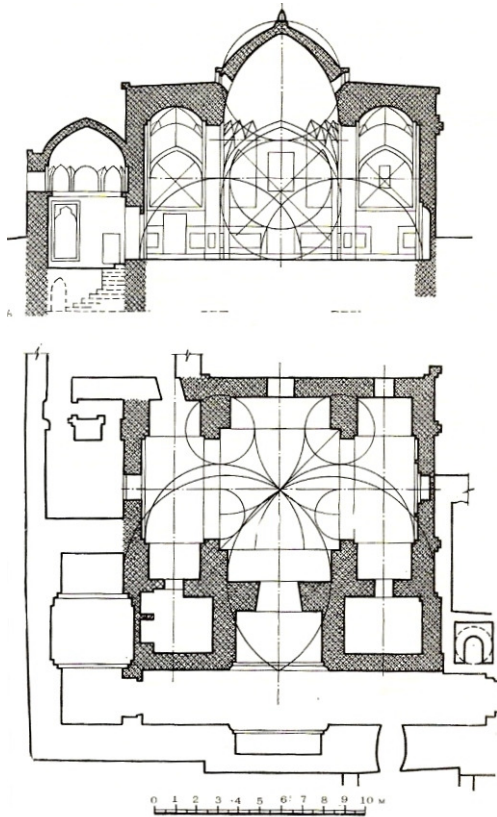


Fig.385: Samarqand, Shāh-i Zinda, 14th c. AD mosque of the Quthām b. ‘Abbās Mausoleum, cross section and plan after Nemceva
Source: Nemceva: *Shah-i Zinda*, 1979, p.90, Fig.102

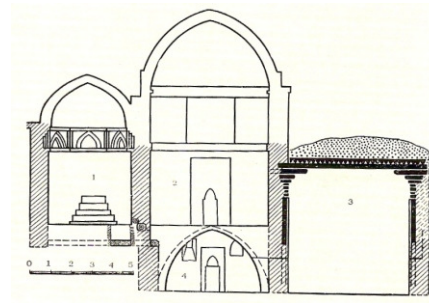


Fig.386: Samarqand, Shāh-i Zinda, reconstruction of the Quthām b. ‘Abbās Mausoleum in the 11th c. AD, cross section after Nemceva
1) *gurkhana*, 2) *ziyarat khaneh*, 3) 11th c. AD mosque, 4) *chiliakhana*
Source: Nemceva: *Shah-i Zinda*, 1979, p.37, Fig.33



Fig.387: Samarqand, Mausoleum of Quthām b. ‘Abbās, detail of an old presumably 11th c. AD beam in the mosque next to the *mihrāb* from the 14th c. AD, September 2006
Source: Author's photograph



Fig.388: Samarqand, Mausoleum of Quthām b. ‘Abbās, wooden console from the 11th c. AD, September 2006
Source: Author's photograph



Fig.389: Samarqand, Mausoleum of Quthām b. 'Abbās, dome detail of the *ziyarat khaneh*, September 2006
Source: Author's photograph

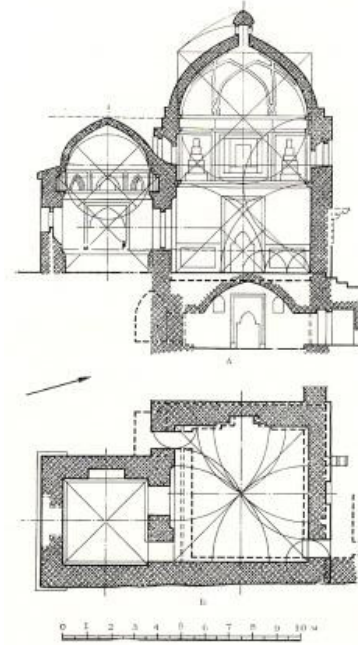


Fig.390: Samarqand, Shāh-i Zinda, 14th c. AD *gurkhana* and *ziyarat khaneh* of the Quthām b. 'Abbās Mausoleum, cross section and plan after Nemceva
Source: Nemceva: *Shah-i Zinda*, 1979, p.90, Fig.102

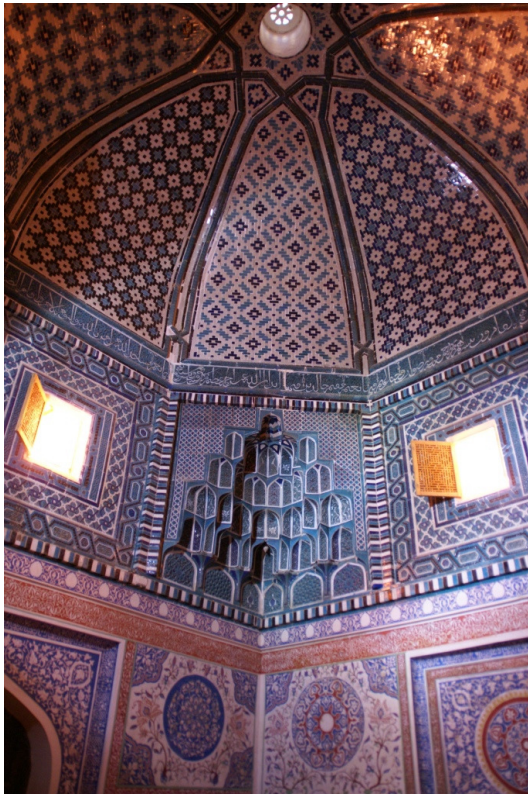


Fig.391: Samarqand, Mausoleum of Quthām b. 'Abbās, interior detail of the *ziyarat khaneh*, octagonal zone of transition with *muqarnas* squinch, September 2006
Source: Author's photograph



Fig.392: Samarqand, Mausoleum of Quthām b. 'Abbās, interior detail panelling of the *ziyarat khaneh*, September 2006
Source: Author's photograph



Fig.393: Samarqand, Mausoleum of Quthām b. ‘Abbās, wall detail of the *ziyarat khaneh*, September 2006
Source: Author's photograph



Fig.394: Samarqand, Mausoleum of Quthām b. ‘Abbās, wall detail of the *ziyarat khaneh*, September 2006
Source: Author's photograph

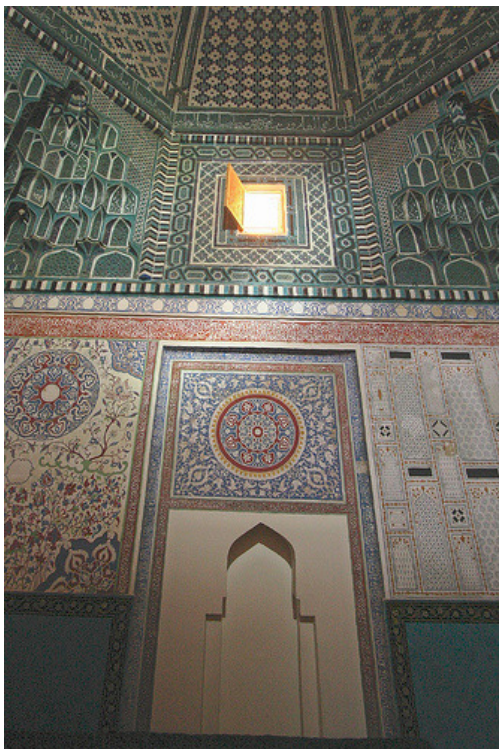


Fig.395: Samarqand, Mausoleum of Quthām b. ‘Abbās, *mihrāb* in the *ziyarat khaneh*, September 2006
Source: Author's photograph



Fig.396: Samarqand, Mausoleum of Quthām b. ‘Abbās, *mihrāb* in the *ziyarat khaneh*, September 2006
Source: Author's photograph



Fig.397: Samarqand, Mausoleum of Quthām b. ‘Abbās, Interior view of the stepped *gurkhana* cenotaph, 1987
Source: Author Roya Marefat, Archnet [Accessed on 1 November 2009]

V.1.2 Shergazi Khān Madrasa (1718-1726 AD) versus the Pahlavān Mahmūd Mausoleum (14th c.-16th c.), Khīva

The four-*īwān* Shergazi Khān Madrasa forms a *kosh* with the Mausoleum of Pahlavān Mahmūd (Fig.398,399), the latter being one of the most sacred buildings in Khīva, related to Khīva's patron saint Pahlavān Mahmūd. The Shergazi Khān Madrasa (1718-1726 AD) is located in the centre of the Ichan-Kala and is aligned with the entrance to the Pahlavān Mahmūd Mausoleum (Fig.402).



Fig.398: Khīva, *Kosh* of the Shergazi Khān Madrasa and the Pahlavān Mahmūd Mausoleum
Source: Google Earth [Accessed on 1 May 2009]



Fig.399: Khīva, *Kosh* of the Shergazi Khān Madrasa and the Pahlavān Mahmūd Mausoleum
Source: Author's photograph



Fig.400: Khīva, Pahlavān Mahmūd Mausoleum, aerial view
Source: <http://www.wk2005.de/Khiva/Pakhlavan-Mahmud.html> [Accessed on 24 March, 2010]

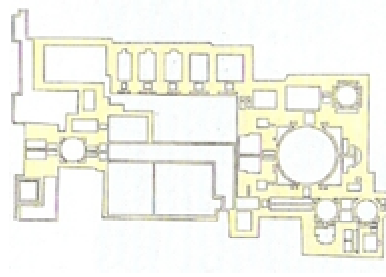


Fig.401: Khīva, Pahlavān Mahmūd Mausoleum, plan
Source: Madaminov et al: *Khiva*, 2001, p.68



Fig.402: Khīva, *Kosh* of the Shergazi Khān Madrasa (to the right) and the Pahlavān Mahmūd Mausoleum (to the left), September 2006
Source: Author's photograph



Fig.403: Khīva, Shergazi Khān Madrasa, entrance *kosh īwān*, September 2006
Source: Author's photograph

The Pahlavān Mahmūd Mausoleum (14th-16th c. AD) is known among the local population as Palvan Pir (holy patron) (Fig.400,401). It comprises a large complex containing the cruciform mausoleum itself, a *khānaqāh*, a mosque and a shelter for the pilgrims (Fig.401). There is also a summer mosque and rooms for reading the Koran (*karikhana*). The mausoleum was initially built as a small single-room structure above the real burial place of Pahlavān Mahmūd in the 14th c. AD Pahlavān Mahmūd was a venerated wrestler (*pehlavan*), a poet and a healer. In the course of time, a cemetery grew around his mausoleum which attracted many pilgrims (Fig.406,407). The main entrance *īwān* was built in the 17th c. AD at the southern end of the complex. The Pahlavān Mahmūd Mausoleum has become the most

venerated burial site of Khīva, where the dynasty of the Qungrat Khāns (*kungrads*) and other Khīva khāns have found their resting place until the 19th c. AD. The dome has the largest span in Khīva and dominates the skyline of the old city (Fig.405).



Fig.404: Khīva, Pahlavān Muhammad Mausoleum, dome dominating the Khīva skyline, September 2006
Source: Author's photograph



Fig.405: Khīva, Pahlavān Muhammad Mausoleum, dome exterior view, September 2006
Source: Author's photograph



Fig.406: Khīva, Pahlavān Mahmūd Mausoleum with adjacent tombs, 1987
Source: Roya Marefat, Archnet [Accessed on 1 November 2009]



Fig.407: Khīva, Pahlavān Mahmūd Mausoleum with adjacent tombs, September 2006
Source: Author's photograph



Fig.408: Khīva, Pahlavān Muhammad Mausoleum, adjacent tombs to the left of the main entrance, September 2006
Source: Author's photograph



Fig.409: Khīva, Pahlavān Muhammad Mausoleum, entrance īwān to the complex (to the right) with adjacent tombs, September 2006
Source: Author's photograph



Fig.410: Khīva, Pahlavān Mahmūd Mausoleum, courtyard with the entrance *īwān* to the main shrine, September 2006
Source: Author's photograph



Fig.411: Khīva, Pahlavān Mahmūd Mausoleum, entrance *īwān* to the main shrine, September 2006
Source: Author's photograph



Fig.412: Khīva, Pahlavān Mahmūd Mausoleum, courtyard with the carved wooden columns, September 2006
Source: Author's photograph



Fig.413: Khīva, Pahlavān Mahmūd Mausoleum, courtyard with water pool and arcade with blind niches to the left of the main shrine, September 2006
Source: Author's photograph



Fig.414: Khīva, Pahlavān Muhammad Mausoleum, inner dome of the main shrine, September 2006
Source: Author's photograph



Fig.415: Khīva, Pahlavān Muhammad Mausoleum, detail wall decoration of the main shrine, September 2006
Source: Author's photograph



Fig.416: Khīva, Pahlavān Mahmūd Mausoleum, sarcophagus chamber of Pahlavān Mahmūd, September 2006
Source: Author's photograph

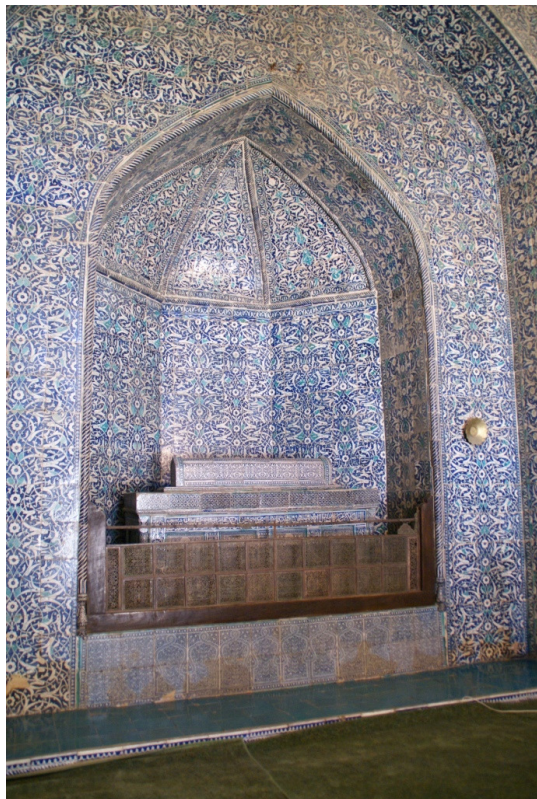


Fig.417: Khīva, Pahlavān Mahmūd Mausoleum, sarcophagus of Pahlavān Mahmūd, September 2006
Source: Author's photograph

Nowadays, the mausoleum is more popular than ever with thousands of pilgrims. Newly-weds also visit the shrine and pray for a long and happy marriage (Fig.418,419).



Fig.418: Khīva, newly-weds on their way to the Pahlavān Mahmūd Mausoleum, September 2006
Source: Author's photograph



Fig.419: Khīva, newly-weds on their way to the Pahlavān Mahmūd Mausoleum, September 2006
Source: Author's photograph

The four-*īwān* Shergazi Khān Madrasa was erected by slaves captured in 1718 AD by Shergazi Khān during his raid on Khurasan and Mashhad. Shergazi Khān promised to free the slaves after the construction of the madrasa was finished but did everything possible to delay the completion. Infuriated slaves killed Shergazi Khān in the uncompleted madrasa in 1720 AD. His Mausoleum is connected to the western corner of the madrasa's main façade, which makes the madrasa also a funerary madrasa. Shergazi Khān Madrasa is among the oldest and largest in Khīva. Its entrance (Fig.403) lies two meters below the street level due to the natural drop of the relief and the growth of cemetery layers next to the Pahlavān Mahmūd Mausoleum. The madrasa is one-and two-storey building (with two stories at the entrance) comprising a four-*īwān* courtyard, suite of vestibule rooms and a lecturing hall at the transverse axis of the antechamber.

V.2 The Two-fold *Kosh*: Madrasa versus Congregational Mosque

V.2.1 Bībī Khānum Congregational Mosque (1398-1405 AD) versus the Saray Malik Khānum Madrasa (1397 AD) and Mausoleum (early 15th c. AD), Samarqand

The Bībī Khānum Congregational Mosque (1398-1405 AD) (Fig.428) was built in memory of the mother of Tīmūr's Chingizid primary wife, Saray Malik Khānum³⁷⁵. However, in the majority of legends, the mosque was dedicated to the wife herself and not to her mother. Opposite the entrance of Bībī Khānum, Saray Malik Khānum erected a madrasa with a mausoleum (Fig.421). In the 16th c. AD the madrasa was destroyed by 'Abdallāh Khān³⁷⁶ and only the domed mausoleum of Saray Malik Khānum remains until present (Fig.422). Although the entrance façades of the mosque and the madrasa are not on the same compositional axis, the two buildings were conceived as a *kosh* (Fig.420). Apart from the family dedications, the Bībī Khānum Mosque became the largest and the most ambitious building project of Tīmūr that materialised during his lifetime and can be still visited today.



Fig.420: Samarqand, aerial view of the *kosh* of the Bībī Khānum Mosque (to the left) with the Khānum's Mausoleum (to the right)

Source: Google Earth [Accessed on 1 October 2009]

Both the mosque and the madrasa are courtyard compounds with the main sanctuary on the longitudinal axis. Bībī Khānum has a four-*īwān* plan with three mosques: the largest forming the sanctuary and two smaller ones (to the north and to the south) along the perpendicular axis. Each mosque is based on a cruciform plan with a square domed interior defined by four

³⁷⁵ Clavijo: *The Embassy*, 2005, pp.280-281.

³⁷⁶ Golombek and Wilber: *Timurid Architecture*, 1988, p.254.

axial arched recesses. The domes rest on high drums. The only surviving sanctuary of the Bībī Khānum Madrasa - her Mausoleum, is also based on a cruciform plan (Fig.421). Golombek and Wilber³⁷⁷ define it as a “*čhahār taq*”, the inner sanctuary has a square plan, surrounded by an octagonal exterior with four arched recesses (Fig.421,422).

According to Bulatov³⁷⁸, the proportions of the octagonal Bībī Khānum Mausoleum are identical with the proportions of Gūr-i Amīr. The proportions of the cylindrical drum of the cupola are also identical with the cupola proportions of the mausoleum of Tīmūr's second in rank wife Tuman-Aka (1405-1406 AD) at Shāh-i Zinda (Fig.423,424), Gūr-i Amīr and the *gurkhana* cupola of the Ahmad Yasavi Shrine³⁷⁹ in Turkestan³⁸⁰ (built at the end of the 14th c. AD), all three major mausolea built by Tīmūr. The identical cupola design points out to the great importance of the above mausolea. The Mausoleum of Tuman-Aka was constructed almost at the same time as Gūr-i Amīr and it is possible that the same architects and builders were involved in the construction.

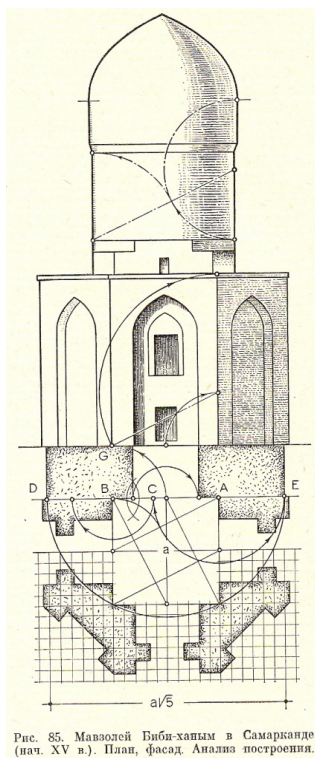


Fig.421: Samarkand, tomb of Bībī Khānum, plan and façade after Bulatov
Source: Bulatov: *Geometrical harmonisation*, 1978, p.175, Fig.85



Fig.422: Samarkand, tomb of Bībī Khānum, September 2006
Source: Author's photograph

³⁷⁷ Golombek and Wilber: *Timurid Architecture*, 1988, p.254.

³⁷⁸ Bulatov: *Architectural harmonisation*, 1978, p.176.

³⁷⁹ Ibid., p.176.

³⁸⁰ Although this monument is a key to understanding Tīmūrid architecture, it is not discussed in the current dissertation since it is not based on a four-*iwān* plan.

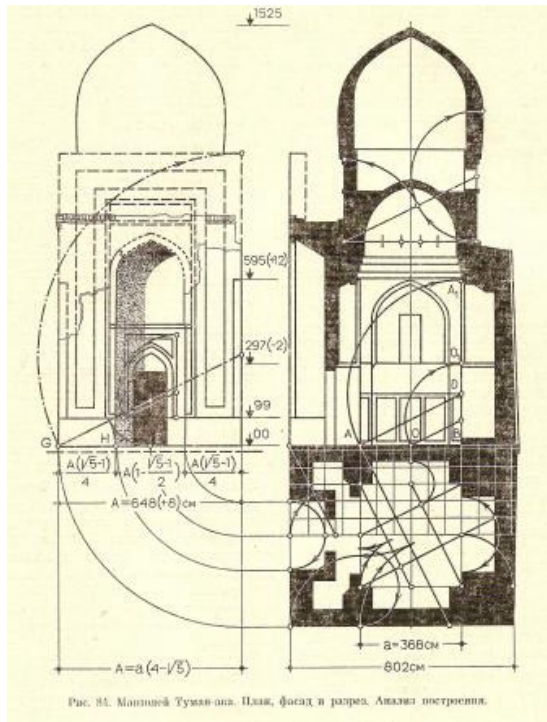


Fig.423: Samarqand, Shāh-i Zinda, plan, cross section and façade of the Mausoleum of Tuman-Aka after Bulatov
Source: Bulatov: *Geometrical harmonisation*, 1978, p.173, Fig.84



Fig.424: Samarqand, Shāh-i Zinda, main façade of the Mausoleum of Tuman-Aka, September 2006
Source: Author's photograph

The status of Saray Malik Khānum is also very important to understand the dedication of the mosque. The mosque was not only conceived as a sign of love but also as a sign of dominance over and close relation to the Chaghatay Khāns. Chaghatay was the son of Chingiz Khān who conquered Central Asia. Saray Malik Khānum was a Ghingizid princess³⁸¹, she was the daughter of the Chaghataid Khān Kazan who controlled huge areas of Khurasan and Kerman in the 13th and 14th c. AD. At first, Saray Malik Khānum was married to Amīr Husayn, the supreme amīr of the Chaghatays with a residence in Kabul and later in Balkh. In 1370 Tīmūr dethroned Husayn and was declared the supreme governor of the Chaghatay Ulus (domain). Husayn was killed and Saray Malik Khānum became Tīmūr's primary wife, who enjoyed exclusive rights and respect in the Tīmūrid family.

Saray Malik Khānum symbolised the power of Tīmūr over the Ulus Chaghatay and their marriage legitimised his rule. The leadership over the Ulus Chaghatay, which involved tribes that shared common interests, required also the support of the population. Further, the central ruler, like Tīmūr, was essential for the identity of the Ulus as heirs to the Mongol

³⁸¹ Arapov, A.: *Samarkand*, 2004, p.24.

empire. Yet, the figure of a central ruler limited the power of the tribes. However, as Manz³⁸² puts it “He [Tīmūr] was able to exploit the ideal of central leadership to legitimise his sovereignty. Throughout his career he used and emphasized the legitimacy of the Chaghatayid house, and his followers continued throughout his life and beyond to identify themselves as Chaghatays.” In order to secure his position as a centralized ruler, Tīmūr had to change the diffuse power relations within the Chaghatay Ulus and in place of the existing tribal aristocracy he “promoted a dependent elite, made up of his personal following, and then of his own descendants”³⁸³.

That is why, the Bībī Khānum Mosque can be interpreted also as a monument of the Tīmūrid centralised power and dominion over the Chaghatay Ulus and its Turco-Mongolian system. The fact that the greatest Tīmūrid building was named after a prominent Chaghatay princess and that through that marriage Tīmūr also legitimised his rule over the Chaghatays, can only stress the importance of the building. By choosing to erect a mosque, Tīmūr made a clear statement of his state religious preferences to Islam. The scale of the construction was meant to struck and provoke awe and respect, much needed also within the Chaghatay tribe leaders.

The construction of the mosque (Fig.425,426) started in 1398 AD after the madrasa of Saray Malik Khānum had been already completed in 1397 AD. The mausoleum was added later at the beginning of the 15th c. AD. According to The *Zafarnama*,³⁸⁴ Tīmūr resided at the madrasa to observe the construction of the mosque.

“In the midst of these happenstances [construction of Bībī Khānum], Mirza Muhammad Sultan, who had been residing, according to orders, on the border of Jatah, arrived with a multitude of private attendants. In the Khānaqah of Tuman Aqa he paid his respects (?) to (Tīmūr). He fulfilled the custom of distributing money and magnificent presents. (Tīmūr) embraced the prince and caressed him. During the completing of this affair, his Majesty was occupied with the utmost concern and solicitude with passing judgement. Although he, his blessed self, was present to oversee the construction work [of Bībī Khānum], during that time he very often frequented the madrasa of the Khānum, which is near the masjid, and the Khānaqah of Tuman Aqa. In these places he settled religious and civil cases which the Worker of Justice and Lover of his Subjects was concerned about.”³⁸⁵

³⁸² Manz, B.F.: *The rise and rule of Tamerlane*. Cambridge: Cambridge University Press, 1989, p.149.

³⁸³ Ibid., p.150.

³⁸⁴ Quoted by Golombek and Wilber: *Timurid Architecture*, 1988, p.254.

³⁸⁵ Golombek and Wilber: *Timurid Architecture*, 1988, p.258. Translation by L.Golombek from Yazdi 1957-58, vol.II, pp.144-147.



Fig.425: "Construction of the Masjid-i Jami" in Samarqand", fol. 359b from the *Zafarnama* by Yazdi, Harāt, 1467-1468 AD
Source: Lentz and Lowry: *Timur*, 1989, p.289



Fig.426: "Construction of the Masjid-i Jami" in Samarqand", fol. 360a from the *Zafarnama* by Yazdi, Harāt, 1467-1468 AD
Source: Lentz and Lowry: *Timur*, 1989, p.289

Yet, the erection of the mosque and the madrasa represented the rivalry between Tīmūr and his "beloved" wife, who must have been an aging woman at that time, being also his senior. The madrasa symbolised the power of the Chaghatay princess who rose to power in the Tīmūrid court. Of course, Tīmūr could not allow that a Chaghatay building project could exceed by any means the most splendid building built throughout his reign, symbolising the might of his empire. That is why, Tīmūr ordered the main entrance to Bībī Khānum Mosque to be rebuilt. Golombek and Wilber³⁸⁶ quote Ibn 'Arabshah who summarises that Tīmūr changed the plans of the mosque and rebuilt the main entrance in order to exceed the madrasa:

"Now he had diverse reasons for that deed, of which this was the chief: the queen, the chief wife of Tīmūr, ordered to be built a college (madrasa) and the architects and geometers judging by unanimous consent that it should be built opposite that mosque, raised its columns high and elevated its structure and lifted its stories and walls above that mosque, wherefore it became stronger than it and stood higher, but since Tīmūr was by nature like a leopard and of the temper of a lion, no head was raised above him but he brought it low and no back grew stronger

³⁸⁶ Golombek and Wilber: *Timurid Architecture*, 1988, p.255.

than his but he broke it and he was thus in all things which concerned or touched him. Therefore when he saw the great height of the college (madrasa) and that it bore itself more proudly than the slighter structure of his own mosque, his breast was bitter with anger and he blazed forth and dealt as he did with that superintendent, who did not find the fortune which he had hoped.”³⁸⁷

The majestic dimensions of the mosque correspond to the megalomaniac ambitions of Tīmūr for world grandeur and opulence. Although the best artisans and builders were summoned to erect the building, and the work was carried out around the clock, the large scale of the mosque became its doom. The dome of the main sanctuary rises to 40m height and dominates the skyline of Samarqand. Only the Koranic Kufic inscriptions on its drum are 2m high and are “written in script so large that it can be read from nearly a league away”³⁸⁸.

The Bībī Khānum Mosque has been constantly repaired and restored since 1974 and the current monument has been reconstructed over the last 30 years (Fig.427). The reconstructions have been carried out on only 60% of the original architectural substance, which has been extensively damaged by earthquakes throughout the centuries (Fig.456-462).



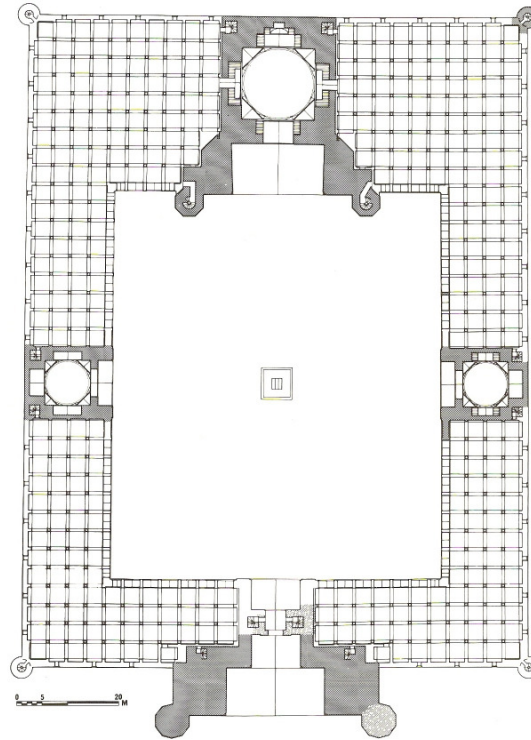
Fig.427: Samarqand, general view of the Bībī Khānum Mosque as it stood in 1995 with the halt of the Soviet large-scale restoration project.

Source: website MIT Open Course Ware

<http://ocw.mit.edu/OcwWeb/Architecture/4-614Religious-Architecture-and-Islamic-CulturesFall2002/LectureNotes/detail/Tīmūrids.htm#islam1> [Accessed on 17 October, 2008]

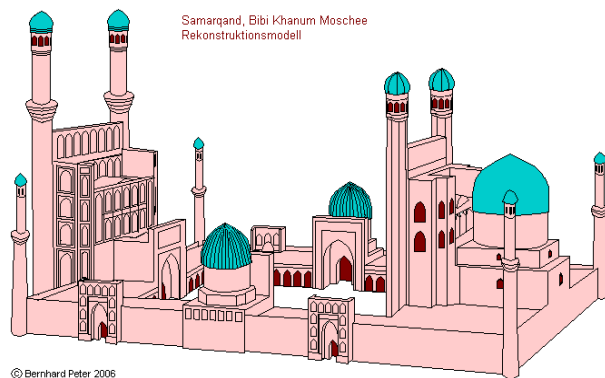
³⁸⁷ This passage is a bit dubious, since it presupposes that the mosque stood while the madrasa was built. However, according to the dates provided by Golombek and Wilber, which have been adopted here, the madrasa was accomplished one year before the construction of the mosque started.

³⁸⁸ Babur: *Baburnama*, 2002, p.57.



26. (Cat. No. 28) Samarkand. Masjid-i jami' of Timur ("Bibi Khanum"). Plan

Fig.428: Samarkand, plan of the Bībī Khānum Mosque after Golombek and Wilber
Source: Golombek and Wilber: *Timurid Architecture*, 1988, Fig.26



© Bernhard Peter 2006

Fig.429: Samarkand, reconstruction of the Bībī Khānum Mosque with exterior side *ṭwāns* after Peter
Source:
<http://depts.washington.edu/silkroad/cities/uz/Samarkan/bibi.html> [Accessed on 17 October, 2008]

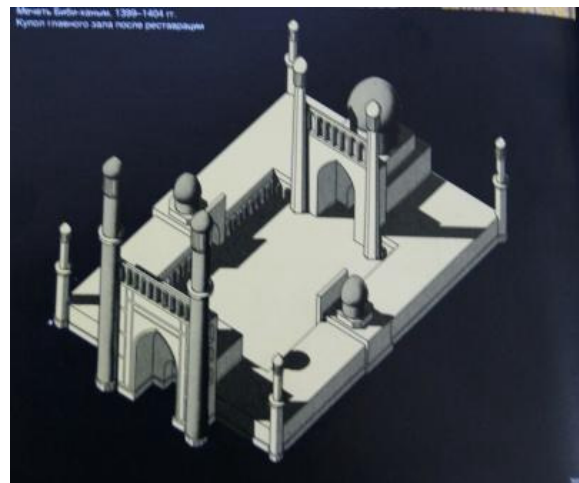


Fig.430: Samarkand, isometry of the Bībī Khānum Mosque (missing exterior *ṭwāns*) after Borodina
Source: Borodina: *Central Asia*, 1985, p.70

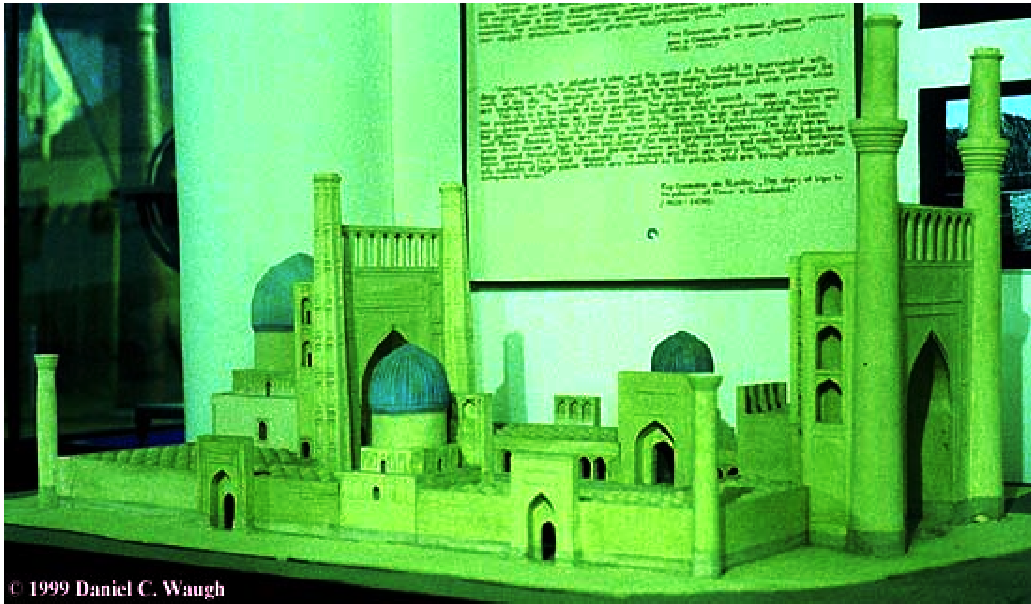


Fig.431: Samarkand, Bībī Khānum Mosque, reconstruction after Sh. Ratiia, model at the Museum of Samarkand, 1999

Source: Waugh, <http://depts.washington.edu/silkroad/cities/uz/Samarkand/bibi.html> [Accessed on 17 October, 2008]



Fig.432: Samarkand, courtyard of the Bībī Khānum Mosque, main sanctuary (to the left), northern mosque (in the centre), main entrance (to the right), May 2004

Source: <http://www.world-heritage-tour.org> [Accessed on 17 October, 2008]



Fig.433: Samarqand, Bībī Khānum Mosque, backside of the entrance *īwān* (to the left), southern mosque (to the right), May 2004

Source: <http://www.world-heritage-tour.org> [Accessed on 17 October, 2008]



Fig.434: Samarqand, Bībī Khānum Mosque, exterior view of the southern mosque, September 2006
Source: Author's photograph



Fig.435: Samarqand, Bībī Khānum Mosque, exterior view of the northern mosque, September 2006
Source: Author's photograph



Fig.436: Samarqand, Bībī Khānum Mosque, dome detail with squinches of the southern mosque, September 2006

Source: Author's photograph



Fig.437: Samarqand, Bībī Khānum Mosque, dome detail with squinches of the northern mosque, September 2006

Source: Author's photograph



Fig.438: Samarqand, Bībī Khānum Mosque, detail of the entrance to the northern mosque, September 2006

Source: Author's photograph



Fig.439: Samarqand, Bībī Khānum Mosque, interior detail with squinches and arched recesses of the northern mosque, September 2006

Source: Author's photograph



Fig.440: Samarqand, Bībī Khānum Mosque, side exterior view of the southern mosque, September 2006
Source: Author's photograph

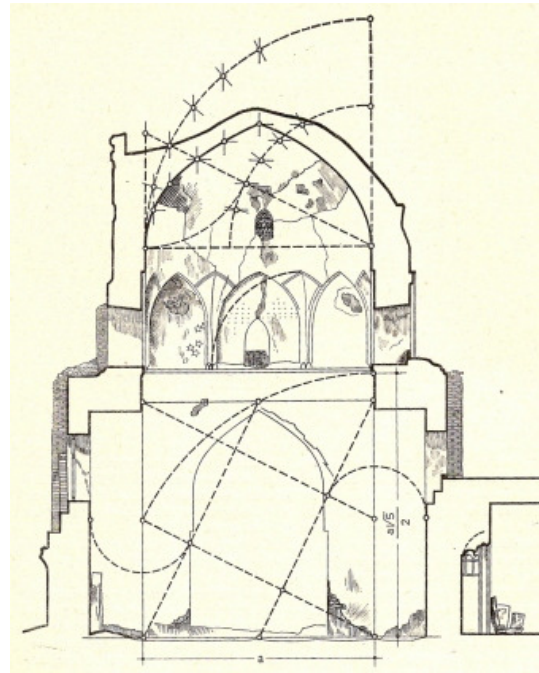


Fig.441: Samarqand, Bībī Khānum Mosque, cross section of the southern mosque after Bulatov
Source: Bulatov: *Geometrical harmonisation*, 1978, p.159, Fig.73.



Fig.442: Samarqand, Bībī Khānum Mosque, detail of the entrance to the southern mosque, September 2006
Source: Author's photograph



Fig.443: Samarqand, Bībī Khānum Mosque, detail of a blind arched niche in the southern mosque, September 2006
Source: Author's photograph



Fig.444: Samarqand, Bībī Khānum Mosque, detail of the blind arched niches in the southern mosque, September 2006
Source: Author's photograph



Fig.445: Samarqand, Bībī Khānum Mosque, detail of the blind arched niches in the southern mosque, September 2006
Source: Author's photograph



Fig.446: Samarqand, Bībī Khānum Mosque, detail of the floral decoration of the main blind arched niche in the southern mosque, September 2006
Source: Author's photograph



Fig.447: Samarqand, Bībī Khānum Mosque, detail of the floral decoration of the side panel of the main blind arched niche in the southern mosque, September 2006
Source: Author's photograph



Fig.448: Samarqand, corner minaret of the Bībī Khānum Mosque, main sanctuary to the left, May 2004
Source: <http://www.world-heritage-tour.org> [Accessed on 17 October, 2008]

References to Paradise

Golombek and Wilber³⁸⁹ quote Yazdi who elaborated on several references to Paradise in Bībī Khānum:

“Until, by the benediction of his royal favour, its (the masjid’s) lofty pinnacles, making the qadrbani answer to the ivan of Saturn, and the purity of the courtyard, a Dilugsha (i.e., like a garden, or the specific garden of this name built by Tīmūr), and the ventilation system, an augment of wind-the pen of forgetfulness passed over the attributes of the Chinar Garden and the Garden of Paradise.

How marvellously high is the building
whose upper rooms are Paradise!
To estimate its loftiness, all must admit to
inadequacy.

[...]

In each of the four corners is a minaret, whose head is directed toward the heavens, proclaiming: “Our monument will tell about us!” which reaches to the four corners of the world. And the grating sound of the great door which is composed of the seven elements will call the men of the seven climes to the Dar al-Salam-Islam.

[...] and the words of the sūra of the “Cavern” and other significant verses from the Koran.”

Sūra of the Cave [18:31]

As for such, theirs will be Gardens of Eden, wherein rivers flow beneath them; therein they will be given armlets of gold and will wear green robes of finest silk and gold embroidery, reclining upon throne therein. Blest the reward, and fair the resting-place!³⁹⁰

Obviously Tīmūr chose the four-īwān plan to embody his ambitions of a world emperor, of God’s representative on earth. The four īwāns of the courtyard marked ideally the four

³⁸⁹ Golombek and Wilber: *Timurid Architecture*, 1988, p.259.

³⁹⁰ Translation by Marmaduke Pickthall, website of the Royal Aal al-Bayt Institute for Islamic Thought.

corners of the world that were also signified by the four corner minarets. Tīmūr saw himself as an all-encompassing being, which conquered and ruled from Constantinople to the borders of China. With its four-*īwān* plan, the Bībī Khānum Mosque represented a miniature version of the world, dominated by Tīmūr.

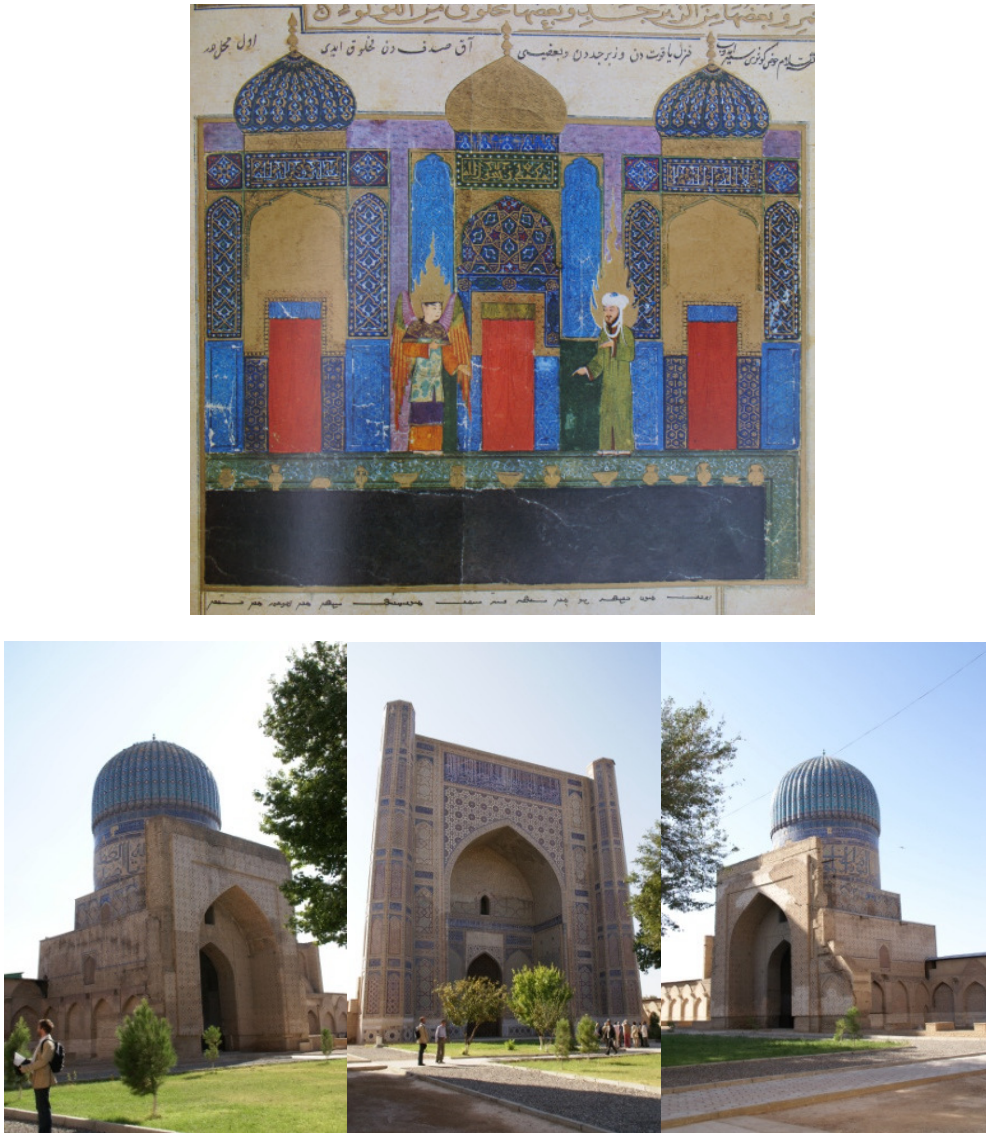


Fig.449: Comparison between the representation of Paradise during the *miraj* as depicted in The *Mi'rajnama* fol. 45 v⁰ from 1425-1450 AD and the three domed sanctuaries of the Bībī Khānum Mosque as perceived from the courtyard

If we compare the representation of Paradise during the *miraj* of Muhammad from The *Mi'rajnama* fol. 45 v⁰ from 1425-1450 AD and a projection of the three domed sanctuaries of the Bībī Khānum Mosque (Fig.449), we can find the following similarities. Both representations consist of three *īwāns* with a domed sanctuary. The central compound is the main sanctuary with a golden cupola and a *muqarnas* vault (the one that houses the *qibla*). The side niches of the main sanctuary are higher than the respective niches of the other two *īwāns*. On both depictions, there are bands of Koranic inscriptions above the arches. It might

be possible that the builders of Tīmūr followed paradisiacal representations that already existed in the literary sources and were later depicted in the manuscript of The *Mi'rajnama*. The Bībī Khānum Mosque is the only Tīmūrid edifice with three mosques and three domes. Its opulence, rich decoration and expensive materials were associated with the plenitude of Paradise as shown above and the structure might have been designed to represent Paradise itself.

Koran reader by Ulugh Beg

The courtyard of the mosque is defined by the intersecting orthogonal axes of the three mosques. Today the central piece of the courtyard is occupied by the Koran reader, erected there by Ulugh Beg (Fig. 450). However, it might be possible that originally, there was a water pool at the centre of the courtyard. In the majority of four-*īwān* compounds, there are such pools of water, which metaphorically symbolise the *Kawthar*, also depicted on the above representation of Paradise from The *Mi'rajnama* (Fig.449).



Fig.450: Samarkand, Bībī Khānum Mosque, Koran reader in the courtyard, September 2006
Source: Author's photograph

Sanctuary

The domed sanctuary is square in plan, with four arched recesses in each wall (Fig.451,452). Its plan is an architectural representation of the hierophany of the Cosmic Cross. The north and south façades have secondary entrances that also lead to the main domed space (Fig.455). The west bay with a double recess holds the *mihṛāb* (Fig.466). Probably, the construction problems arose from the fact that all of the arches were decreased in height and

breadth shortly after the building was erected³⁹¹. As a result, there are huge cracks in the construction and the domed space looks as if it is on the verge of collapsing (Fig.456-462).

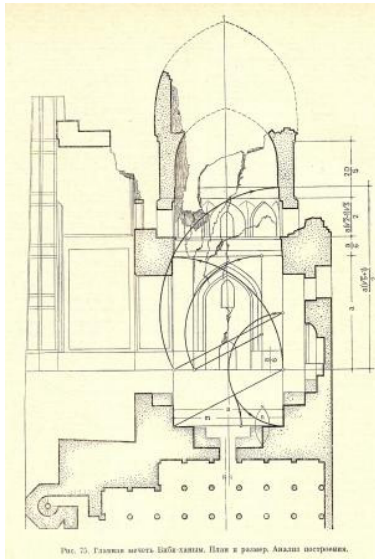


Fig.451: Samarqand, Bībī Khānum Mosque, cross section of the main sanctuary mosque after Bulatov
Source: Bulatov: *Geometrical harmonisation*, 1978, p.161, Fig.75

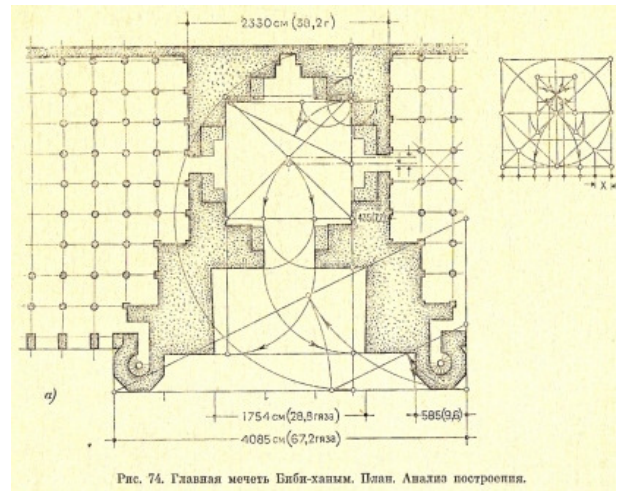


Fig.452: Samarqand, Bībī Khānum Mosque, plan of the main sanctuary mosque after Bulatov
Source: Bulatov: *Geometrical harmonisation*, 1978, p.160, Fig.74



Fig.453: Samarqand, Bībī Khānum Mosque, exterior view of the main sanctuary from the south, September 2006
Source: Author's photograph



Fig.454: Samarqand, Bībī Khānum Mosque, detail of the main sanctuary from the south, September 2006
Source: Author's photograph

³⁹¹ Golombek and Wilber: *Timurid Architecture*, 1988, p.256.



Fig.455: Samarqand, Bībī Khānum Mosque, interior view of the dome of the sanctuary, September 2006
Source: Author's photograph



Fig.456: Samarqand, Bībī Khānum Mosque, detail of the squinches of the dome in the sanctuary, September 2006
Source: Author's photograph



Fig.457: Samarqand, Bībī Khānum Mosque, detail of the squinches of the dome in the sanctuary, September 2006
Source: Author's photograph



Fig.458: Samarqand, Bībī Khānum Mosque, detail of the damage to the squinches of the dome in the sanctuary, September 2006
Source: Author's photograph



Fig.459: Samarqand, Bībī Khānum Mosque, detail of the damage to the arched niches in the sanctuary, September 2006
Source: Author's photograph

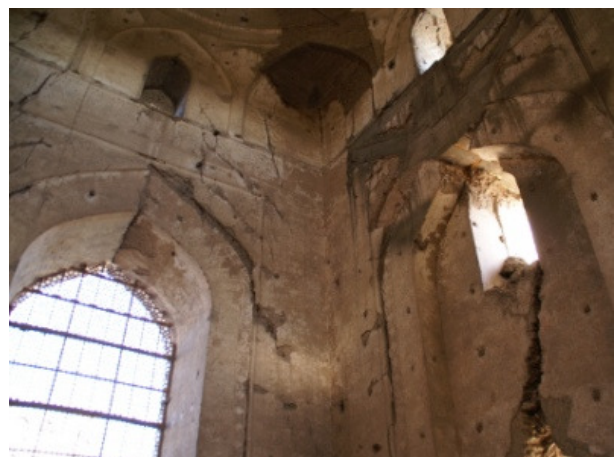


Fig.460: Samarqand, Bībī Khānum Mosque, detail of the damage to the arched niches in the sanctuary, September 2006
Source: Author's photograph



Fig.461: Samarqand, Bībī Khānum Mosque, detail of the decoration on the blind niches of the sanctuary, September 2006

Source: Author's photograph



Fig.462: Samarqand, Bībī Khānum Mosque, detail of the damage to the blind niches of the sanctuary, September 2006

Source: Author's photograph

Qibla

King³⁹² has published a study based on an 11th c. AD manuscript on the *qibla* in Transoxania. In the manuscript, the legal scholar al-Bazdawī (died 1089 AD)³⁹³ gives the following geographical measurements for the *qiblas* in Samarqand:

- 270°N to the west as used by the *Hanafī* legal school and also corresponded to the direction in which the road to Mecca left Samarqand;
- 240°N the winter sunset as used for the Great Mosque;

³⁹² King, D.A.: "Al-Bazdawī on the *Qibla* in Transoxania". In *Journal for the History of Arabic Science*. 7, 1983, pp. 3-38.

³⁹³ Until the monumental study of the orientation of the *qiblas*, compiled during the 15th c. AD by Ulugh Beg, there is one more table that could have been known to Tīmūr, apart from the manuscript of al-Bazdawī (this information is based on my private e-mail correspondence with Prof. King). That is the table of al-Khāzinī from the 12th c. AD. However, King summarises that "in general the qibla values in al-Khāzinī's geographical table are sloppily computed when judged by the standards of the best of Muslim astronomers." (King, *World-maps*, 1999, Chapter 2.6.1., p.74). That is why, the values of that table are not discussed here.

- 230°N according to an “accurate” formula for measuring *qiblas*, however, this formula is not provided;
- 225°N southwest is based on a table from an earlier source, quoted by al-Bazdawī;
- 180°N to the south as used by the *Shāfiʿī* legal school, corresponding to the *qibla* of the Prophet in Medina. The *qiblas* towards the south were also favoured in both Jerusalem and Damascus, although their mathematically-computed orientations, as published by King³⁹⁴, are closer to 135°N and 150°N respectively.

The *mihṛāb* of the Bībī Khānum Mosque (Fig.466), situated in the main sanctuary is directed 260°N to the southwest, since the main sanctuary is also to the southwest. The majority of the Sunnīs in Samarqand were *Hanafī*, so it makes sense that the *mihṛāb* of the main congregational mosque would have followed the direction prescribed by al-Bazdawī (according to the above record, it is 270°N). However, there is still a difference of 10° between the *qibla* of the Bībī Khānum Mosque and the *Hanafī* formula. If we analyse the compass directions to Mecca from Samarqand (Fig.465), we can calculate that Mecca is 239°46'N (Fig.463, see the compass on the left hand side) to the southwest. However, Baghdad is approximately 257°51'N (Fig.464) to the southwest. The *mihṛāb* of Gūr-i Amīr is directed 252°N to the southwest, the *mihṛāb* of the Ulugh Beg Madrasa in Samarqand is directed 258°N to the southwest.

For the orientation of the *qibla* of the Bībī Khānum Mosque at the end of the 14th c. AD, Tīmūr's astronomers had two tables (*zīj*es) at their disposal: the one of al-Bazdawī from the 11th c. AD and of al-Khāzinī's from the 12th c. AD. However, the *qibla* of the Bībī Khānum Mosque does not follow either of them. With its 260°N to the southwest, it is closest to Baghdad. If we go further down the Tīmūrid family line, we can express the hypothesis that it is unlikely that Ulugh Beg, the astronomer who built his royal observatory in Samarqand and created one of the most precise *zīj*es³⁹⁵ of the 15th c. AD for calculating *qiblas*, did not have the correct knowledge and measuring instruments to direct his *mihṛāb* to Mecca and also made a mistake of about 20°. If Ulugh Beg had the knowledge and the technical means to compile such a “monumental geographical table displaying the direction and distance to Mecca” as put by King³⁹⁶, he most certainly would have known the right direction to Mecca and built the *qibla* of his most representational madrasa accordingly.

³⁹⁴ King, D.A.: *In Synchrony with the Heavens. Studies in Astronomical Timekeeping and Instrumentation in Medieval Islamic Civilization*. Studies I-IX. Volume One. The Call of the Muezzin. Leiden: Brill, 2004, p.768.

³⁹⁵ King, *World-maps*, 1999, Chapter 3.3.

³⁹⁶ King, *World-maps*, 1999, Chapter 3.3., p.149.

What is to me personally more plausible, is that Ulugh Beg followed the orientation of the *mihṛāb* of the Bībī Khānum Mosque, because throughout his life he wanted to be associated with his grandfather Tīmūr and his megalomaniac building activities as a representation of Tīmūr's status of a ruler of the world.

Building name	Gūr-i-Amīr Mausoleum	Bībī Khānum Mosque	Ulugh Beg Madrasa
Location	Samarqand	Samarqand	Samarqand
Building period	1400-1404	1398-1405	1417-1420
Ruler	Tīmūr	Tīmūr	Ulugh Beg
South-western <i>īwān</i>	252°N	260°N	256°N
North-western <i>īwān</i>	338°N	350°N	346°N
South-eastern <i>īwān</i>	160°N	170°N	170°N
North-eastern <i>īwān</i>	60°N	70°N	76°N
<i>Qibla (mihṛāb)</i>	252°N	260°N	258°N
Direction to Mecca	239°46'39"	239°46'39"	239°46'39"
Direction to Baghdad	257°51'12"	257°51'12"	257°51'12"
Direction to Jerusalem	262°51'55"	262°51'55"	262°51'55"

Starting with Tīmūr's *mihṛābs* and going down to the *mihṛābs* erected by his descendants, all or at least the majority of the *mihṛābs* in Bukhārā and Samarqand were not directed towards Mecca but to Baghdad³⁹⁷ (Fig.464, see the compass on the left hand side). This is a hypothesis based on the compass measurements of the *qiblas* of the most important four-*īwān* compounds in Bukhārā and Samarqand, carried out by the author in 2006 (see Annex I). Further, Golombek³⁹⁸ argues that Tīmūr wanted to underline his affiliation to the 'Abbāsīd Caliphate in Baghdad and his family relations to Chingiz Khān throughout his life. That is why, the above hypothesis is not so farfetched.

³⁹⁷ Please refer to Frye, R.: "The Iranicization of Islam". In *Islamic Iran and Central Asia (7th-12th centuries)*. London: Variorum reprints, 1979, pp.IX. Frye analyses the importance of Khurasan's learned men in the establishment of Islam: "Khurasan was indeed a source of the development of knowledge whether the person was Muslim, Christian, Jew or Zoroastrian. One might say that the Bukhara-Baghdad axis was far more important in this intellectual realm than a Tabriz-Isfahān-Shiraz axis.", p.5.

³⁹⁸ "Studies have shown that Tīmūr sought to legitimise his reign through the formulation of an ideology which identified him as heir to both Genghis Khan and the Baghdad caliphate." see Golombek, L.: "Discourses of an Imaginary Arts Council in Fifteenth-Century Iran". In *Timurid Art and Culture: Iran and Central Asia in the Fifteenth Century*, ed. L. Golombek and M. Subtelny. Leiden: E.J. Brill, 1992, p.1.

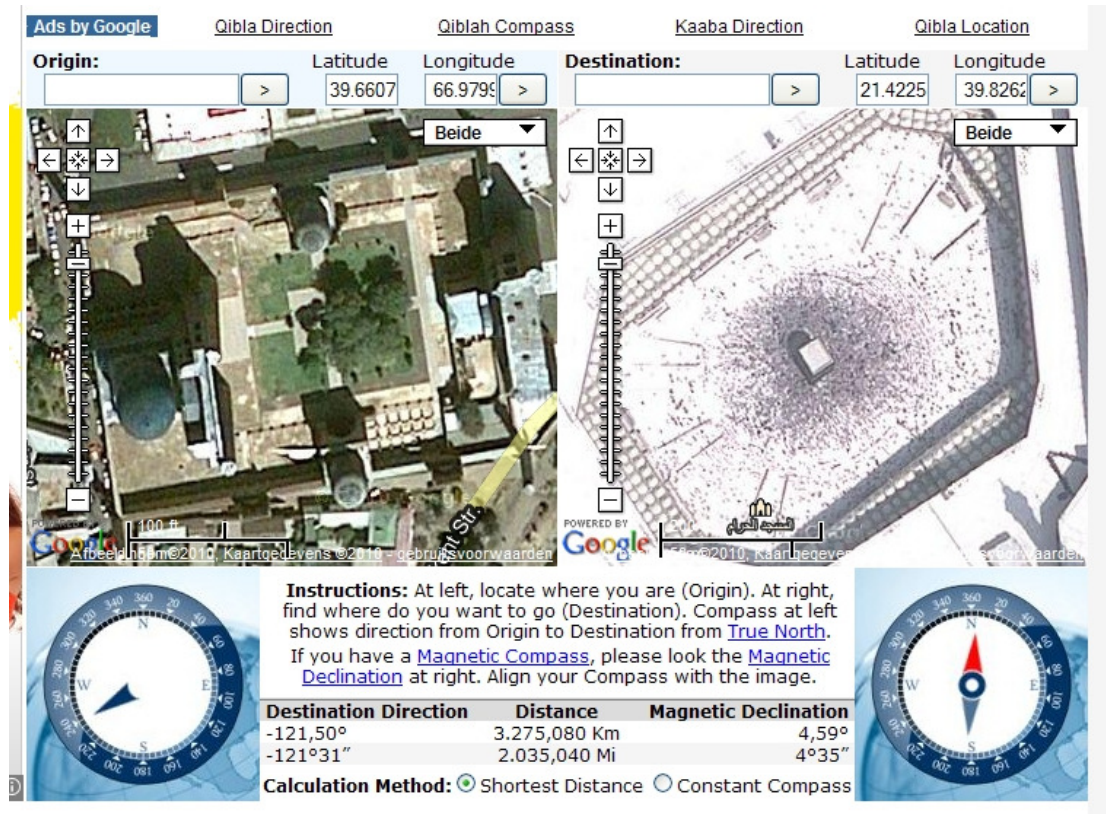


Fig. 463: Digital compass direction of Bībī Khānum Mosque in Samarqand towards Mecca - 239°46' (compass on the right-hand side)

Source: Google Maps [Accessed on 11 July 2010]

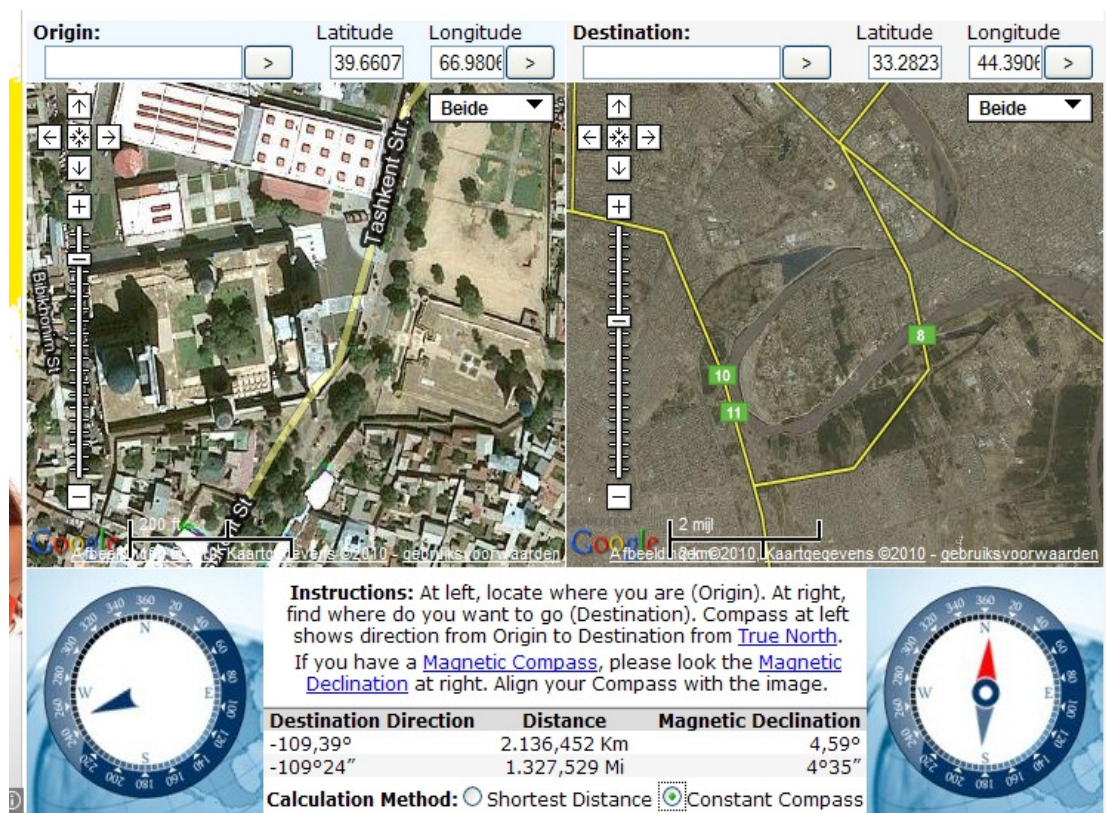


Fig. 464: Digital compass direction of Bībī Khānum Mosque, Samarqand towards Baghdad - 257°51' (compass on the right-hand side)

Source: Google Maps [Accessed on 11 July 2010]

Any affiliations to the Umayyad Damascus (Fig.465) can be excluded, since Timur burned down the Umayyad Mosque in 1401 AD³⁹⁹ in order to profess his supreme power over conquered Damascus⁴⁰⁰. As far as Jerusalem is concerned, Tīmūr did not conquer it for political reasons as explained by Shterenshis⁴⁰¹. However, the Mamluk citizens of Jerusalem “declared him their sovereign and promised to pay yearly tribute⁴⁰².” Jerusalem is situated 262°51'N to Samarqand and Tīmūr’s *qibla* with its 260°N could have been also directed to Jerusalem with only 2° difference. However, if Tīmūr did not make the effort to conquer the city, which also according to Shterenshis⁴⁰³ was “of no military and strategic interest to the Timur-Mamluk war”, since it was small and defenceless at that time, why would he direct the *qibla* of his lifework-the Bībī Khānum Mosque to Jerusalem? If Tīmūr had wanted to relate his world empire to Jerusalem, there should have been some references in his court chronicles. Yet, The *Zafarnama*^{404,405} only mentions that “expensive gifts were sent to ‘the holy town of al-Kuds (Jerusalem)’”. That is why, I regard the orientation of the Bībī Khānum Mosque to Jerusalem as rather unlikely.

Another very daring hypothesis is that the orientation of the whole four-*īwān* compound of the Bībī Khānum Mosque might have followed the orientation of the Ka’ba itself, or at least that the *qibla* wall of the main mosque sanctuary was built parallel to the eastern wall of the Ka’ba (Fig.463). In this way, Tīmūr would have repositioned the centre of the Islamic world to his new splendid capital of Samarqand and staged himself as the creator of an work of art and architecture, having the same spatial components as the Ka’ba. In this respect, the Bībī Khānum Mosque would be the *Axis Mundi* of Tīmūr’s empire, a four-*īwān* mosque, based on the hierophany of the Cosmic Cross. The orientation of the Bībī Khānum Mosque and the Ka’ba (Fig.463) is although very similar, not identical. That is why, this hypothesis must be further researched into.

Although the distance measurements presented in the current dissertation are based on Google Maps, i.e. modern digital media that was obviously not available in the 14th c. AD, the proximity in the orientation of the *qiblas* and the compass direction to Baghdad is more than clear. In order to verify or falsify the above hypothesis, some accurate (digital) measurements should be made of the most prominent *mīhrābs* and *qiblas* of Tīmūrid

³⁹⁹ Rustomji: *The Garden*, 2009, p.132.

⁴⁰⁰ Fischel, W.J.: *Ibn Khaldūn and Tamerlane. Their historic meeting in Damascus, 1401 A.D. (803 A.H.): A Study Based on Arabic Manuscripts of Ibn Khaldūn’s “Autobiography,” with a Translation into English, and a Commentary*. Berkeley: University of California Press, 1952.

⁴⁰¹ Shterenshis, M.: *Tamerlane and the Jews*. London: Routledge, 2002, p.94.

⁴⁰² *Ibid.*, p.94.

⁴⁰³ *Ibid.*, p.94.

⁴⁰⁴ Quoted by Shterenshis, notes 22, 23, p.142.

⁴⁰⁵ “Book of triumph”, completed around 1425 AD in Shiraz. See Thackston: *Century of Princes*, 1989, pp.63-100.

architecture also outside present-day Uzbekistan. There is no scientific study of the *qiblas* of Central Asia so far, which can be consulted for these purposes. The current dissertation is the first attempt to relate the orientation of the Tīmūrid *qiblas* to certain Islamic capitals. The relation between 'Abbāsīd architecture and the spread of the four-*īwān* plan in Central Asia should be further explored as well.



Fig.465: A map with straight line from Bukhārā and Samarqand to Mecca and Baghdad.
Source: Google Earth [Accessed on 1 October 2009]



Fig.466: Samarqand, Bībī Khānum Mosque, *mihrāb* in the main sanctuary, September 2006
Source: Author's photograph

In the previous paragraphs we discussed the Chingizid descend of Saray Malik Khānum and that through that marriage Tīmūr legitimised his rule over the Chaghatay Ulus. The Bībī Khānum Mosque can be seen as Tīmūr's architectural life achievement that represents par excellence his imperial programme: on the one hand, it is erected in honour of the Chingizid princess, representing his relation also through marriage to Chingiz Khān, on the other hand, the *mihrāb* is most likely directed to Bagdad, representing Tīmūr's affiliation to the 'Abbāsīd Caliphate. And above all, the scale of the building and the references to Paradise, represented the megalomaniac aspirations of the world's conqueror Tīmūr wanted to be.

V.2.2 The Kalyān Mosque (completed 1512-1539 AD) versus the Mīr-i ‘Arab Madrasa (1535-1536 AD), Bukhārā

The four-*īwān* Kalyān Mosque (completed 1514 AD) (Fig.477) and the four-*īwān* Mīr-i ‘Arab Madrasa (1535-1536 AD) (Fig.476) form the most important *kosh* in Bukhārā, situated to the southwest of the main east-western axis of the *madīna* and the centre of the old orthogonal city. By ordering the construction of the Mīr-i ‘Arab Madrasa and placing it in the main axis of the Kalyān Mosque, the ruler ‘Abdallāh Shaybāni and the patron *Naqšbandiyya* Shaykh Mīr-i ‘Arab created the oldest surviving urban *kosh* ensemble (Fig.467-475) of Bukhārā.

The Qarakhānid ruler Arslan Khān (1102-1129 AD) started building activity on this site by commissioning a wooden mosque with a wooden minaret, of which little is known. His own tomb was also located here. The wooden minaret fell some time after its erection, destroying in its fall the adjoining mosque. The existing brick minaret was built as a replacement in 1127 AD, and the standing mosque was constructed in phases over the first half of the 15th c. AD and during the 16th c. AD⁴⁰⁶. The façade of the Kalyān Mosque was completed under ‘Abdallāh Shaybāni in 1512-1539 AD⁴⁰⁷.

The *kosh* marks the most important point of the urban centre of Bukhārā⁴⁰⁸. The madrasa with its higher façade (Fig.471) and two domes on each side of the entrance *īwān* struck one as the more elaborate building. The lower and wider façade (Fig.485) of the Kalyān Mosque is balanced by the height of the adjoining minaret. The platforms, on which the two buildings are situated, are also not on the same level; the madrasa is higher. As a result, the square formed by the *kosh* is vertically asymmetrical. However, the *kosh* ensemble appears to be horizontally symmetrical because the two entrance *īwāns* are situated along the same longitudinal axis.

⁴⁰⁶ Source: Archnet [Accessed on 17 October, 2008].

⁴⁰⁷ Gangler, Gaube and Petruccioli: *Bukhara*, 2004, p. 90.

⁴⁰⁸ For a virtual tour around the Kalyān Square, please visit the following website: <http://www.world-heritage-tour.org/asia/central-asia/uzbekistan/Bukhara/kalon-square/sphere-flash.html> [Accessed on 17 October, 2008].



Fig.467: Bukhārā, *Kosh Mīr-i 'Arab Madrasa* (to the left) versus the *Kalyān Mosque* (to the right), the *Kalyān Minaret* in the middle, September 2006
Source: Author's photograph



Fig.468: Bukhārā, *Kosh Kalyān Mosque* (to the left) and *Mīr-i 'Arab Madrasa* (to the right)
Source: Google Earth [Accessed on 1 April 2010]

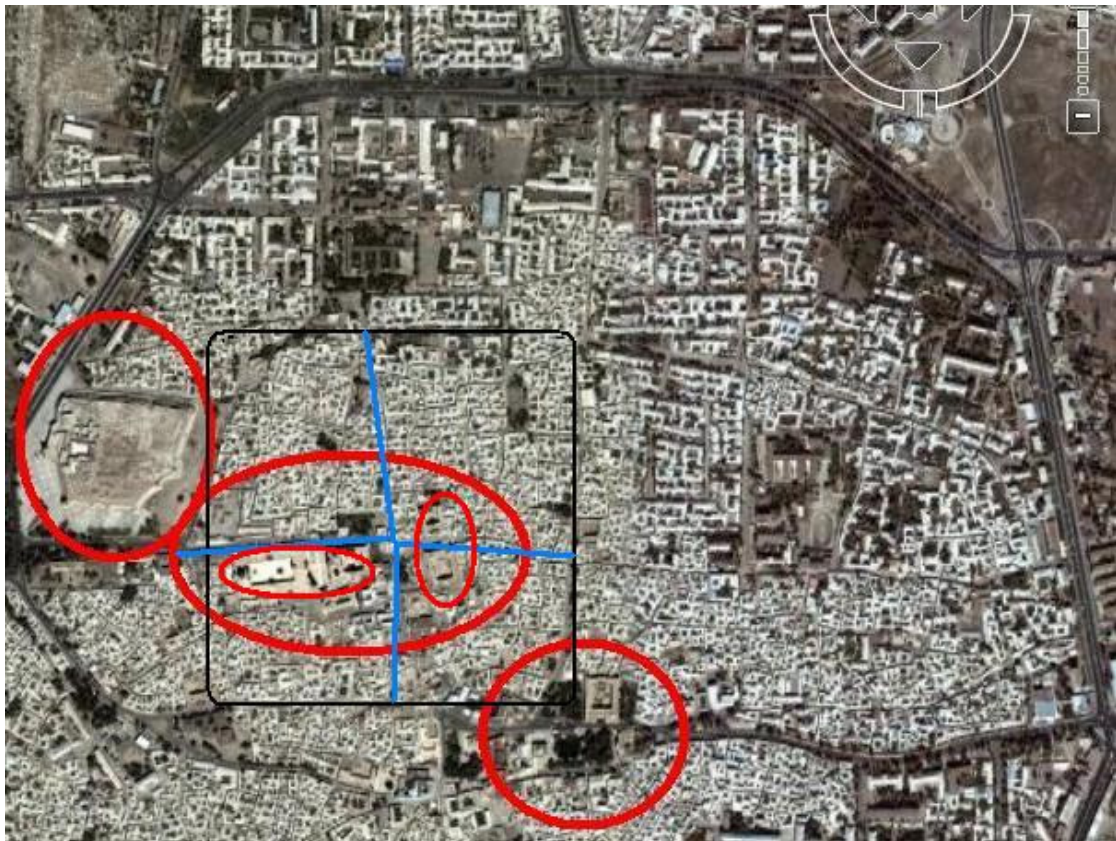


Fig.469: Bukhārā, *shahristan*, the *Citadel* to the west, the oldest part of the orthogonal city with the two intersecting roads, the *Kalyān - Mīr-i 'Arab Kosh* (to the left) and the *Ulugh Beg - 'Abd al'Azīz Khān Kosh* (to the right)
Source: Google Earth [Accessed on 1 April 2010]

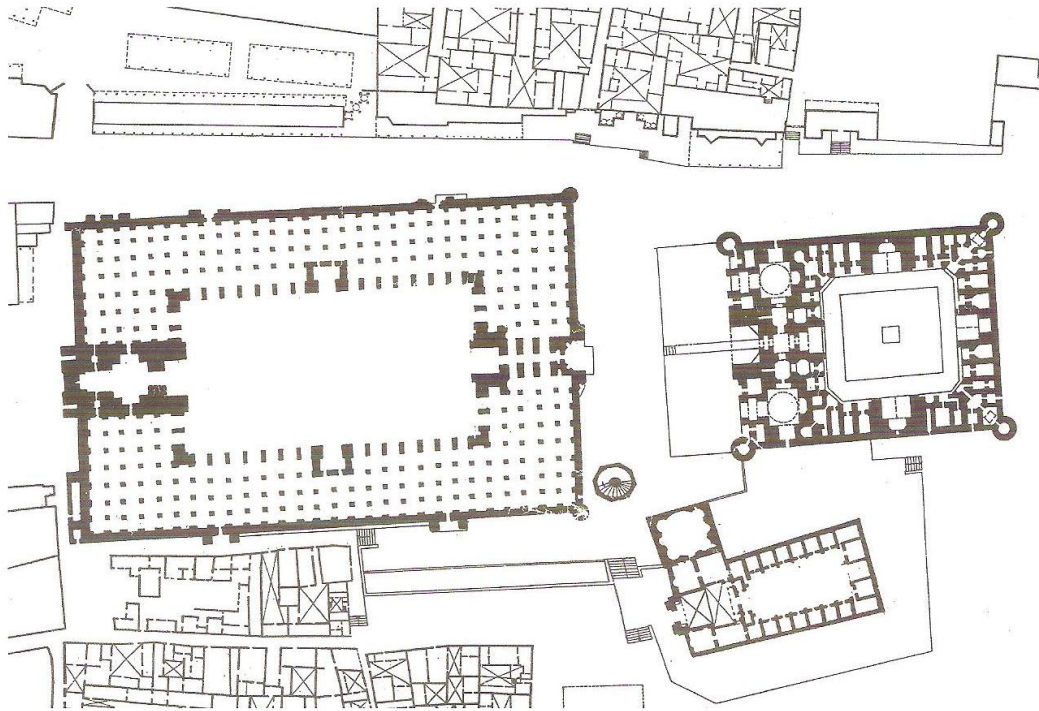


Fig.470: Bukhārā, *Kosh Mīr-i 'Arab Madrasa* versus the *Kalyān Mosque*, plans after Gangler, Gaube and Petruccioli

Source: Gangler, Gaube and Petruccioli: *Bukhara*, 2004, p.144.

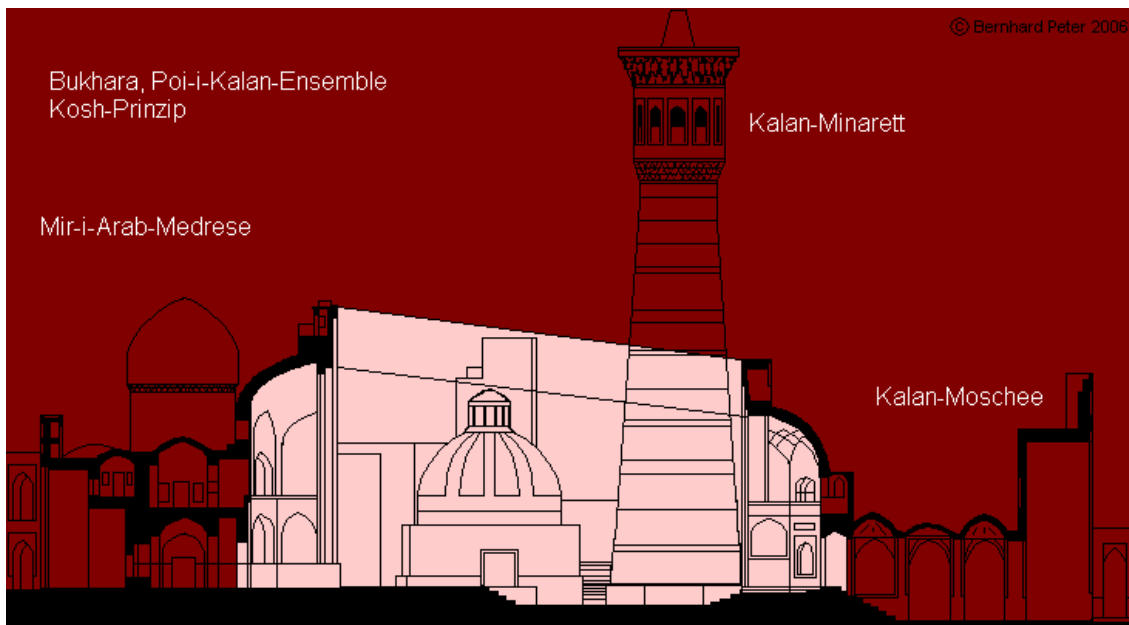


Fig.471: Bukhārā, *Kosh Mīr-i 'Arab Madrasa* versus the *Kalyān Mosque*, cross section after Peter

Source: Website of B. Peter

<http://www.kultur-in-asien.de/Usbekistan/architektur/kosh.htm> [Accessed on 19 August 2009]

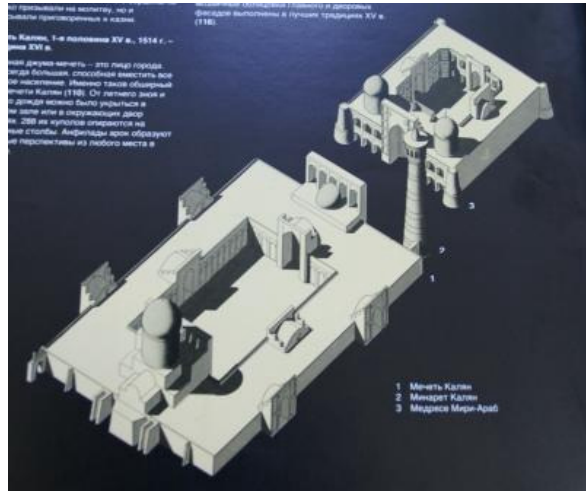


Fig.472: Bukhārā, isometry of the *Kosh Mīr-i 'Arab* Madrasa versus the Kalyān Mosque after Borodina
Source: Borodina: *Central Asia*, 1985, p.128



Fig.473: Bukhārā, *kosh* façade of the Mīr-i 'Arab Madrasa with entrance *īwān*, September 2006
Source: Author's photograph



Fig.474: Bukhārā, *kosh* façade of the Kalyān Mosque with the Kalyān Minaret to the left, September 2006
Source: Author's photograph



Fig.475: Bukhārā, *Kosh* Kalyān Mosque and Mīr-i 'Arab Madrasa (to the left), *Kosh* Ulugh Beg Madrasa and 'Abd al'Azīz Khān Madrasa (to the right)
Source: Google Earth [Accessed on 1 April 2010]

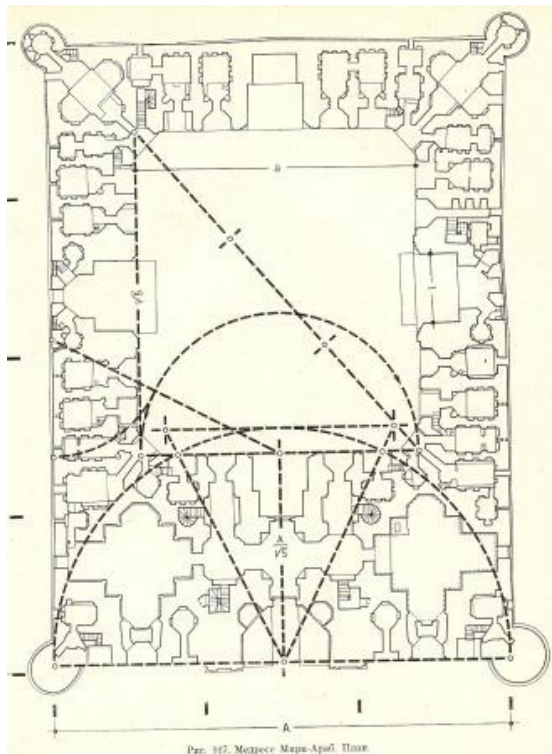


Fig.476: Bukhārā, Mīr-i 'Arab Madrasa, plan after Bulatov
Source: Bulatov: *Geometrical harmonisation*, 1978, p.211, Fig.117

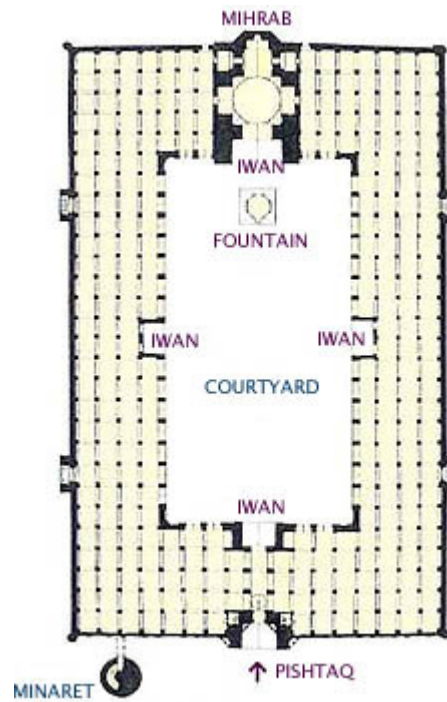


Fig.477: Bukhārā, Kalyān Mosque, plan
Source: http://www.ne.jp/asahi/arc/ind/2_meisaku/68_Bukhārā/buk_eng.htm [Accessed on 1 October 2009]

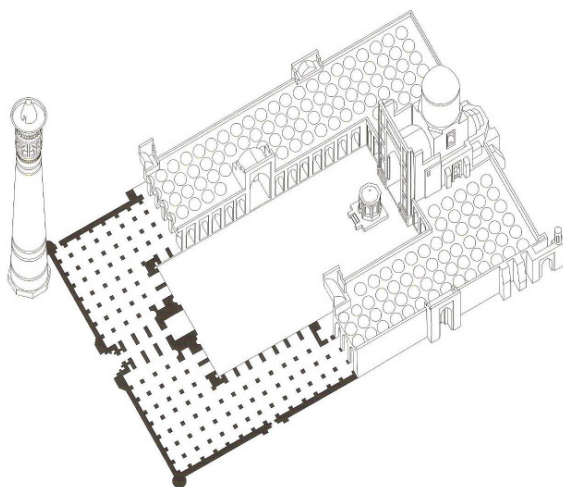


Fig.478: Bukhārā, Kalyān Mosque, isometry after Gangler, Gaube and Petruccioli
Source: Gangler, Gaube and Petruccioli: *Bukhara*, 2004, p.144

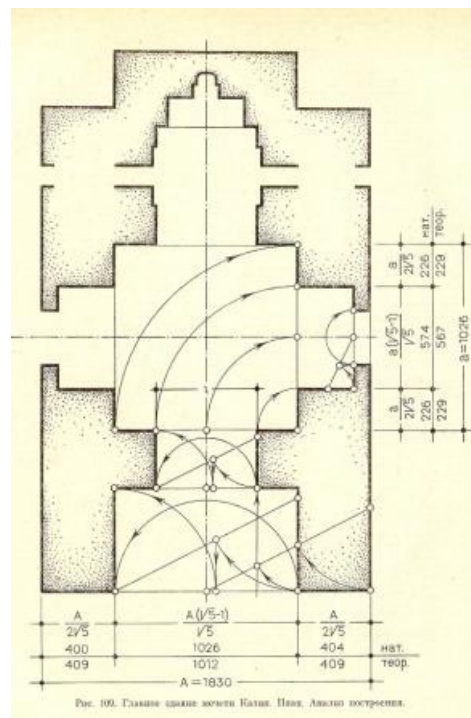


Fig.479: Bukhārā, Kalyān Mosque, plan of the main sanctuary after Bulatov
Source: Bulatov: *Geometrical harmonisation*, 1978, p.203, Fig.109



Fig.480: Bukhārā, Mīr-i 'Arab Madrasa aerial view, picture taken from the Kalyān minaret
Source: Google Earth [Accessed on 1 April 2010]



Fig.481: Bukhārā, courtyard of the Kalyān Mosque, in the background Bukhārā's Citadel, picture taken from the Kalyān minaret
Source: Google Earth [Accessed on 1 April 2010]



Fig.482: Bukhārā, eastern courtyard *iwān* with adjacent *hujras* of the Mīr-i 'Arab Madrasa, September 2006
Source: Author's photograph



Fig.483: Bukhārā, courtyard of the Kalyān Mosque with the main sanctuary at the back, as seen from the backside of the entrance *iwān*, September 2006
Source: Author's photograph



Fig.484: Bukhārā, *kosh* façade of the Mīr-i 'Arab Madrasa with entrance *iwān*, picture taken from the entrance of the Kalyān Mosque, September 2006
Source: Author's photograph



Fig.485: Bukhārā, *kosh* façade of the Kalyān Mosque with entrance *iwān*, September 2006
Source: Author's photograph

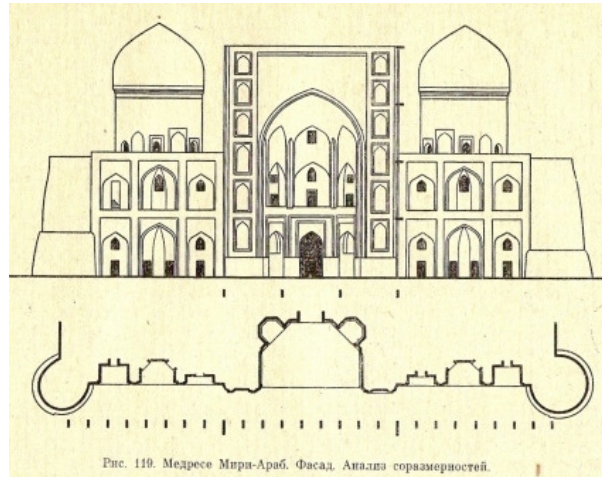


Fig.486: Bukhārā, Mīr-i 'Arab Madrasa, main façade after Bulatov
Source: Bulatov: *Geometrical harmonisation*, 1978, p.213, Fig.119



Fig.487: Bukhārā, detail of the main *kosh iwān* of the Mīr-i 'Arab Madrasa, September 2006
Source: Author's photograph



Fig.488: Bukhārā, detail of the main *kosh iwān* of the Kalyān Mosque, September 2006
Source: Author's photograph

The Mīr-i 'Arab Madrasa (in the *gurkhana*, to the left of the main *kosh* façade) contains the tombs of both the ruler 'Abdallāh Shaybāni and the patron *Naqšbandiyya* Shaykh Mīr-i 'Arab. This is remarkable, because it overtly represents the Sufi preference of 'Abdallāh Shaybāni, who saw Shaykh Mīr-i 'Arab as his spiritual leader and teacher. The madrasa has both a burial and a lecturing function. It is actually one of the oldest madrasas in Central Asia that is

still functioning today (Fig.491). The four *īwāns* (Fig.489,490), based on the hierophany of the Cosmic Cross represent both the Paradisiacal imagery, associated with the tomb and the life in the Hereafter and offer a paradisiacal setting for prayer similar to the site where Allah was revealed to Muhammad.

It is very strange that the Mīr-i 'Arab Madrasa does not have a mosque. The main sanctuary is the burial chamber. That is why, it is impossible to measure the orientation of the *mihrāb*.



Fig.489: Bukhārā, exterior of the Mīr-i 'Arab Madrasa, May 2005
Source: www.world-heritage-tour.org [Accessed on 17 October, 2008]



Fig.489: Bukhārā, eastern *īwān* of the Mīr-i 'Arab Madrasa, September 2006
Source: Author's photograph



Fig.490: Bukhārā, northern *īwān* of the Mīr-i 'Arab Madrasa, September 2006
Source: Author's photograph



Fig.491: Bukhārā, student at the Mīr-i 'Arab Madrasa, September 2006
Source: Author's photograph



Fig.492: Bukhārā, *kosh* façade of the Mīr-i 'Arab Madrasa, picture taken in the 1920s, exhibited at the Archaeological Museum of Bukhārā in the Citadel
Source: Author's photograph



Fig.493: Bukhārā, picture of the *kosh* façade of the Mīr-i 'Arab Madrasa taken behind the Kalyān minaret, September 1920, exhibited at the Archaeological Museum of Bukhārā in the Citadel
Source: Author's photograph



Fig.494: Bukhārā, *kosh* façade of the Mīr-i 'Arab Madrasa before the restoration
Source: Archnet [Accessed on 1 April 2010]

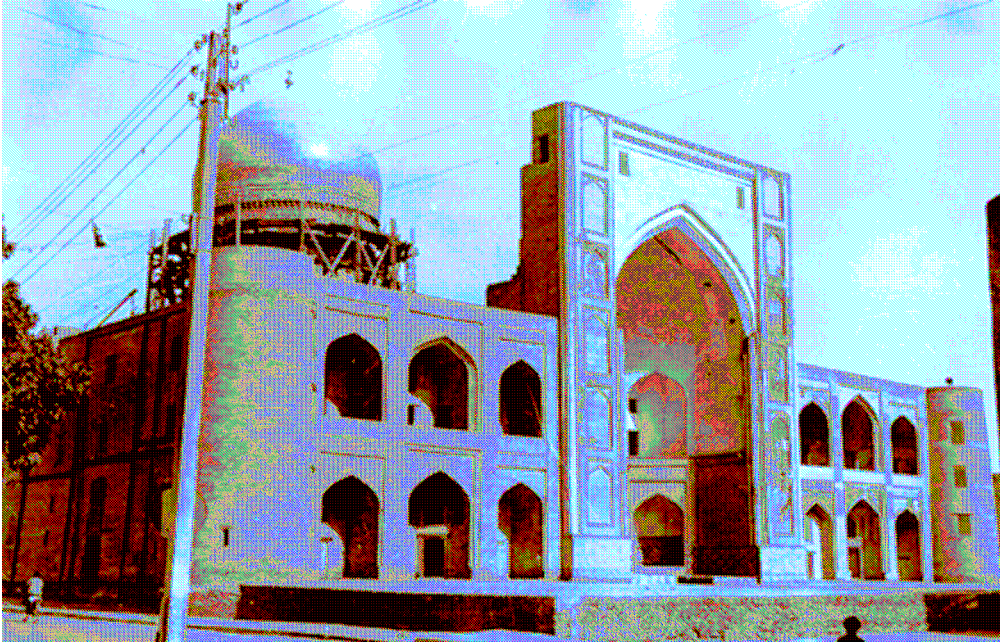


Fig.495: Bukhārā, *kosh* façade of the Mīr-i 'Arab Madrasa after the restoration
Source: Archnet [Accessed on 1 April 2010]

The Kalyān Mosque is one of the largest mosques in Central Asia based on the four-*īwān* plan, which has been most likely adopted from the Bībī Khānum Mosque. The similarities between the two mosques are most vividly represented by the position and the plan of the cross-axial sanctuary, which contains the *mihrāb* and is based on the hierophany of the Cosmic Cross. The sanctuary of the Kalyān Mosque, exactly like the sanctuary of the Bībī Khānum Mosque, is also situated along the main longitudinal axis and is at the far end of the four-*īwān* courtyard. The sanctuary *īwān* (Fig.498,499) of the Kalyān Mosque is characterised by its majestic scale and the octagonal fountain (Fig.496,497) erected in front of its main entrance. The *īwān* is flanked with four blind niches on each side and has a band of Koranic inscriptions at the top, similar to the sanctuary *īwān* of Bībī Khānum. The octagonal pool represents the imagery of Paradise with flowing waters and octagonal plan (i.e. the hierophany of the Eight Paradises) with a small cupola. It is situated on a plinth and has three major construction elements: the square plinth, representing the earth, the octagonal fountain, representing Paradise and the dome, representing the Heavens.



Fig.496: Bukhārā, courtyard view of the Kalyān Mosque, September 2006
Source: Author's photograph



Fig.497: Bukhārā, ablution pool in front of the sanctuary of the Kalyān Mosque, September 2006
Source: Author's photograph



Fig.498: Bukhārā, sanctuary *iwān* of the Kalyān Mosque, September 2006
Source: Author's photograph



Fig.499: Bukhārā, ablution pool with sanctuary *iwān* of the Kalyān Mosque, September 2006
Source: Author's photograph

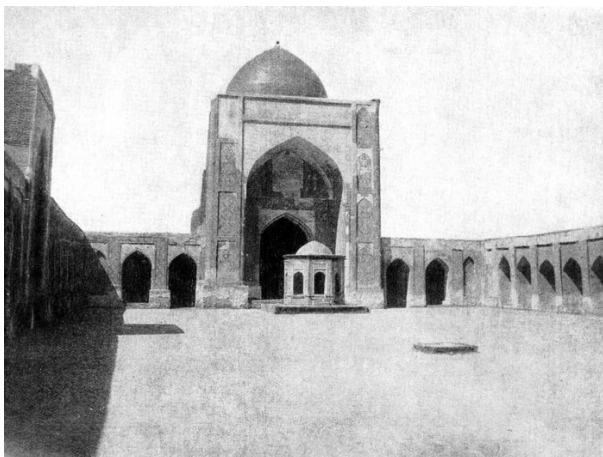


Fig.500: Bukhārā, ablution pool with sanctuary *iwān* of the Kalyān Mosque, prior to restoration
Source: <http://artyx.ru> [Accessed on 3 September 2009]



Fig.501: Bukhārā, ablution pool with sanctuary *iwān* of the Kalyān Mosque, after the restoration
Source: Google Earth [Accessed on 1 April 2010]

Mihrāb

According to Gangler, Gaube and Petruccioli the *mihrāb* must have been decorated with exquisite ceramic mosaic around 1540 AD. The orientation of the *mihrāb* is 258°N to the southwest. This measurement proves that the *mihrāb* of the Kalyān Mosque is not oriented towards Mecca, since Mecca is 236°02'N to the southwest from Bukhārā. It might be possible that the *mihrāb* is oriented towards Baghdad, as Baghdad is 250°N to the southwest. However, the difference of 8° is too big. The *mihrāb* of the Bībī Khānum Mosque is oriented 260°N to the southwest. So, the Kalyān Mosque does not only copy the four *īwān* plan of the Bībī Khānum Mosque but it also adopts almost the same orientation of the *mihrāb*, with only 2° difference⁴⁰⁹. The orientation of the four-*īwāns* of the two mosques is identical.

Building name	Kalyān Mosque	Bībī Khānum Mosque
Location	Bukhārā	Samarqand
Building period	Completed 1514	1398-1405
Ruler	Completed under 'Abdallāh Khān I	Tīmūr
South-western <i>īwān</i>	260°N	260°N
North-western <i>īwān</i>	350°N	350°N
South-eastern <i>īwān</i>	170°N	170°N
North-eastern <i>īwān</i>	70°N	70°N
<i>Qibla (mihrāb)</i>	258°N	260°N
Direction to Mecca	236°02'40"	239°46'39"
Direction to Baghdad	254°26'31"	257°51'12"
Direction to Jerusalem	260°23'56"	262°51'55"

Courtyard *īwāns*

The courtyard (Fig. 504-507) is huge and is characterised by orthogonal symmetry with four *īwāns* along each of the intersecting axes, situated in the middle of the four courtyard walls. The *īwāns* have elongated proportions, whereby the sanctuary *īwān* is the highest. All *īwāns* have a band of Koranic verses, only the sanctuary *īwān* is flanked by side niches.

⁴⁰⁹ However, this small difference might be due to my hand measurements. The *mihrāb* and the sanctuary *īwān* of the Bībī Khānum Mosque are identical. For verification, the *mihrāb* should be measured with a digital compass.

Measured from the courtyard, the backside of the entrance *īwān* (Fig.510,511) is oriented 70°N to the northeast, the southern *īwān* is 170°N to the southeast, the northern *īwān* is 350°N to the northwest, the sanctuary *īwān* is 260°N to the southwest. In the centre of the courtyard, there must have been some water reservoir or flowing water, since there is a canal (Fig.507). But nowadays, the courtyard is arid and decorated only with a tree (Fig.506) with some benches around the trunk. The geographical orientation of the *īwāns* of the Kalyān Mosque follow exactly the orientation of the *īwāns* of the Bībī Khānum Mosque (see Annex I). This is another proof that the Bībī Khānum Mosque have influenced the design and the orientation of the Kalyān Mosque. It might be possible that the ‘Abdallāh I, under whose rule the Kalyān Mosque was completed, wanted to be associated with Tīmūr and his imperial capital Samarqand.



Fig.504: Bukhārā, courtyard of the Kalyān Mosque, September 2006
Source: Author's photograph



Fig.505: Bukhārā, courtyard of the Kalyān Mosque, September 2006
Source: Author's photograph



Fig.506: Bukhārā, courtyard view of the entrance *īwān* and the tree of the Kalyān Mosque, September 2006
Source: Author's photograph



Fig.507: Bukhārā, detail of the courtyard canal of the Kalyān Mosque, September 2006
Source: Author's photograph



Fig.508: Bukhārā, sanctuary *iwān* of the Kalyān Mosque, September 2006
Source: Author's photograph



Fig.509: Bukhārā, detail of the arch of the sanctuary *iwān* of the Kalyān Mosque, September 2006
Source: Author's photograph



Fig.510: Bukhārā, courtyard view of the backside of the entrance *iwān* of the Kalyān Mosque, September 2006
Source: Author's photograph



Fig.511: Bukhārā, courtyard view of the backside of the entrance *iwān* of the Kalyān Mosque with the Kalyān Minaret to the right, September 2006
Source: Author's photograph



Fig.512: Bukhārā, courtyard side *iwān* of the Kalyān Mosque, September 2006
Source: Author's photograph

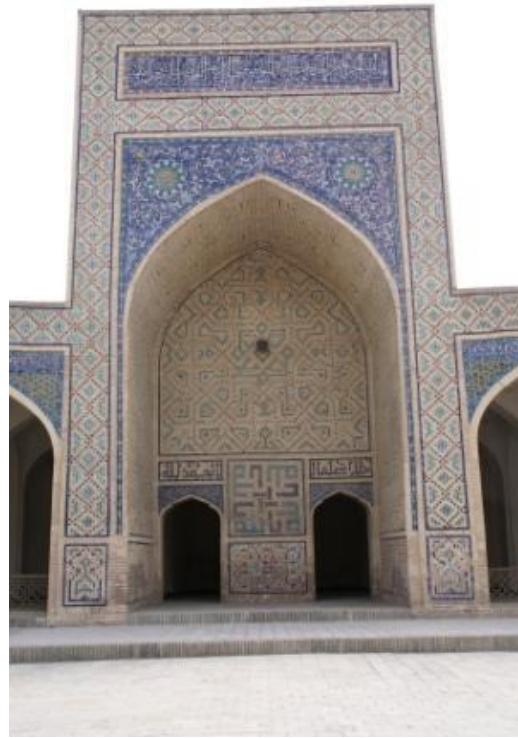


Fig.513: Bukhārā, courtyard side *iwān* of the Kalyān Mosque, September 2006
Source: Author's photograph



Fig.514: Bukhārā, roof view of the Kalyān Mosque, May 2005
Source: www.world-heritage-tour.org [Accessed on 17 October, 2008]

Arcade

The one-storey arcade (Fig.515-521) has been restored in the last decades. The arcade consists of arched niches decorated with tiles and brickwork. The designs are all different and are based on mainly floral ornaments (Fig.518-521).



Fig.515: Bukhārā, arcade along the courtyard of the Kalyān Mosque, September 2006
Source: Author's photograph



Fig.516: Bukhārā, arcade along the courtyard of the Kalyān Mosque, September 2006
Source: Author's photograph



Fig.517: Bukhārā, arcade along the courtyard of the Kalyān Mosque, September 2006
Source: Author's photograph



Fig.518: Bukhārā, detail of arcade mosaic of the Kalyān Mosque, September 2006
Source: Author's photograph



Fig.519: Bukhārā, detail of arcade mosaic of the Kalyān Mosque, September 2006
Source: Author's photograph



Fig.520: Bukhārā, detail of arcade mosaic of the Kalyān Mosque, September 2006
Source: Author's photograph



Fig.521: Bukhārā, detail of arcade mosaic of the Kalyān Mosque, September 2006
Source: Author's photograph

V.2.2.a Comparison between the Exterior Īwāns of the Bībī Khānum and the Kalyān Mosques

The exterior *īwāns* of the Bībī Khānum Mosque seem to have been added during the restoration (Fig.427). The only other four-*īwān* mosque with four exterior *īwāns*, two on each longitudinal side, parallel to the respective central *īwāns*, is the Kalyān Mosque in Bukhārā. The plan of the Bībī Khānum Mosque published by Golombek and Wilber (Fig.428) and the reconstruction suggested by Borodina (Fig.430) exploit only a four-*īwān* courtyard without the additional exterior *īwāns*.

The exterior *īwāns* of the Bībī Khānum Mosque are decorated only along the exterior (Fig.522,523) and are hollow from the courtyard (Fig.524). Actually, the form of the *īwān* is only exploited as a façade and is reduced to a mere brick wall; it does not have any structural function. Whereas, the exterior *īwāns* of the Kalyān Mosque (Fig.525-532) are used as buttresses and are more monumental. However, they are not decorated along the exterior walls (at least not in the current situation). The exterior *īwāns* of the Bībī Khānum Mosque consist of a central arch, flanked by three blind niches and topped with five blind niches, all niches are rectangular and have the same dimensions. The exterior *īwāns* of the Kalyān Mosque consist of a central arch, flanked by two elongated blind niches and topped with three niches (Fig.530,531), one rectangular and two square ones.

If the central courtyard of the four-*īwān* plan is originally based on a square, the location of the additional exterior *īwāns* can be geometrically determined by rotating the square on 90°. The intersecting points of the two squares define the position of the exterior *īwāns*. The same principle can be applied also to a rectangular plan, rotated at 90°. If analysed within the *hierophanic palimpsest*, the plans of the Bībī Khānum Mosque and the Kalyān Mosque can

be interpreted as a representation of the hierophany of the gates to Paradise (see Chapter II.4).



Fig.522: Samarqand, southern mosque, backside of the exterior *iwān* of the Bībī Khānum Mosque, July 2006
Source:
<http://www.pbase.com/askar01/image/63972306/medium> [Accessed on 20 November 2008]



Fig.523: Samarqand, corner minaret, exterior *iwān* to the north, backside of the entrance *iwān* of the Bībī Khānum Mosque, July 2006
Source:
<http://www.pbase.com/askar01/image/63972306/medium> [Accessed on 20 November 2008]



Fig.524: Samarqand, wall and outside *iwān* of the Bībī Khānum Mosque, May 2004
Source: <http://www.world-heritage-tour.org> [Accessed on 17 October, 2008]

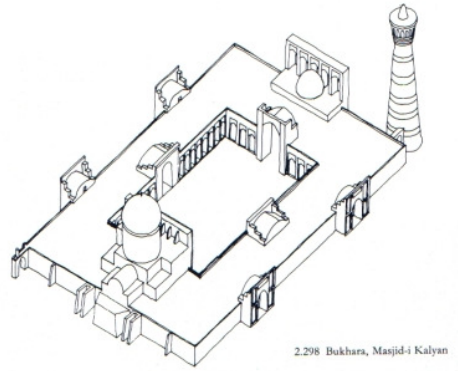


Fig.525: Bukhārā, isometry of the Kalyān Mosque after Hillenbrand
Source: Hillenbrand: *Islamic Architecture*, 1994, Fig.2.298



Fig.526: Bukhārā, southern exterior *īwāns* of the Kalyān Mosque, September 2006
Source: Author's photograph



Fig.527: Bukhārā, detail of southern exterior *īwān* of the Kalyān Mosque, September 2006
Source: Author's photograph



Fig.528: Bukhārā, exterior of the Kalyān Mosque along the main east-west axis of the *madina*, dome of the sanctuary and exterior *īwāns*, September 2006
Source: Author's photograph



Fig.529: Bukhārā, exterior of the Kalyān Mosque along the main east-west axis of the *madina*, corner of the entrance façade, dome of the sanctuary and exterior *īwāns*, September 2006
Source: Author's photograph



Fig.530: Bukhārā, exterior *īwān* of the Kalyān Mosque along the main east-west axis of the *madina*, September 2006
Source: Author's photograph



Fig.531: Bukhārā, exterior of the Kalyān Mosque along the main east-west axis of the *madina*, September 2006
Source: Author's photograph



Fig.532: Bukhārā, exterior of the Kalyān Mosque, September 2006
Source: Author's photograph



Fig.533: Bukhārā, two sides of the entrance *īwān* of the Kalyān Mosque, picture taken behind the Kalyān minaret September 2006
Source: Author's photograph

The *īwāns* of the Kalyān Mosque on the inner side of the courtyard do not reflect the *īwāns* on the exterior. There is one *īwān* in the centre of each courtyard wall. On two of the exterior walls, there are two *īwāns*, symmetrically situated on the two sides of the inner courtyard *īwān*. This is also the case with Bībī Khānum Mosque in Samarqand. However, in Bībī Khānum, the side courtyard *īwāns* are entrances to the northern and respectively to the southern mosques.

This is one of the major differences compared to the Mīr-i 'Arab Madrasa, in which the courtyard *īwāns* have corresponding *īwāns* also on the exterior walls of the madrasa.

V.3 The Two-fold *Kosh*: Madrasa versus Madrasa

V.3.1 Ulugh Beg Madrasa (1417-1420 AD) versus ‘Abd al’Azīz Khān Madrasa (1651-1652 AD), Bukhārā

The two-*īwān* Ulugh Beg Madrasa (1417-1420 AD) (Fig.534) and the four-*īwān* ‘Abd al’Azīz Khān Madrasa (1651-1652 AD) (Fig.535) form the most prominent “madrasa *kosh*” (Fig.536, 537) in Bukhārā. The ‘Abd al’Azīz Khān Madrasa was built exactly in the main axis of the Ulugh Beg Madrasa. The Ulugh Beg Madrasa was one of the three madrasas Ulugh Beg erected during his lifetime and can be seen as less important than the larger Rīgistān Madrasa (1417 AD) in Samarqand, which has four-*īwāns* and more significant than the inauspicious Gijduvan Madrasa (1433 AD). Yet, with it Ulugh Beg still paid his respect to the clergy in Bukhārā. Built more than two centuries later, the four-*īwān* ‘Abd al’Azīz Khān Madrasa can be characterised as the most spectacular madrasa of Bukhārā with exquisite decoration. The ‘Abd al’Azīz Khān Madrasa surpasses the Ulugh Beg Madrasa in the following: the front (*kosh*) façade is larger and higher, it has four *īwāns*, the decoration and the vault solutions⁴¹⁰ are innovative and exclusive, and it has two mosques, compared to the one mosque of the Ulugh Beg Madrasa.

The Ulugh Beg Madrasa is the only Tīmūrid monument of Bukhārā. Neither Tīmūr, nor Shāh Rukh built anything in the spiritual capital of Central Asia. Tīmūr focused his building activities in his two capitals – Shahr-i Sabz and Samarqand. Although Shāh Rukh was not much of a building patron, it is a bit puzzling that he did not honour Bukhārā with a royal monument, since his piety was notorious and exactly Sunnī Bukhārā would have been the most appropriate place to build. Yet, his wife Gauhar Shād (also mother of Ulugh Beg) honoured Shī’a Mashhad with the opulent Friday Mosque and three madrasas, all based on the four-*īwān* plan.

⁴¹⁰ For details on the vault solutions, please see Pugachenkova: *Samarkand, Bukhara*, 1968, pp.177-178.



Fig.534: Bukhārā, Ulugh Beg Madrasa, *kosh* façade, September 2006
Source: Author's photograph



Fig.535: Bukhārā, 'Abd al'Aziz Khān Madrasa, *kosh* façade
Source: Google Earth [Accessed on 1 April 2010]



Fig.536: Bukhārā, *kosh* of Ulugh Beg Madrasa and 'Abd al'Aziz Khān Madrasa
Source: Google Earth [Accessed on 1 April 2010]

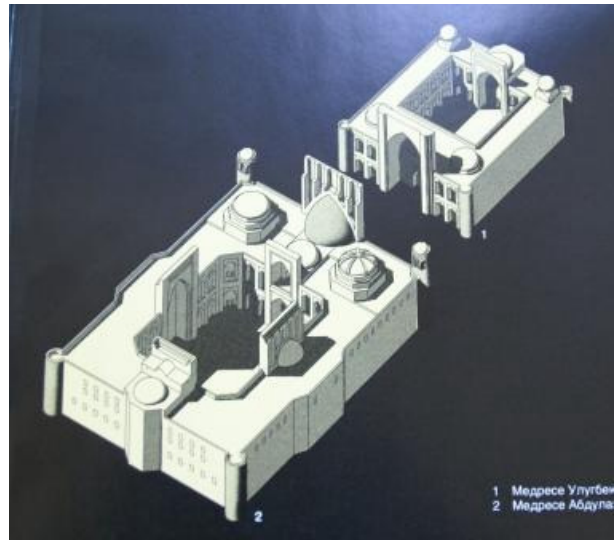


Fig.537: Bukhārā, isometry of the *kosh* Ulugh Beg Madrasa and the 'Abd al'Aziz Khān Madrasa after Borodina
Source: Borodina: *Central Asia*, 1985, p.160

The choice of Ulugh Beg to erect a madrasa in Bukhārā, and not a mosque or a *khānaqāh*, can be explained with the fact that madrasas had a long tradition in Bukhārā as a major Islamic educational centre in Central Asia. The chronicle of Narshakhi⁴¹¹ *History of Bukhara* tells that one of the oldest madrasas in Bukhārā, the Fardjek Madrasa, burnt down during the

⁴¹¹ Quoted by Nemceva, see Немцева, Н.: "Истоки медресе Средней Азии". *Роль города Самарканда в истории мирового культурного развития*. Ташкент- Самарканд, 2007, стр.235-241. (Nemceva: "History of the Madrasa in Central Asia". In *The Role of the City of Samarqand in the World's Cultural History*. Tashkent-Samarqand, 2007, pp.235-241)

great fire in 937 AD. During the Sāmānid rule, there were 17 madrasas in Samarqand⁴¹² (*mutazalit and keramiic*) and Bukhārā, as the Sāmānid capital, must have had also a considerable number of madrasas already in the 9th-10th c. AD.

‘Abd al’Azīz Khān was a cultured ruler, similar to Ulugh Beg. He attracted many poets and theologians to his court in Bukhārā and patronised the fine arts. That is one of the reasons for the location of his most important madrasa in Bukhārā. He wanted to be associated and even to surpass⁴¹³, at least architecturally, the Ulugh Beg Madrasa, built by the most cultured Tīmūrid ruler. The *kosh* can be, thus, seen as an architectural statement representing the fame and ambitions of ‘Abd al’Azīz Khān in the 17th c. AD, which were very similar to the cultural heritage left by Ulugh Beg in the 15th c. AD.

The ‘Abd al’Azīz Khān Madrasa (Fig.539,541,543) is the only surviving madrasa⁴¹⁴ out of four built by ‘Abd al’Azīz Khān during his reign (1645-1681 AD) in Bukhārā. The Bazaar Guzfand Madrasa (1669-1670 AD) was located at the northern border of the Rigistān, the other two Khiyaban Madrasa (1654-1655 AD) and Mirakan Madrasa (1650-1652 AD) were in the Juibar, south-western part of the circumvallated city. All three of these madrasas were destroyed during the Soviet rule.



Fig.538: Bukhārā, Ulugh Beg Madrasa, *kosh* façade, September 2006
Source: Author's photograph



Fig.539: Bukhārā, ‘Abd al’Azīz Khān Madrasa, *kosh* façade, picture taken from the entrance *īwān* of the Ulugh Beg Madrasa, September 2006
Source: Author's photograph

⁴¹² Nemceva: *History of the Madrasa in Central Asia*, 2007.

⁴¹³ Baranov et al: *Encyclopaedia*, 1969, p.326.

⁴¹⁴ Gangler, Gaube, Petruccioli: *Bukhara*, 2004, p.96.



Fig.540: Bukhārā, Ulugh Beg Madrasa, *kosh* façade, detail of the column at the entrance *īwān*, September 2006
Source: Author's photograph



Fig.541: Bukhārā, 'Abd al'Azīz Khān Madrasa, *kosh* façade, detail *muqarnas* of the entrance *īwān*
Source: <http://www.pagetour.org/Bukhārā/bu/'Abdullazizkhan1.htm> [Accessed on 24 March, 2010]

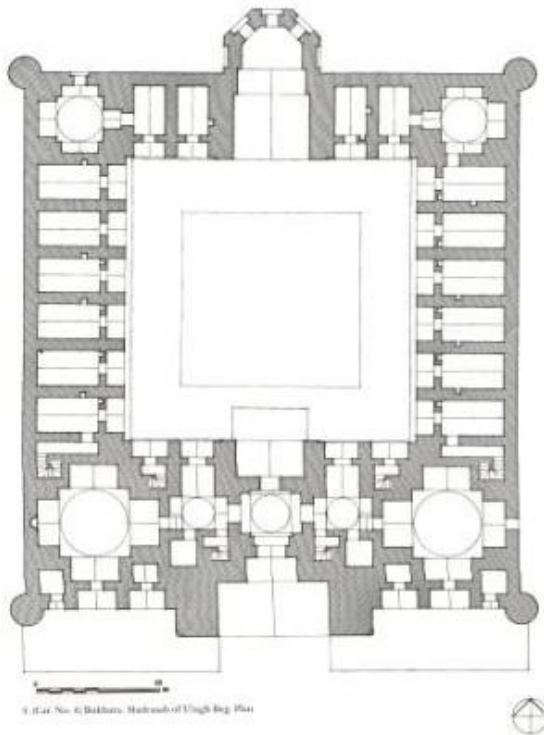


Fig.542: Bukhārā, Ulugh Beg Madrasa, plan after Golombek and Wilber
Source: Golombek and Wilber: *Timurid Architecture*, 1988, Fig.4

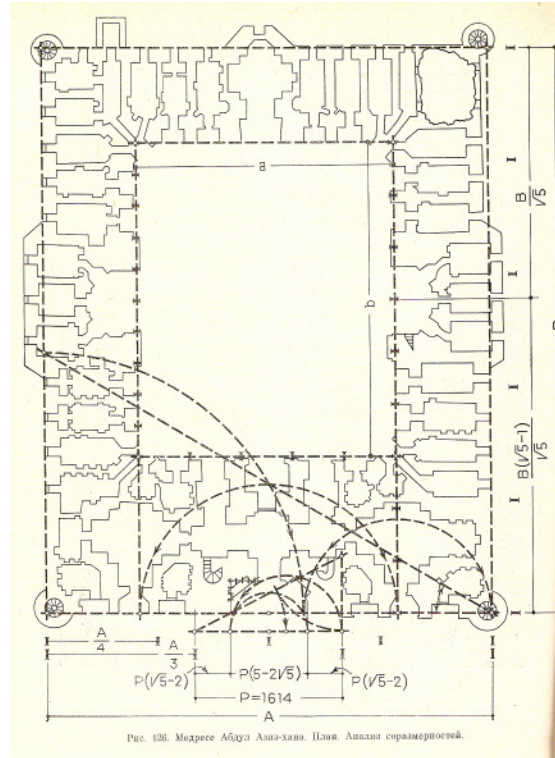


Fig.543: Bukhārā, 'Abd al'Azīz Khān Madrasa, plan after Bulatov
Source: Bulatov: *Geometrical harmonisation*, 1978, p.222, Fig.126

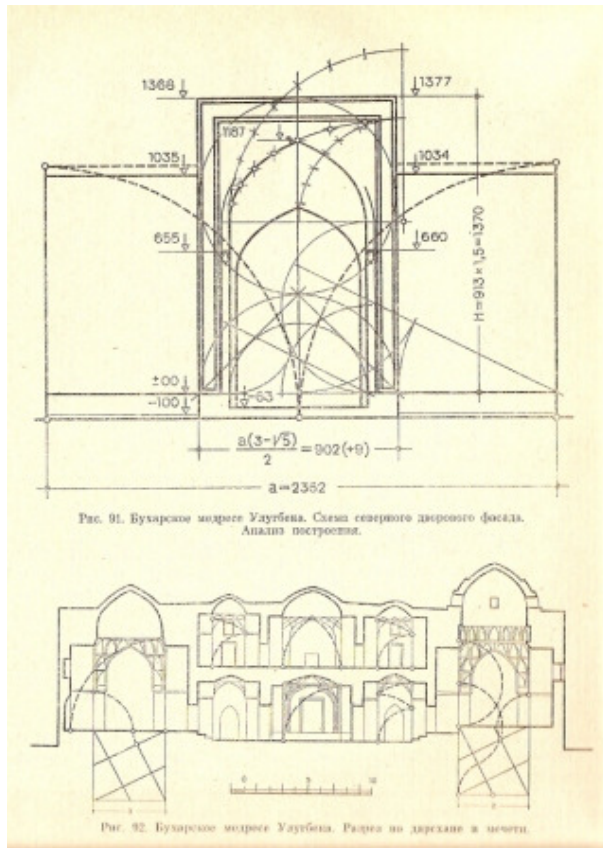


Fig.544: Bukhārā, Ulugh Beg Madrasa, cross section after Bulatov
Source: Bulatov: *Geometrical harmonisation*, 1978, p.182, Fig.92

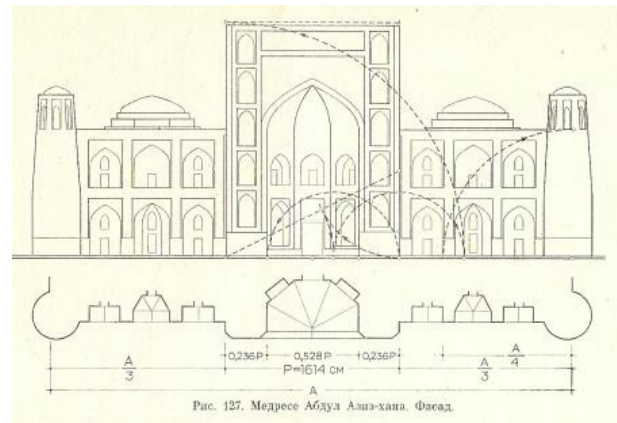


Fig.545: Bukhārā, 'Abd al'Azīz Khān Madrasa, *kosh* façade after Bulatov
Source: Bulatov: *Geometrical harmonisation*, 1978, p.223, Fig.127

Although the two madrasas form a *kosh* and the two entrance *īwāns* (Fig.538,539) are on the same axis, the entrance façades differ in their composition. The *kosh* façade of the Ulugh Beg Madrasa (Fig.538) has a central *īwān* with two bays of arched niches on two floors and a decorative bay on each side with four vertical blind niches. The *kosh* façade of the 'Abd al'Azīz Khān Madrasa (Fig.539,545) has an elongated entrance *īwān*, much higher than the respective *īwān* of the Ulugh Beg Madrasa, flanked by two vertical rows of five blind niches. The façade is divided in three bays on each side with arched niches on two levels. There are corner *guldasta* on each side. The plan of the Ulugh Beg Madrasa (Fig.542) is close to a square, of approximately 22m, while the 'Abd al'Azīz Khān Madrasa (Fig.543) has a rectangular courtyard (48m x 60m). Both madrasas have two floors of *hujras*. The main *īwān* of the 'Abd al'Azīz Khān Madrasa (Fig.541) has majolica panels depicting flowers, birds and dragon-like creatures with bird heads. Unfortunately, these panels are damaged and were being restored (Fig.539) when I visited the madrasa in the autumn of 2006.



Fig.546: Bukhārā, picture of the Ulugh Beg Madrasa taken in the 1920s, exhibited at the 'Abd al'Azīz Khān Madrasa
Source: Author's photograph



Fig.547: Bukhārā, *kosh* façade of the Ulugh Beg Madrasa after the restoration, September 2006
Source: Author's photograph

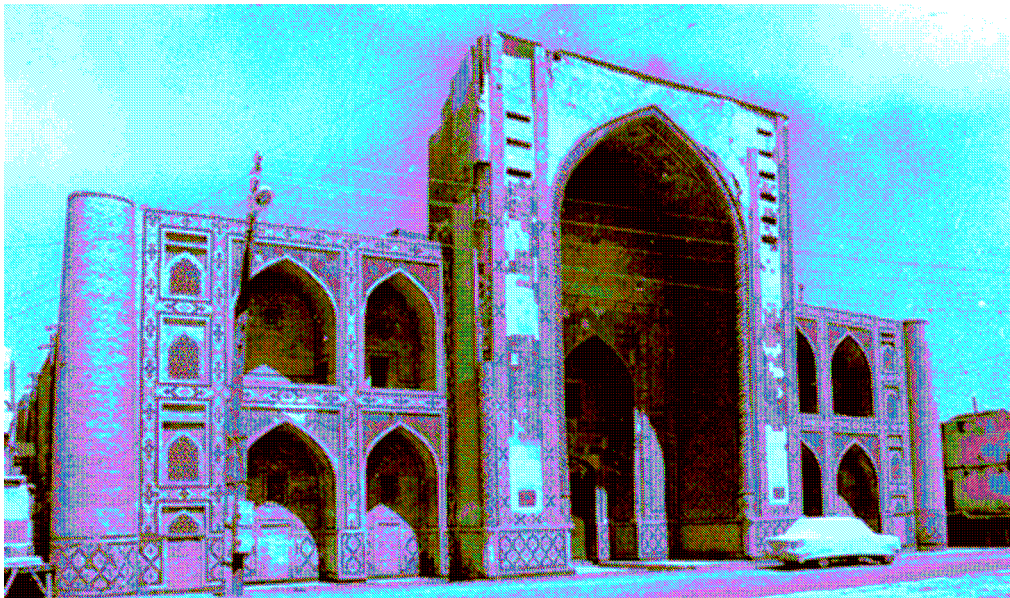


Fig.548: Bukhārā, *kosh* façade of the Ulugh Beg Madrasa after partial restoration during the restoration of the Old City of Bukhārā that won The Aga Khan Award for Architecture in 1995
Source: Archnet [Accessed on 1 April 2010]



Fig.549: Bukhārā, Ulugh Beg Madrasa, courtyard view of the backside of the entrance *īwān*, September 2006
Source: Author's photograph



Fig.550: Bukhārā, Ulugh Beg Madrasa, courtyard view of the northern *īwān* with a *muqarnas* niche, September 2006
Source: Author's photograph



Fig.551: Bukhārā, Ulugh Beg Madrasa, courtyard view of the northern *īwān* with *hujras* on the northern courtyard façade, September 2006
Source: Author's photograph



Fig.552: Bukhārā, Ulugh Beg Madrasa, western courtyard façade with two-storey *hujras*, September 2006
Source: Author's photograph

The four courtyard *īwāns* of the ‘Abd al’Azīz Khān Madrasa⁴¹⁵ are all different in their architectural details. The backside of the entrance *īwān* (northern *īwān*) (Fig.555) and the southern *īwān* (Fig.556) are slender and elongated and have two levels each, in line with the two floors of *hujras*. While the eastern (Fig.557) and the western (Fig.558) *īwāns* are bulkier and wider. Although the latter *īwāns* have the same half octagonal plan and two bays of three arched niches, they are also not identical. The western *īwān* has a flat side surface and

415 For a virtual tour around the courtyard of the Abd al’Azīz Khān Madrasa, please visit the following website: <http://www.world-heritage-tour.org/asia/central-asia/uzbekistan/Bukhārā/abdul-aziz-khan-madrassa/sphere-flash.html> [Accessed on 17 October, 2008]

no *muqarnas*, whereas, the eastern *īwān* is richly decorated with a *muqarnas* and is framed by three flat blind niches, topped with a square. On the one hand, the western *īwān* repeats the geometry of the entrance *īwān*, which has also three bay windows on two levels. Yet the entrance *īwān* has five blind niches on each side. So, we can summarise that all *īwāns* of the ‘Abd al’Azīz Khān Madrasa have different architectural details, which, according to me, is a novelty treatment of the four-*īwān* plan, since the four *īwāns* were simultaneously built and are part of the same architectural composition.

The northern (Fig.555) and the southern (Fig.556) courtyard *īwāns* of the ‘Abd al’Azīz Khān Madrasa repeat the elongated proportions of the respective *īwāns* (Fig.549,550) of the Ulugh Beg Madrasa, which underline the main longitudinal *kosh* axis. All courtyard *īwāns* of the two madrasas along this axis have the same proportions, which is a remarkable architectural solution, that is not repeated in any other *kosh* ensemble known to me and is noted here for the first time. The bulkier proportions of the eastern (Fig.557) and western (Fig.558) *īwāns* of the ‘Abd al’Azīz Khān Madrasa poise the elongated proportions of the other two courtyard *īwāns* (along the longitudinal *kosh* axis) and create a harmonious counterbalance. That is why, I disagree with Pugachenkova⁴¹⁶, who treats the ‘Abd al’Azīz Khān Madrasa as a minor architectural achievement compared to the earlier Tīmūrid madrasas and pays merit only to its ornamentation. According to me, the architecture of the madrasa underlines not only the *kosh* façade but also develops the longitudinal *kosh* axis, so that the two monuments i.e. the Ulugh Beg Madrasa and the ‘Abd al’Azīz Khān Madrasa are conceived as part of the same architectural *kosh* ensemble.



Fig.553: Bukhārā, ‘Abd al’Azīz Khān Madrasa, courtyard view of the northern façade, September 2006
Source: Author’s photograph



Fig.554: Bukhārā, ‘Abd al’Azīz Khān Madrasa, courtyard view of the western *īwān* (to the left) and the northern *īwān* (to the right), September 2006
Source: Author’s photograph

⁴¹⁶ Pugachenkova: *Samarkand, Bukhara*, 1968, pp.177-178.



Fig.555: Bukhārā, 'Abd al'Azīz Khān Madrasa, courtyard view of the backside of the entrance *īwān*, northern façade, September 2006
Source: Author's photograph



Fig.556: Bukhārā, 'Abd al'Azīz Khān Madrasa, courtyard view of the *īwān* of the southern façade, September 2006
Source: Author's photograph



Fig.557: Bukhārā, 'Abd al'Azīz Khān Madrasa, courtyard view of the eastern *īwān*, September 2006
Source: Author's photograph



Fig.558: Bukhārā, 'Abd al'Azīz Khān Madrasa, courtyard view of the western *īwān*, September 2006
Source: Author's photograph

The 'Abd al'Azīz Khān Madrasa surpasses the Ulugh Beg Madrasa also by the number of mosques. The Ulugh Beg Madrasa has a winter mosque (Fig.559,560), situated to south west of the entrance *īwān*, while the 'Abd al'Azīz Khān Madrasa has a winter (Fig.565-570) and a summer (Fig.561-564) mosque: one half open mosque in the courtyard (the winter one) and a mosque to the southwest of the entrance *īwān* (the summer one). The situation of

the mosque in the Ulugh Beg Madrasa follows the earlier pattern of placing the mosque of a madrasa on either side of the entrance *īwān*, while the Ulugh Beg Madrasa in Samarqand follows the more innovative solution, also used in the Bībī Khānum Mosque, of situating the mosque in the main sanctuary, opposite the entrance *īwān* in the courtyard. In the Ulugh Beg Madrasa in Bukhārā, there is a *darskhana* (a lecture hall) opposite the mosque. Both the mosque and the *darskhana* are symmetrically situated on either side of the entrance *īwān* in the antechamber, have identical plans and domed constructions. These lateral chambers are cruciform in plan and have four arched recesses on each side, which rise almost to the base of the dome (Fig.559). The small *mihṛāb* of the Ulugh Beg Madrasa is situated in the south-western alcove of the mosque.



Fig.559: Bukhārā, Ulugh Beg Madrasa, dome in the south-western chamber, September 2006
Source: Author's photograph



Fig.560: Bukhārā, Ulugh Beg Madrasa, detail of the dome squinches in the south-western chamber, September 2006
Source: Author's photograph



Fig.561: Bukhārā, 'Abd al-'Azīz Khān Madrasa, detail of the dome of the summer mosque, September 2006
Source: Author's photograph



Fig.562: Bukhārā, 'Abd al-'Azīz Khān Madrasa, detail of the dome squinches, summer mosque, September 2006
Source: Author's photograph



Fig.563: Bukhārā, 'Abd al'Azīz Khān Madrasa, detail of the arched niche in the summer mosque, September 2006
Source: Author's photograph



Fig.564: Bukhārā, 'Abd al'Azīz Khān Madrasa, detail of the *muqarnas* above the entrance of the summer mosque, September 2006
Source: Author's photograph



Fig.565: Bukhārā, 'Abd al'Azīz Khān Madrasa, detail of the cupola of the winter mosque, September 2006
Source: Author's photograph



Fig.566: Bukhārā, 'Abd al'Azīz Khān Madrasa, detail of the cupola of the winter mosque, September 2006
Source: Author's photograph



Fig.567: Bukhārā, 'Abd al'Azīz Khān Madrasa, detail of the arched recesses of the winter mosque, September 2006

Source: Author's photograph

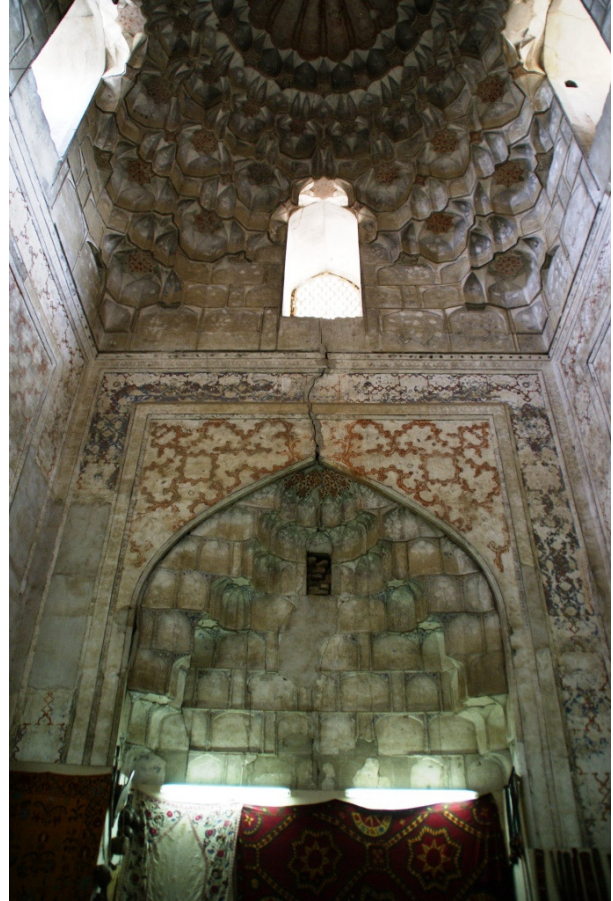


Fig.568: Bukhārā, 'Abd al'Azīz Khān Madrasa, detail of the arched recesses of the winter mosque, September 2006

Source: Author's photograph



Fig.569: Bukhārā, 'Abd al'Azīz Khān Madrasa, detail of the arched recesses of the winter mosque, September 2006

Source: Author's photograph



Fig.570: Bukhārā, 'Abd al'Azīz Khān Madrasa, detail of the vault wall painting on one of the arched recesses of the winter mosque, September 2006

Source: Author's photograph

The winter and the summer mosques of the 'Abd al'Azīz Khān Madrasa have two separate *mihṛābs* with different *qibla* orientations. The *mihṛāb* of the summer mosque (situated in the antechamber) (Fig.573) is oriented 260°N to the southwest. The *mihṛāb* of the winter mosque (situated in the courtyard) is oriented 250°N to the southwest. So, it is a bit puzzling that the

two *mihrābs* of the ‘Abd al‘Azīz Khān do not have the same orientation. It is likely that the *mihrāb* of the winter mosque copies the orientation of the *mihrāb* of the Ulugh Beg Madrasa, which is also oriented 250°N to the southwest. Since the summer mosque of the ‘Abd al‘Azīz Khān Madrasa corresponds architecturally to the only mosque of the Ulugh Beg Madrasa, i.e. both of them are situated along the entrance *īwān* and face each other across the *kosh*, it would have been more logical for the summer *mihrāb* to follow the orientation of the Ulugh Beg *mihrāb*. However, this is not the case. It is the smaller winter mosque with less decoration that is oriented like the Ulugh Beg’s Mosque. Still the larger and more lavishly decorated summer mosque might follow other examples. The only other *mihrāb*⁴¹⁷ (see Annex I) that is oriented exactly 260°N to the southwest is the *mihrāb* of the Bībī Khānum Mosque in Samarqand that might be directed towards Baghdad and not Mecca as I have shown above. It might be possible that ‘Abd al‘Azīz Khān not only tried to exceed the splendour of Ulugh Beg but also attempted to glorify his most important madrasa by directing one of its *mihrābs* similar to the *mihrāb* of Tīmūr’s greatest building achievement, which at the time of ‘Abd al‘Azīz Khān must have been already in ruins. Yet, this is also a hypothesis and the above *mihrābs* have to be carefully re-measured with a digital compass in order to have a 100% certainty about their orientation.



Fig.571: Bukhārā, ‘Abd al‘Azīz Khān Madrasa, detail of the dome above the *mihrāb* of the summer mosque, September 2006
Source: Author’s photograph



Fig.572: Bukhārā, ‘Abd al‘Azīz Khān Madrasa, detail of the dome above the *mihrāb* of the summer mosque, September 2006
Source: Author’s photograph

⁴¹⁷ From all the *mihrābs* in Samarqand, Bukhārā and Khīva that I measured by compass during my study trip to Uzbekistan in September 2006.



Fig.573: Bukhārā, 'Abd al'Azīz Khān Madrasa, detail of the *mihrāb* of the summer mosque, September 2006
Source: Author's photograph

At present a two-storey *hujra* (Fig.574,575) has been restored at the 'Abd al'Azīz Khān Madrasa, which gives an idea of the spatial organisation of the madrasa's students' rooms. The upper floor of the *hujra* (Fig.574) was used for studying and the living quarters were on the lower level (Fig.575).



Fig.574: Bukhārā, second semi-floor of a student's room at the 'Abd al'Azīz Khān Madrasa, September 2006
Source: Author's photograph



Fig.575: Bukhārā, staircase leading to the second semi-floor of a student's room at the 'Abd al'Azīz Khān Madrasa, September 2006
Source: Author's photograph

V.3.2 Madār-i Khān Madrasa (1566-1567 AD) versus ‘Abdallāh Khān Madrasa (1588-1590 AD), Bukhārā

Both madrasas were built by the Shaybānīd ruler ‘Abdallāh Khān II (1556-1598 AD) to the southwest of the *shahristan* of Bukhārā, outside the old centre. The two-*īwān* Madār-i Khān Madrasa (1566/67), also known as the Modarixon, was erected earlier than the four-*īwān* ‘Abdallāh Khān Madrasa (1588-1590 AD). The latter was built during Bukhārā's third and last great construction phase when numerous civic structures such as caravansarays, markets, *čahār-suqs* (domed market kiosks), *hauz* (lakes) and *khānaqāhs* (hospices) were erected. The ‘Abdallāh Khān Madrasa is situated exactly across the main façade of the Madār-i Khān Madrasa, both madrasas have identical façades, thus they form an ideal symmetrical *kosh* (Fig.576-579).



Fig.576: Bukhārā, ‘Abdallāh Khān Madrasa (to the left) versus Madār-i Khān Madrasa (to the right), September 2006

Source: Author's photograph



Fig.577: Bukhārā, the *kosh* of the 'Abdallāh Khān Madrasa (to the left) and the Madār-i Khān Madrasa (to the right)

Source: Google Earth [Accessed on 1 April 2010]

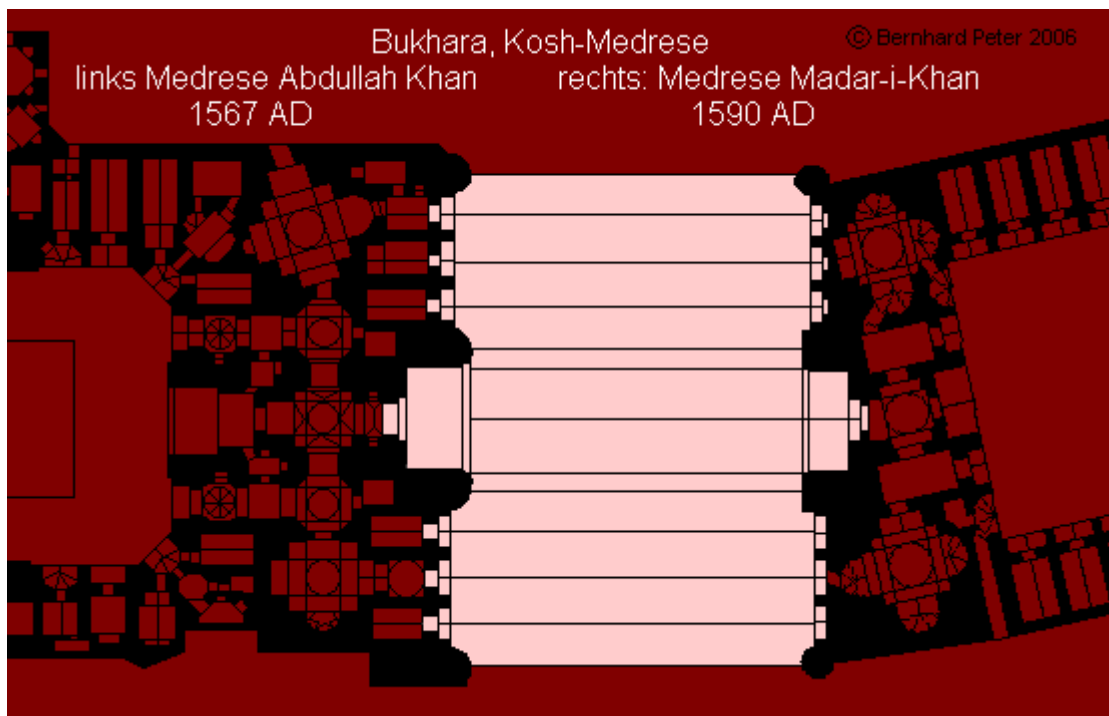


Fig.578: Bukhārā, the *kosh* of the 'Abdallāh Khān Madrasa (to the left) and the Madār-i Khān Madrasa (to the right) after Peter (Note: the years that Peter provided have to be reversed)

Source: Website of B. Peter

<http://www.kultur-in-asien.de/Usbekistan/architektur/kosh.htm> [Accessed on 19 August 2009]



Fig.579: Bukhārā, *kosh* 'Abdallāh Khān Madrasa and Madār-i Khān Madrasa (to the left), the Citadel (top) with the Rigistān, *kosh* Kalyān Mosque and Mīr-i 'Arab Madrasa next to the Citadel, Labi Hauz *kosh* (to the right)

The *kosh* defines the new urban centre of Bukhārā, created during the long reign of the Shaybānīd ruler 'Abdallāh Khān II (1556-1598 AD). 'Abdallāh Khān II's "reputation as a builder became so proverbial that even centuries after his death, people would customarily attribute to him any ancient building of monumental proportions of whose origin they were ignorant."⁴¹⁸ With his extensive building activity, 'Abdallāh Khān II transferred the main bazaar and thus the commercial centre of Bukhārā to the south and southwest of the old *shahristan* (Fig.579). The new bazaar needed also a new main market avenue, leading from the Rigistān to the new Shirgaran Gate in the southwest.

Since the two madrasas built by 'Abdallāh Khān II have identical façades, their main entrance *īwāns* are situated along the same longitudinal axis (Fig.578). The perpendicular axis is formed by the new main market avenue created by 'Abdallāh Khān II. The intersecting point of these two axes, which is also the centre of the created *kosh* square, can be analysed within the frame of the representational theory of Mekking as *Axis Mundi* that marks the new urban identity of Bukhārā at the end of the 16th c. AD. This new *Axis Mundi* created by "the greatest" Shaybānīd ruler 'Abdallāh Khān II can be further interpreted as a counterpart to the older *Axis Mundi* at the *shahristan*, formed by the *kosh* of the Kalyān Mosque, the Mīr-i 'Arab Madrasa and the Kalyān Minaret that represented the power of the first Shaybānīds.

⁴¹⁸ McChesney, 1987, p.230 quoted by Gangler, Gaube and Petruccioli: *Bukhara*, 2004, p.90.

Further, ‘Abdallāh Khān II and the effluent Sufi Juibar Shaykhs were the main building patrons of Bukhārā in the late 16th c. AD. Their joint building activities can be analysed in two ways. Firstly, the Sufi Juibar Shaykhs were so influential and had huge economic power to invest on the same scale as the ruling khān of Bukhārā by erecting also a caravansaray and two baths along the new bazaar avenue. Secondly, ‘Abdallāh Khān needed their political support for his reign. Additionally, he decided to extend the western part of the city by moving the city walls, in order to include the new Juibar district with its large *čahār-bahr* gardens and residential estates within the compound of the circumvallated city⁴¹⁹. In a way, this urban change legitimised the constructions of the Sufi shaykhs and made them officially part of the city and thus part of the realms, governed directly by the khān. ‘Abdallāh Khān II erected his madrasa *kosh* in the vicinity of this new city wall, and thus within the new boundaries of Bukhārā. In this respect, the ‘Abdallāh Khān and Madār-i Khān Madrasa *kosh* celebrates the administrative power of the khān and acknowledges the economic and political power of the Sufis.

The ‘Abdallāh Khān and Madār-i Khān Madrasa *kosh* commemorates the relationship between a mother and her son, the son being the commissioner of the two madrasas. The metaphor of the son, risen to power and glory, who acknowledges his mother by a building is quite old. In Bukhārā, it is reinvented also in the Bahauddin complex, which contains a minaret and the tomb of Bahauddin’s mother⁴²⁰. However, the latter were not directly commissioned by the son. Bahauddin was the founder of the powerful Sufi *Naqšbandiyya* order and the complex is one of the most sacred and widely venerated sites around Bukhārā. In Isfahān, the four-*īwān* Madār-i Shāh Madrasa (1706-1714 AD), dedicated to the mother of the shāh, is part of the whole urban ensemble that includes a market and a *čahār-bahr* garden, constructed under the patronage of Shāh Husayn I, the last Safavid emperor.

The *kosh* façades of the ‘Abdallāh Khān Madrasa and the Madār-i Khān Madrasa are symmetrical (Fig.580-583) with six arched loggias, three on each floor, flanking either side of the entrance *īwāns*. Both madrasas have corner towers (*guldasta*) capped at the wall cornice buttresses. The other façades of the two madrasas are inauspicious and reveal only undecorated brickwork. The *kosh* *īwāns* and the loggias are adorned with rich majolica, mosaic inlay and glazed brickwork typical of the Shaybānīd constructions of the early 16th c. AD. Although the two entrance *īwāns* have the same width, their size and depth are different. The entrance *īwān* of the ‘Abdallāh Khān Madrasa (Fig.584) is deeper, slender and higher,

⁴¹⁹ Gangler, Gaube and Petruccioli: *Bukhara*, 2004, p.95.

⁴²⁰ Please see Chapter IV.7.3.

whereas the entrance *īwān* of the Madār-i Khān Madrasa (Fig.583) is lower and clumsier in its overall proportions. The latter is also flanked with four blind niches on each side.



Fig.580: Bukhārā, 'Abdallāh Khān Madrasa, side view of the *kosh* façade, September 2006
Source: Author's photograph



Fig.581: Bukhārā, Madār-i Khān Madrasa, side view of the *kosh* façade, September 2006
Source: Author's photograph



Fig.582: Bukhārā, 'Abdallāh Khān Madrasa, *kosh* façade, September 2006
Source: Author's photograph



Fig.583: Bukhārā, Madār-i Khān Madrasa, *kosh* façade, September 2006
Source: Author's photograph



Fig.584: Bukhārā, 'Abdallāh Khān Madrasa, entrance īwān, September 2006
Source: Author's photograph



Fig.585: Bukhārā, Madār-i Khān Madrasa, entrance īwān, September 2006
Source: Author's photograph



Fig.586: Bukhārā, 'Abdallāh Khān Madrasa, detail of the inscription on the entrance īwān, September 2006
Source: Author's photograph



Fig.587: Bukhārā, Madār-i Khān Madrasa, detail of the inscription on the entrance īwān, September 2006
Source: Author's photograph

Both *kosh īwāns* have an inscription above the main entrance (Fig.586,587). It is interesting to note that the inscription on the Madār-i Khān Madrasa is in Persian (Fig.587) and the inscription on the 'Abdallāh Khān Madrasa is in Arabic (Fig.586). The date of erection 974 *hijra* (1566-67 AD) is inscribed with majolica in verse above the entrance of the Madār-i Khān Madrasa⁴²¹.

⁴²¹ After Mankovskaya: *Central Asia*, 1980.

The reconstructed image of the entrance *īwān* of the ‘Abdallāh Khān Madrasa (Fig.590), with a band of Koranic inscriptions above the *īwān*’s arch, that elongates its overall image, reminds one of similar examples, such as the reconstructed entrance *īwān* of the Ulugh Beg’s Mosque Kōk Gunbad (Fig.588) in Shar-i Sabz and the *īwān* to the sanctuary of the Bībī Khānum Mosque (Fig.589) in Samarqand. That is why, given the reconstruction that has been taking place since the 1950s, one cannot be sure of the original appearance and proportions of that *kosh īwān*.



Fig.588: Shahr-i Sabz, Gok Gunbad Mosque, entrance *īwān*, September 2006
Source: Author’s photograph



Fig.589: Samarqand, Bībī Khānum Mosque, entrance *īwān* to the main sanctuary, September 2006
Source: Author’s photograph



Fig.590: Bukhārā, ‘Abdallāh Khān Madrasa, entrance *īwān*, September 2006
Source: Author’s photograph

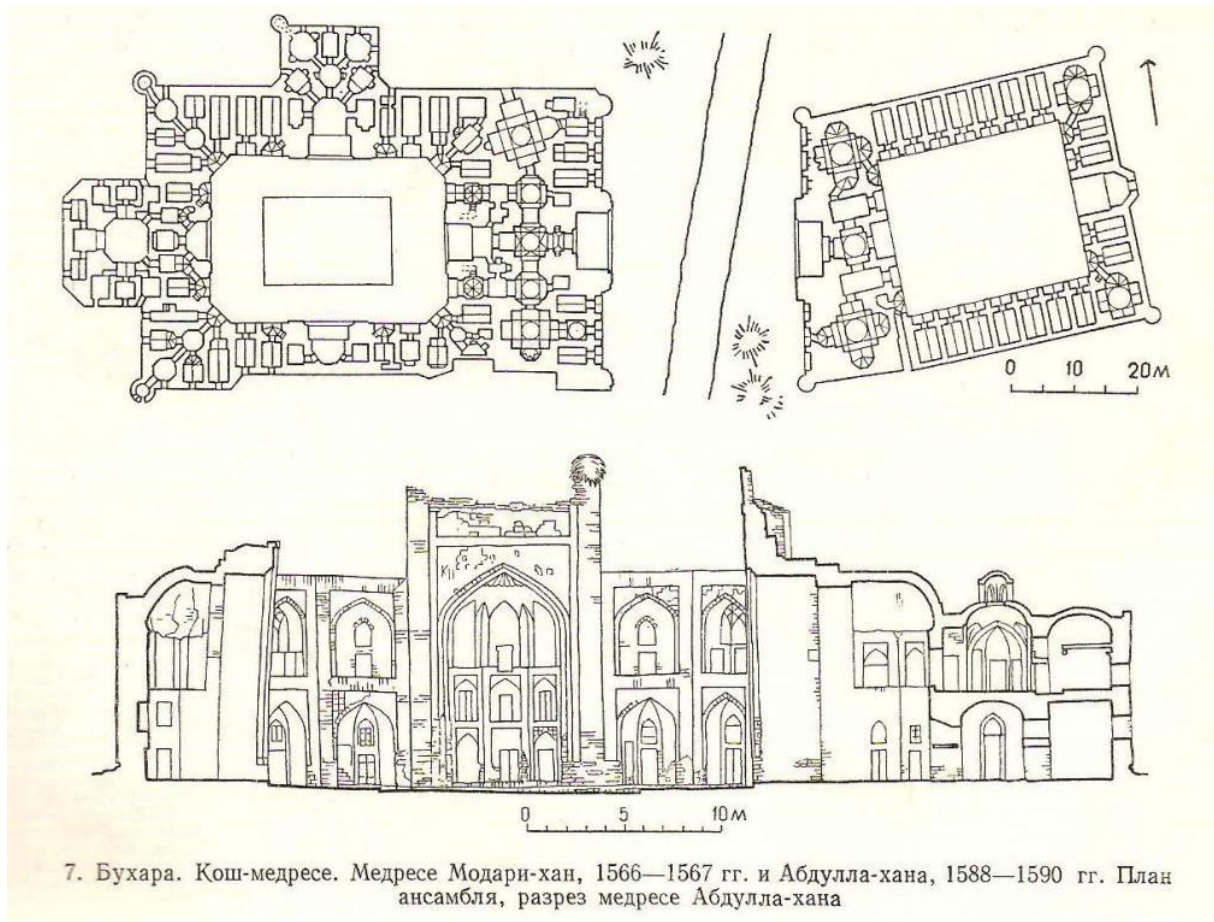


Fig.591: Bukhārā, plan of the 'Abdallāh Khān Madrasa (to the left) versus Madār-i Khān Madrasa (to the right), Cross section of the 'Abdallāh Khān Madrasa after Baranov. Note: the direction North on this drawing is not completely correct.

Source: Baranov et al: *Encyclopaedia*, 1969, p. 313, Fig.7.

The *kosh* of the 'Abdallāh Khān Madrasa and the Madār-i Khān Madrasa is very interesting from an urban point of view because of the orientation of the main façades as opposed to the orientation of the buildings (Fig.591). The two-*īwān* Madār-i Khān Madrasa is oriented almost along the ideal cardinal points, with an eastern and western courtyard *īwāns*. The north-western *īwān* (backside of the entrance *kosh īwān*) (Fig.593) is oriented 283°N to the northwest. The south-eastern *īwān* is oriented 118°N to the southeast (Fig.592). However, its antechamber is extended to the south in order to allow for more space for the cruciform mosque with the *mihrāb* to the southwest. As a result, the main façade faces the bazaar avenue and the antechamber has a trapezoid form. It is the mosque that determines the orientation of the Madār-i Khān Madrasa as a building and of the longitudinal axis, defining the courtyard *īwāns*.

Building name	Madār-i Khān Madrasa	‘Abdallāh Khān Madrasa
Location	Bukhārā	Bukhārā
Building period	1566-1567	1588-1590
Ruler	Abdallāh Khān II	Abdallāh Khān II
South-western <i>īwān</i>	-	209 °N
North-western <i>īwān</i>	283 °N	299 °N
South-eastern <i>īwān</i>	118 °N	114 °N
North-eastern <i>īwān</i>	-	21 °N
<i>Qibla (mihrāb)</i>	283 °N	275 °N
Direction to Mecca	236 °02'40"	236 °02'40"
Direction to Baghdad	254 °26'31"	254 °26'31"
Direction to Jerusalem	260 °23'56"	260 °23'56"



Fig.592: Bukhārā, Madār-i Khān Madrasa, courtyard view of the south-eastern *īwān*, September 2006
Source: Author's photograph



Fig.593: Bukhārā, Madār-i Khān Madrasa, courtyard view of the backside of the entrance (north-western) *īwān*, September 2006
Source: Author's photograph



Fig.594: Bukhārā, Madār-i Khān Madrasa, *hujras* of the northern façade, courtyard view, September 2006
Source: Author's photograph



Fig.595: Bukhārā, Madār-i Khān Madrasa, *hujras* of the southern façade, courtyard view, September 2006
Source: Author's photograph



Fig.596: Bukhārā, Madār-i Khān Madrasa, interior of the antechamber, September 2006
Source: Author's photograph



Fig.597: Bukhārā, Madār-i Khān Madrasa, interior of the antechamber, September 2006
Source: Author's photograph



Fig.598: Bukhārā, Madār-i Khān Madrasa, cupola of the antechamber, September 2006
Source: Author's photograph



Fig.599: Bukhārā, Madār-i Khān Madrasa, interior of the antechamber, September 2006
Source: Author's photograph

The main façade of the 'Abdallāh Khān Madrasa appears to be absolutely symmetrical to the main façade of the Madār-i Khān Madrasa. Yet the 'Abdallāh Khān Madrasa is not oriented along the ideal cardinal points. Its *mihrāb* (Fig.591), however, deviates from the *mihrāb* of the Madār-i Khān Madrasa. According to Peter⁴²² the deviation is only 12° degrees. I have measured that the deviation is approximately 7°-8° degrees. The rotated cruciform mosque of the 'Abdallāh Khān Madrasa is oriented almost along the ideal cardinal points. The backside of the entrance *īwān* is oriented 114°N to the southeast. The south-western *īwān* is

⁴²² According to Peter, B.: <http://www.kultur-in-asien.de/Usbekistan/architektur/kosh.htm> [Accessed on 19 August 2009]

oriented 209°N to the southwest. The *īwān* to the larger domed chamber is oriented 299°N to the northwest (Fig.603) and the north-eastern *īwān* is oriented 21°N to the northeast.

Although the ‘Abdallāh Khān Madrasa has a rectangular four-*īwān* plan, there are two polygonal projections in the middle of the western and in the northern façades (Fig.600,601), which make it different, compared to the Tīmūrid standard rectangular madrasas with a four-*īwān* courtyard. Its *kosh* eastern façade is wider and the antechamber houses a mosque and a *darskhana* (lecture room) similar to all Bukhārā madrasas. What makes the ‘Abdallāh Khān Madrasa different is the fact that the orientation of the madrasa as a whole building is subjected to the orientation of the *kosh* façade, which is in turn defined by the pre-existing Madār-i Khān Madrasa. It is the *kosh* that determines the orientation of the façade and thus of the whole madrasa and not the mosque, which had to be rotated to follow the orientation of the other *kosh* mosque, i.e. the Madār-i Khān Madrasa.

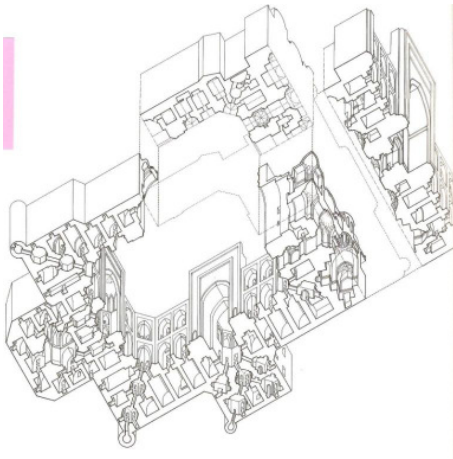


Fig.600: Bukhārā, ‘Abdallāh Khān Madrasa, exploded axonometric view after Gangler, Gaube and Petruccioli
Source: Gangler, Gaube and Petruccioli: *Bukhara*, 2004, p.148, Fig.9.15

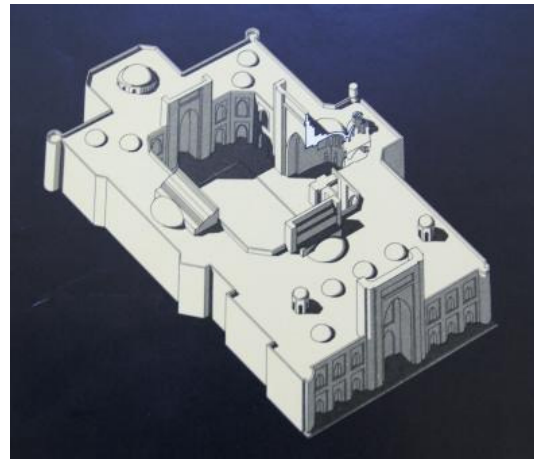


Fig.601: Bukhārā, ‘Abdallāh Khān Madrasa, reconstruction after Borodina
Source: Borodina: *Central Asia*, 1985, p. 150



Fig.602: Bukhārā, ‘Abdallāh Khān Madrasa, courtyard view, September 2006
Source: Author's photograph



Fig.603: Bukhārā, ‘Abdallāh Khān Madrasa, courtyard view, September 2006
Source: Author's photograph



Fig.604: Bukhārā, 'Abdallāh Khān Madrasa, arcade detail of the antechamber, September 2006
Source: Author's photograph



Fig.605: Bukhārā, 'Abdallāh Khān Madrasa, arcade detail of the antechamber, September 2006
Source: Author's photograph



Fig.606: Bukhārā, 'Abdallāh Khān Madrasa, cupola detail of the arcade of the antechamber, September 2006
Source: Author's photograph

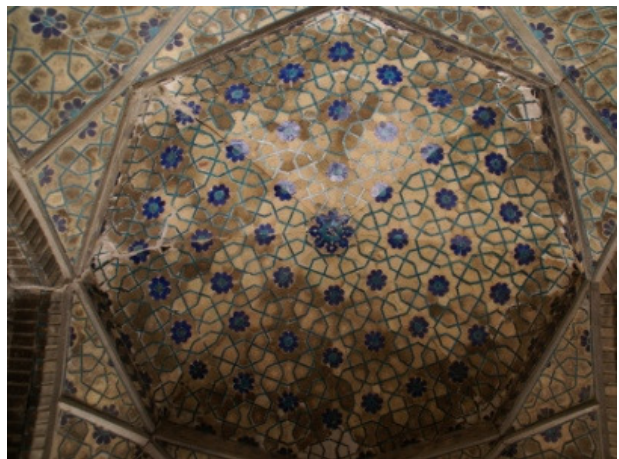


Fig.607: Bukhārā, 'Abdallāh Khān Madrasa, cupola detail of the arcade of the antechamber, September 2006
Source: Author's photograph



Fig.608: Bukhārā, 'Abdallāh Khān Madrasa, cupola detail of the arcade of the antechamber, September 2006
Source: Author's photograph



Fig.609: Bukhārā, 'Abdallāh Khān Madrasa, interior of the antechamber with vaults and cupolas, September 2006
Source: Author's photograph

With all these efforts to rotate the mosques and the *qiblas*, one would expect that they should face Mecca. At least all scholarly⁴²³ analysis so far point to the fact that the mosques of the Madār-i Khān Madrasa and of the 'Abdallāh Khān Madrasa were rotated in order to face Mecca. However, neither of them does. What is more, neither of the measured⁴²⁴ *mihrābs* in Bukhārā faces Mecca. The *mihrāb* of the 'Abdallāh Khān Madrasa (Fig.615-616) is oriented 275°N to the southwest. The *mihrāb* of the Madār-i Khān Madrasa is oriented 283°N to the southwest. Mecca is situated 236°02'N to the southwest of Bukhārā. So, if the *mihrābs* were indeed meant to be directed towards Mecca, the mistake is between 39° and 47° respectively. Although I presented a hypothesis above that the Bībī Khānum Mosque is oriented towards Baghdad, in the case of the Madār-i Khān and the 'Abdallāh Khān Madrasas, neither of them is oriented towards Baghdad, since Baghdad is situated 254°26'N to the southwest of Bukhārā. It might be possible that the *mihrāb* of the 'Abdallāh Khān Madrasa is simply oriented to the west (270°N) and not to the southwest, which in turn means that the cruciform mosque of the 'Abdallāh Khān Madrasa is oriented almost along the ideal cardinal points. Since all of the major cities of the Medieval Islamic world are situated to the southwest of Bukhārā, any other assumption regarding the orientation of the *mihrābs* would be rather unrealistic.

⁴²³ Pugachenkova, Mankovskaya, Brandenburg, etc.

⁴²⁴ I refer here only to the *mihrābs* that I personally measured during my visit in September 2006 (see Annex I).



Fig.610: Map showing the distance to the major cities of the Medieval Islamic world from Bukhārā and Samarqand
Source: Google Earth [Accessed on 1 April 2010]

Another puzzling feature of the ‘Abdallāh Khān Madrasa is that apart from the mosque (Fig.611-614) in the antechamber (Fig.604-609), there is a sanctuary behind the western *īwān*, which is larger and with a more sophisticated cupola (Fig.617-620) than the mosque. Yet, this sanctuary does not have a *mihṛāb*, as is the case with the main sanctuaries of the Bībī Khānum and the Kalyān Mosques.



Fig.611: Bukhārā, ‘Abdallāh Khān Madrasa, cupola detail of the mosque, September 2006
Source: Author’s photograph



Fig.612: Bukhārā, ‘Abdallāh Khān Madrasa, cupola detail of the mosque, cross-arched vaults, September 2006
Source: Author’s photograph



Fig.613: Bukhārā, 'Abdallāh Khān Madrasa, *muqarnas* detail above the *mihrāb*, September 2006
Source: Author's photograph



Fig.614: Bukhārā, 'Abdallāh Khān Madrasa, detail of the transitional zones of the cupola of the mosque, September 2006
Source: Author's photograph



Fig.615: Bukhārā, 'Abdallāh Khān Madrasa, *mihrāb* of the mosque, September 2006
Source: Author's photograph



Fig.616: Bukhārā, 'Abdallāh Khān Madrasa, *muqarnas* detail of the *mihrāb*, September 2006
Source: Author's photograph



Fig.617: Bukhārā, ‘Abdallāh Khān Madrasa, interior of the main sanctuary behind the western *īwān*, September 2006
Source: Author’s photograph



Fig.618: Bukhārā, ‘Abdallāh Khān Madrasa, cupola of the main sanctuary behind the western *īwān*, September 2006
Source: Author’s photograph



Fig.619: Bukhārā, ‘Abdallāh Khān Madrasa, detail of the arches under the cupola of the main sanctuary behind the western *īwān*, September 2006
Source: Author’s photograph



Fig.620: Bukhārā, ‘Abdallāh Khān Madrasa, detail of the cupola of the main sanctuary behind the western *īwān*, September 2006
Source: Author’s photograph

V.3.3 Qutlugh Murad Inaq Madrasa (1804-1812 AD) versus Allāh Qulī Khān Madrasa (1834-1835 AD), Khīva

The ideally symmetrical *kosh* (Fig.621-627) of the four-*īwān* Qutlugh Murad Inaq Madrasa (1804-1812 AD) and the four-*īwān* Allāh Qulī Khān Madrasa (1834-1835 AD) is situated close to the eastern Palvan Darvaza Gate of Khīva (1804-1806 AD) (Fig.174). Built almost eight centuries after some of the earliest four-*īwān* madrasas (e.g. Madrasa at Shah-i Zinda in Samarqand from 1066 AD), the two *kosh* madrasas follow the same rectangular four-*īwān* courtyard plan without any innovations or changes. The most characteristic feature of the *kosh* is that both madrasas are erected along the east-west minor axis of the old Itchan-kala town of Khīva. Due to this position of the two madrasas, their *īwāns* are almost along the cardinal points. What is unusual in the case of Khīva, is that the two madrasas are built on almost equally high platforms and thus the two entrance *īwāns* correspond perfectly in height and proportions (Fig.622,623). I am not familiar with any other four-*īwān* madrasas erected on elevated platforms. The street that runs from the north to the south of the Itchan-kala defines the perpendicular axis of the *kosh*. Both *kosh* façades (Fig.625,626) are symmetrically situated along that axis. As a result, the two entrance *īwāns* are positioned at the same distance from the street. The created *kosh* symmetry is perfect. Both *kosh* façades have two stories of three arched niches on each side, elongated main entrance *īwāns* in the middle of the *kosh* façades and corner *guldasta* (Fig.625,626). In its main *kosh* façade decoration, the 19th c. AD four-*īwān* *kosh* in Khīva copies the 16th c. AD *kosh* of the ‘Abdallāh Khān Madrasa and the Madār-i Khān Madrasa (Fig.580-583) in Bukhārā.

Since the *kosh* complex is not widely covered by scholarly research, some basic description and measurement details of the two madrasas will be provided below.



Fig.621: Khīva, the *kosh* of the Qutlugh Murad Inaq Madrasa and the Allāh Qulī Khān Madrasa. View from the Āq Mosque looking toward the two madrasas with projecting platforms. In the background is the Amīr's Palace. Source: Archnet: Herdeg, K.: *Formal Structure in Islamic Architecture of Iran and Turkistan*. New York: Rizzoli, 1990, p.64. [Accessed on 19 November 2008]

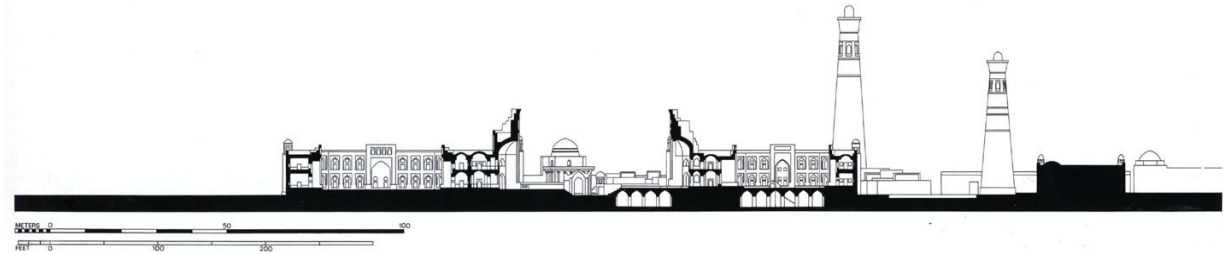


Fig.622: Khīva, East-west section through Allāh Qulī Khān Madrasa (left) and Qutlugh Murad Inaq Madrasa, with its underground winter mosque after Herdeg
Source: Archnet, Herdeg, K.: *Formal Structure in Islamic Architecture of Iran and Turkistan*. New York: Rizzoli, 1990, p.53. [Accessed on 19 November 2008]

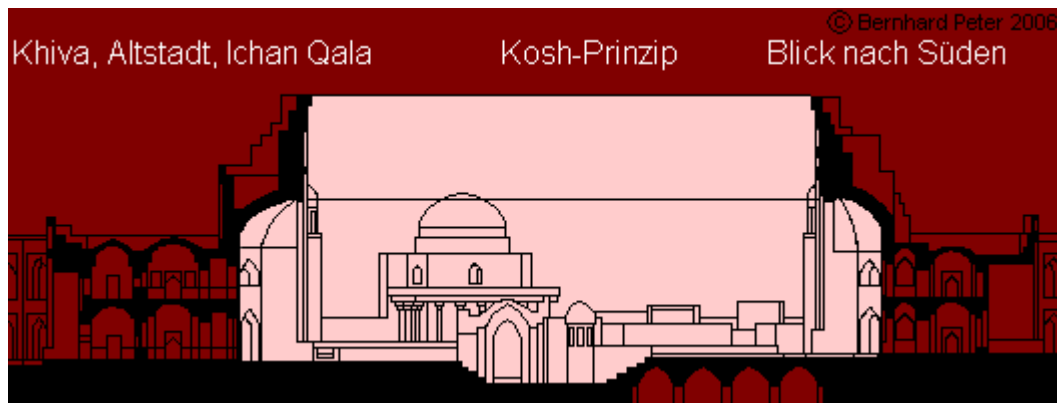


Fig.623: Khīva, East-west cross section through the Allāh Qulī Khān Madrasa (left) and the Qutlugh Murad Inaq Madrasa (right) after Peter
Source: Website of B. Peter
<http://www.kultur-in-asien.de/Usbekistan/architektur/kosh.htm> [Accessed on 19 August 2009]



Fig.624: Khīva, aerial view of the *kosh* of the Qutlugh Murad Inaq Madrasa and the Allāh Qulī Khān Madrasa
Source: Google Earth [Accessed on 19 August 2009]



Fig.625: Khīva, *kosh* façade of the Qutlugh Murad Inaq Madrasa, September 2006
Source: Author's photograph



Fig.626: Khīva, *kosh* façade of the Allāh Qulī Khān Madrasa, September 2006
Source: Author's photograph

The four-*īwān* Qutlugh Murad Inaq Madrasa (Fig.629-635) was built by Allāh Qulī Khān's uncle Qutlugh Murad Inaq between 1804 AD and 1812 AD. The madrasa has a rectangular plan of 57m by 44m, the courtyard being 31,5m by 27,8m (Fig.630-633). It was the first two-storey madrasa in Khīva with 81 *hujras*. In the courtyard there is a domed well – *sardoba* (Fig.632,633).

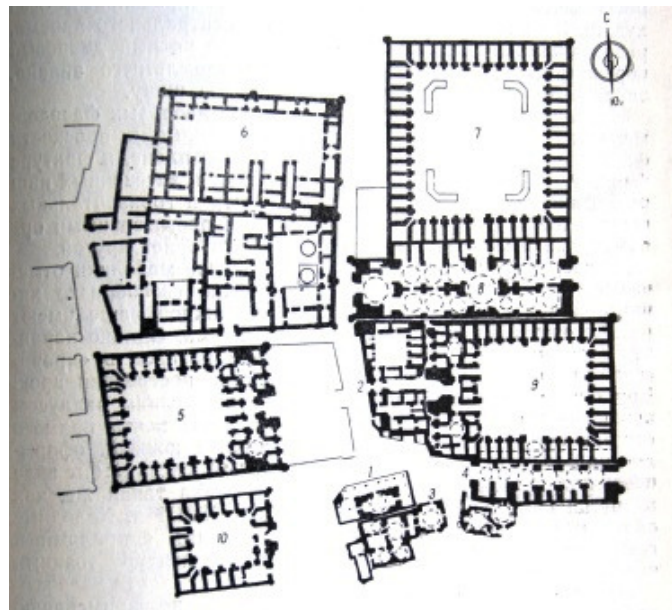


Fig.627: Khīva, plan of the *kosh* of the Qutlugh Murad Inaq Madrasa and the Allāh Qulī Khān Madrasa after Notkin
Source: Pugachenkokova: *Architectural heritage*, 1960, p.91, Fig.3

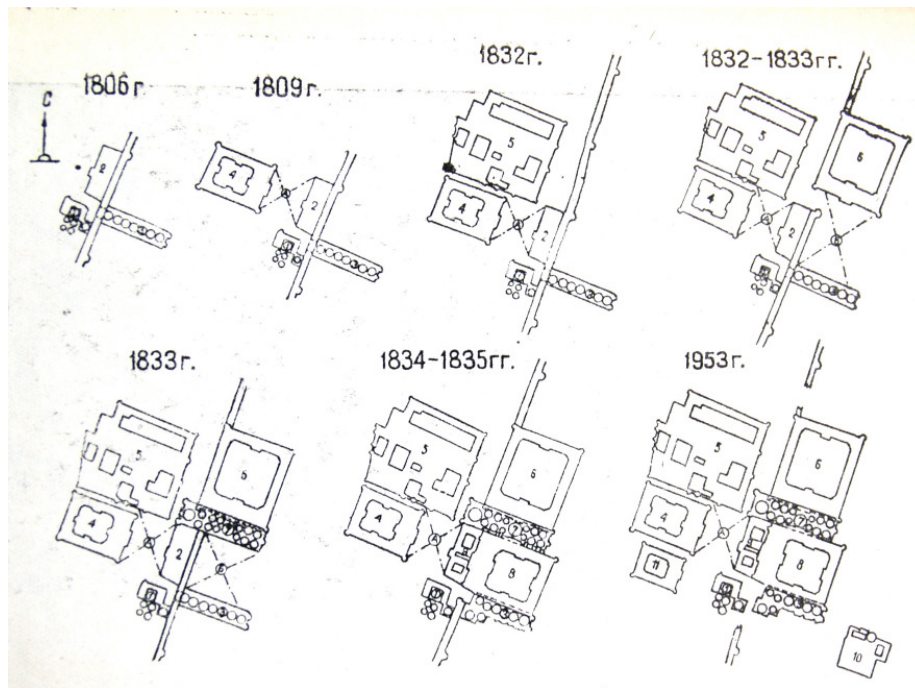


Fig.627: Khīva, urban development of the plan of the *kosh* of the Qutlugh Murad Inaq Madrasa and the Allāh Quli Khān Madrasa after Notkin
Source: Pugachenkokova: *Architectural heritage*, 1960, p.105, Fig.8



Fig.629: Khīva, Qutlugh Murad Inaq Madrasa, main *kosh* façade, May 2005
Source: <http://www.world-heritage-tour.org> [Accessed on 17 October, 2008]



Fig.630: Khīva, Qutlugh Murad Inaq Madrasa, roof view to the north of three courtyard *īwāns*, May 2005
Source: <http://www.world-heritage-tour.org> [Accessed on 17 October, 2008]



Fig.631: Khīva, Qutlugh Murad Inaq Madrasa, northern *īwān* and backside of entrance eastern *īwān*, May 2005
Source: <http://www.world-heritage-tour.org> [Accessed on 17 October, 2008]



Fig.632: Khīva, Qutlugh Murad Inaq Madrasa, courtyard *īwāns*, September 2006
Source: Author's photograph



Fig.633: Khīva, Qutlugh Murad Inaq Madrasa, courtyard *īwāns*, September 2006
Source: Author's photograph



Fig.634: Khīva, Qutlugh Murad Inaq Madrasa, dome of the main sanctuary, September 2006
Source: Author's photograph

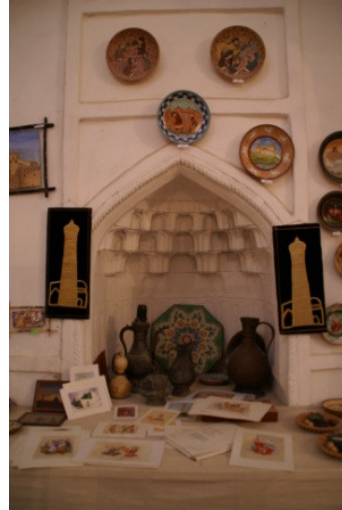


Fig.635: Khīva, Qutlugh Murad Inaq Madrasa, *mihrāb* in the main sanctuary, September 2006
Source: Author's photograph

The four-*īwān* Allāh Qulī Khān Madrasa (Fig.636-648) was built by Allāh Qulī Khān between 1834 AD and 1835 AD. It was incorporated in a very ingenious way into the medieval fabric of Khīva and the eastern gate (Fig.642) of the Itchan-kala. It overlooks the entrance to the market place and the main entrance of the Qutlugh Murad Inaq Madrasa.

The two-storey Allāh Qulī Khān Madrasa has a rectangular plan of 62,5m by 47m with a four-*īwān* courtyard of 34,6m by 29,5m (Fig.643,644). The main portal's span is 6,85m (Fig.636-638). The mosque has the same measurements as the mosque (Fig.634,635) of the Qutlugh Murad Inaq Madrasa, namely 5m by 5m. Several *hujras* of the first floor above the antechamber housed the municipal library founded by Allāh Qulī Khān, which provided books to the students of all madrasas in Khīva. The madrasa was supported by a considerable *waqf* and extra income from the Allāh Qulī Khān caravansaray and tim.



Fig.636: Khīva, Allāh Qulī Khān Madrasa, main entrance *iwān*, September 2006
Source: Author's photograph



Fig.637: Khīva, Allāh Qulī Khān Madrasa, detail of the main entrance *iwān*, September 2006
Source: Author's photograph



Fig.638: Khīva, Allāh Qulī Khān Madrasa, main *kosh* façade, May 2005
Source: <http://www.world-heritage-tour.org> [Accessed on 17 October, 2008]



Fig.639: Khīva, Allāh Qulī Khān Madrasa, the domed bazaar in front of the main entrance of the madrasa, September 2006
Source: Author's photograph



Fig.640: Khīva, Allāh Qulī Khān Madrasa, detail of corner *guldasta* and façade arcade, September 2006
Source: Author's photograph



Fig.641: Khīva, detail of the façade of the Allāh Qulī Khān Madrasa with a corner *guldasta* and the city's eastern gate at the background, September 2006
Source: Author's photograph



Fig.642: Khīva, the eastern gate of the Itchan-kala, September 2006
Source: Author's photograph

The *īwāns* (Fig.643-646) of the Allāh Qulī Khān Madrasa are situated almost ideally according to the cardinal points (Fig.627). The main cross-axial sanctuary is situated in the southern *īwān*, which is also the deepest of all four *īwāns* and might have been used as a summer lecture hall. The courtyard *īwāns* are slightly elevated by 60cm-70cm compared to the façades. The upper part of the northern and the southern (Fig.646) *īwāns* has an arcade of four arched openings, which decoratively accentuate the north-south compositional axis of the madrasa.



Fig.643: Khīva, Allāh Qulī Khān Madrasa, northern and eastern courtyard *iwāns*, September 2006
Source: Author's photograph



Fig.644: Khīva, Allāh Qulī Khān Madrasa, eastern and southern courtyard *iwāns*, September 2006
Source: Author's photograph



Fig.645: Khīva, Allāh Qulī Khān Madrasa, eastern courtyard *iwān*, September 2006
Source: Author's photograph



Fig.646: Khīva, Allāh Qulī Khān Madrasa, the deep southern courtyard *iwān* housing the main sanctuary, September 2006
Source: Author's photograph



Fig.647: Khīva, Allāh Qulī Khān Madrasa, the well in the courtyard, September 2006
Source: Author's photograph



Fig.648: Khīva, Allāh Qulī Khān Madrasa, detail of the *guldasta* of the eastern façade, September 2006
Source: Author's photograph

V.4 The Two-fold *Kosh*: Madrasa versus *Khānaqāh*

Most of the Tīmūrid cruciform *khānaqāhs* were built in a *kosh* with a four-*īwān* madrasa, an indication, as Golombek and Wilber phrase it⁴²⁵, “that high Islam had come to terms with Sufism, and that Sufi leaders are willing to be identified with the ruling classes.” Such *kosh* pairing of madrasas and *khānaqāhs* can be found in Tabriz and Yazd⁴²⁶ by Ghazan Khān and Rashid al-Din from the 14th c. AD. The most renowned Tīmūrid example being of course, the *khānaqāhs* and the madrasas built by Muhammad Sultan in Gūr-i Amīr and by Ulugh Beg on the Rigistān Square in Samarqand. Later, during the reign of Shāh Rukh in Harāt, the madrasa-*khānaqāh* *kosh* was further developed by the amīrs of Shāh Rukh.

Yet, this phenomenon of pair buildings is not indigenous to Khurasan or Transoxania. The first examples of such Sufi *khānaqāhs* built across existing madrasas are in Anatolia⁴²⁷ from the 13th-14th c. AD. However, the Anatolian *khānaqāhs* did not have four-*īwāns* and were in general very different in scale and architecture from the Tīmūrid ones. That is why, they are not covered in this dissertation.

V.4.1 Ulugh Beg Madrasa (1417-1420 AD) and *Khānaqāh* (1424 AD) on Rigistān Square, Samarqand

It was during the reign of Tīmūr’s grandson, Mīrzā Muhammad Tāregh bin Shāh Rukh, widely known as Ulugh Beg (1394-1449 AD), that the trading role of Rigistān was replaced by a representational function, including military parades and official occasions. Throughout his 40-year reign in Samarqand (1409-1449 AD)⁴²⁸, Ulugh Beg tried to establish the city as the new Tīmūrid capital and used the Rigistān square (Fig.649) as an emblematic architectural setting to represent his identity as an educated, liberal governor, who cherished the fine arts.

⁴²⁵ Golombek and Wilber: *Timurid Architecture*, 1988, p.48.

⁴²⁶ *Ibid.*, p.48.

⁴²⁷ For extensive analysis of this phenomenon please refer to Wolper, E.: *Cities and saints. Sufism and the Transformation of Urban Space in Medieval Anatolia*. Pennsylvania: The Pennsylvania State University Press, 2003. For a discussion of the *kosh* principle also in Anatolia, please also consult Paskaleva, E.: “The Architectural Representation of Paradise: Sufi Cosmology and the Four-iwan Plan”. In *The Global Built Environment as a Representation of Realities. Why and How Architecture Should Be Subject of Worldwide Comparison*, ed. A.J.J. Mekking and E. Roose. Amsterdam: Amsterdam University Press, Pallas Publications, 2009.

⁴²⁸ Roemer, H.R.: “Die Nachfolger Tīmūr’s”. In *Islamwissenschaftliche Abhandlungen. Fritz Meier zum sechzigsten Geburtstag*. Wiesbaden: Franz Steiner Verlag GmbH, 1974, p.232.

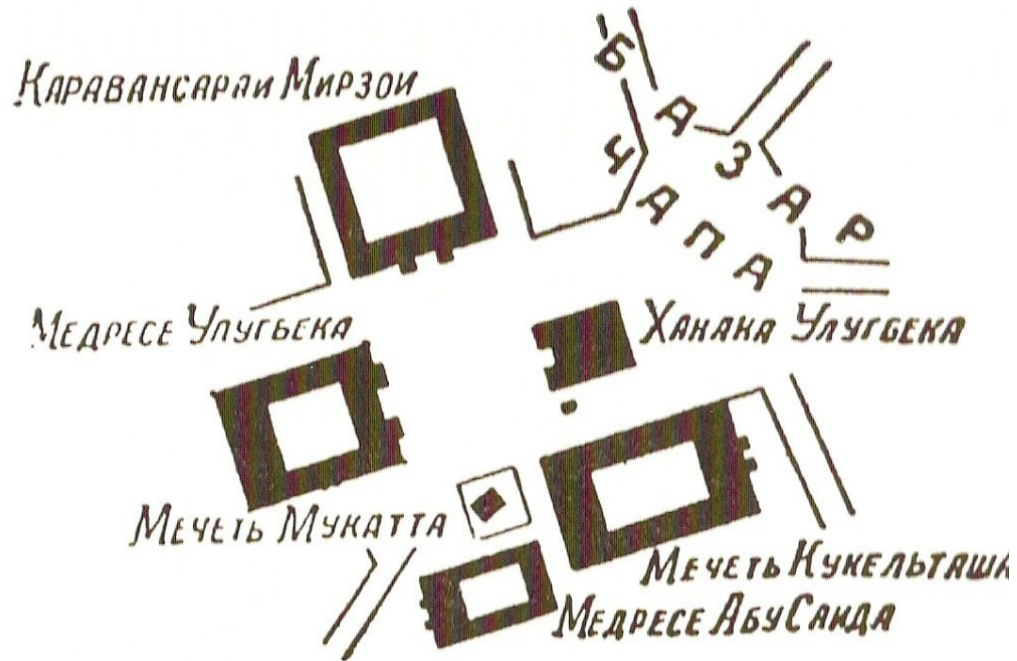
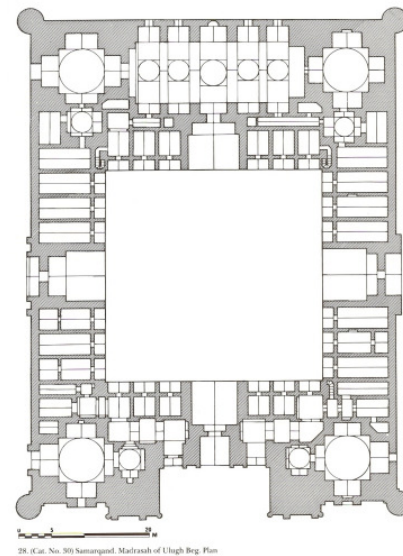


Fig.649: Samarqand, Rigistān Square in the 15th c. AD after Pugachenkova and Rempel, Ulugh Beg Madrasa (to the left), Mirzoi Caravansaray (top), Ulugh Beg *Khānaqāh* (to the right), Alik Kukeltash Mosque (below the *khānaqāh*) and Abu Said Madrasa (below), Bazaar Chapa (between the Mirzoi Caravansaray and the Ulugh Beg *Khānaqāh*)

Source: Brandenburg: *Samarkand*, 1966, p.157



Fig.650: Samarqand, Ulugh Beg Madrasa, entrance *īwān*, September 2006
Source: Author's photograph



28. Cat. No. 305 Samarqand. Madrasah of Ulugh Beg. Plan

Fig.651: Samarqand, plan of the Ulugh Beg Madrasa after Golombek and Wilber
Source: Golombek and Wilber: *Timurid Architecture*, 1988, Fig.28



Fig.652: Samarqand, Ulugh Beg Madrasa, courtyard view with the *īwān* to the main sanctuary, September 2006
Source: Author's photograph



Fig.653: Samarqand, Ulugh Beg Madrasa, courtyard view with backside of the entrance *īwān*, September 2006
Source: Author's photograph

The oldest building to the west of the Rigistān Square, remaining till present, is the four-*īwān* Ulugh Beg Madrasa built between 1417 and 1420 AD (Fig.650-653), which was originally two-storied with “four lofty domes and four minarets”⁴²⁹. The Ulugh Beg *Khānaqāh* was situated in a *kosh* with the madrasa, on the place of the current Shīr Dār Madrasa. What is relevant is that, according to Barthold⁴³⁰, the Ulugh Beg Madrasa was the “centre of learned theology as opposed to dervishism”. That is why, it is very surprising that Ulugh Beg himself commissioned a *khānaqāh* for dervishes⁴³¹ (Sufis), facing his madrasa on Rigistān. In Ulugh Beg’s time⁴³² in Samarqand of the 15th c. AD, it was the aristocracy that enjoyed the support of the supreme power and not the Sufi shaykhs. The interests of the popular masses were defended by the shaykhs of the *Naqshbandiyya* order⁴³³, who were outspokenly hostile towards Ulugh Beg and the Shaykh al-Islam in Samarqand⁴³⁴. Since the learned theologians had become, according to Barthold⁴³⁵, the leaders of the aristocracy; the struggle of the Sufis against the learned theology in Turkestan was different from the one in Western Asia. In the latter, the Sufis had a more liberal interpretation of the *Sharī‘a*, as opposed to the theologians who preached a strict interpretation of the religious laws. That is why, in the West, Sufism became a “synonym for religious free-thinking”. In Turkestan, however, the Sufis advocated

⁴²⁹ Barthold: *Four Studies, Volume II, Ulugh Beg*, 1958, p.119.

⁴³⁰ *Ibid.*, p.121.

⁴³¹ Throughout his work, Barthold refers to the Sufi shaykhs as “dervishes”. However, in the current thesis the term Sufi shaykhs has been used.

⁴³² *Ibid.*, p.114.

⁴³³ The largest and most powerful Sufi order at that time. The *Qalandariyya* order was also influential in Greater Khurasan. It involved practices with tantric and shamanistic overtones. However, it was not very well received by the ruling dynasties; that is why, it is not discussed here.

⁴³⁴ According to the “History of Central Asian darvishism” (Rashahatu ‘ayni-hayā’t), composed in the beginning of the sixteenth century and quoted by Barthold: *Four Studies, Volume II, Ulugh Beg*, 1958, p.115.

⁴³⁵ Barthold: *Four Studies, Volume II, Ulugh Beg*, 1958, p.115.

the *Sharī'a* and preached both against the ruling elite and the Muslim clergy officials, by accusing them of not abiding to the divine laws. In Samarqand, the shaykhs even attacked both Ulugh Beg⁴³⁶ and the official head of the Muslim clergy for their disregard of the *Sharī'a*.

It is very surprising that Ulugh Beg chose to build a *kosh* of a *khānaqāh* and a madrasa, whereby the two buildings were housing two opposite religious schools. On the one hand, the madrasa, being a centre of Islamic religious studies and strict theology and on the other hand, the *khānaqāh*, housing Sufi scholars and shaykhs, presumably of the *Naqšbandiyya* order. This presumption is based on the fact that the *Naqšbandiyya* order was the most widely spread Sufi order in Turkestan at that time.

Information on the Ulugh Beg *Khānaqāh* is very scarce. Barthold⁴³⁷ states that it is unknown what happened to it. Blair⁴³⁸ writes that “nothing is known about the *khānaqāh*”. Golombek and Wilber⁴³⁹ also stress that “nothing remains of the *khānaqāh* which Ulugh Beg erected opposite the madrasa.” Pugachenkova⁴⁴⁰ mentions that the *khānaqāh* was built in the main axis of the madrasa in 1424 AD, which is only four years after the madrasa was accomplished. Barthold⁴⁴¹ quotes Bābur, who points out that the *khānaqāh* “was famous for its lofty dome, the like of which there were few in this world”. Thus, we can conclude that the Ulugh Beg *khānaqāh* had a huge dome, which means that it was not an open-courtyard building.

Arapov⁴⁴² sheds some more light on the history of the Ulugh Beg *Khānaqāh* by saying that in the 1620s AD, the period of the Astarkhānids, the powerful governor of Samarqand, Yalangtush renewed the construction activities on Rigistān but the attempts to restore the *khānaqāh* failed, due to its “ponderous” dome. As a result, the Shīr Dār Madrasa was built on its place in 1619-1635/36 AD. Arapov⁴⁴³ and Pugachenkova⁴⁴⁴ also point out that the tomb of Imam Muhammed-inb-Djafar (9th-10th c. AD) was located in the *khānaqāh* or beside it. So to sum up, the *khānaqāh* had a huge dome, it is associated with a tomb of an imam and it was built as a *kosh*, in the main axis of the Ulugh Beg Madrasa in 1424 AD.

⁴³⁶ Barthold: *Four Studies, Volume II, Ulugh Beg*, 1958, p.114.

⁴³⁷ *Ibid.*, p.122.

⁴³⁸ Blair, S., Bloem. J.: *The art and architecture of Islam 1250-1800*. New York: Penguin Books, 1994, p.45.

⁴³⁹ Golombek and Wilber: *Timurid Architecture*, 1988, p.264.

⁴⁴⁰ Pugachenkova: *Samarkand, Bukhara*, 1968, p.102.

⁴⁴¹ Barthold: *Four Studies, Volume II, Ulugh Beg*, 1958, p.122.

⁴⁴² Arapov, A.V.: *Masterpieces of Central Asia Samarqand*. Tashkent: San'at, 2004, p.42.

⁴⁴³ *Ibid.*, p.44.

⁴⁴⁴ Pugachenkova: *Samarkand, Bukhara*, 1968, p.102.

Unfortunately, we can only speculate about the existence of any *īwāns* in the Ulugh Beg *Khānaqāh*. Although Nemceva⁴⁴⁵ mentions that probably the early *khānaqāhs* had a four-*īwān* plan, we do not have any clues about the 15th c. AD *khānaqāh* of Ulugh Beg. Yet, the examples of other *khānaqāhs* we are familiar with, most of them being in Bukhārā⁴⁴⁶, have a square plan with four *īwāns* on each side⁴⁴⁷. Here, we will mention only the *khānaqāh* of Bahauddin Bliss Bukhari (1318-1389) (Fig.654, 655), the widely venerated founder of the *Naqšbandiyya* order.

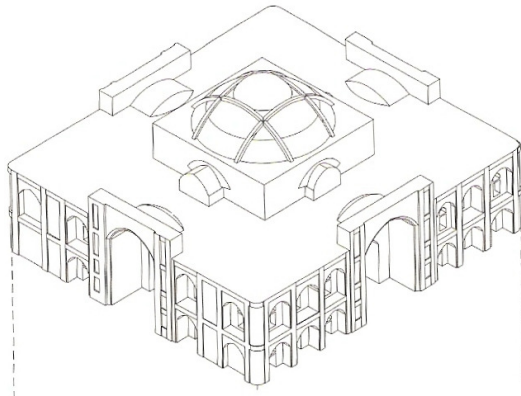


Fig.654: Bukhārā, *Khānaqāh* of Bahauddin Bliss Bukhari, isometry after Gangler, Gaube and Petruccioli
Source: Gangler, Gaube and Petruccioli: *Bukhara*, 2004, p.150



Fig.655: Bukhārā, *Khānaqāh* of Bahauddin Bliss Bukhari, exterior view, September 2006
Source: Author's photograph

There is hardly any record of any remaining *khānaqāhs* in Samarqand. Golombek and Wilber⁴⁴⁸ list the Khvajeh Ahrar *Khānaqāh*, known to have been built around 1490 AD and replaced today by the Nādir Dīvān Beg Madrasa (1630-1635 AD). Khvajeh Ahrar was the leader of the *Naqšbandiyya* order and the most powerful politician and landlord in the second half of the 15th c. AD. It is plausible that his *khānaqāh* might have also followed the architectural examples of Ulugh Beg and Tīmūr but there is not enough evidence to sustain such a statement. The only other example of a Sufi *khānaqāh*, facing a madrasa, which Ulugh Beg most certainly knew was Gūr-i Amīr⁴⁴⁹ (Tomb of the Amir), the tomb memorial built by his grandfather Tīmūr (Fig.656,657).

As far as Ulugh Beg is concerned, we can summarise that in 1424 he commissioned the *khānaqāh* on Rigistān, while he was also busy with the refurbishment of Gūr-i Amīr. On

⁴⁴⁵ In a private e-mail correspondence.

⁴⁴⁶ This can be explained with the fact that Bukhārā was the stronghold of the Naqšbandiyya order.

⁴⁴⁷ Yusupova, M.: "Evolution of Architecture of the Sufi Complexes in Bukhara". In *Bukhara: The Myth and the Architecture*. Attilio Petruccioli (ed). Cambridge, Massachusetts: The Aga Khān Program for Islamic Architecture, 1999, p.130.

⁴⁴⁸ Golombek and Wilber: *Timurid Architecture*, 1988, p.270.

⁴⁴⁹ Gūr-i Amīr will be discussed below as part of the three-fold *kosh* square, please see Chapter V.5.1.

Rigistān, Ulugh Beg followed exactly the “*kosh*” prototype of Gūr-i Amīr, by repeating the urban organisation and building a *khānaqāh* in the main axis of the madrasa. However, he mirrored the orientation of the two buildings, his madrasa was built to the west and the *khānaqāh* to the east. In Gūr-i Amīr, the madrasa is to the east and the *khānaqāh* to the west. It is most likely that the Ulugh Beg *khānaqāh* on Rigistān might have had similar functions as the *khānaqāh* of Gūr-i Amīr, i.e. it offered place for mystic discussions and welcomed prominent guests, such as Bābur, rather than being a sanctuary for wandering dervishes of the lower class.

By repeating the urban layout of Gūr-i Amīr (the Tīmūrid dynastic mausoleum complex) on Rigistān, Ulugh Beg obviously wanted to be associated with the building activities of his grandfather Tīmūr and his heir presumptive Sultan Muhammad. By being the sole ruler of Samarqand in the 15th c. AD, Ulugh Beg definitely followed the steps of his grandfather. Further, he put his own stamp on the most prestigious square of Samarqand, by reviving Samarqand as the capital of the Tīmūrid Empire. His madrasa and *khānaqāh* *kosh* exceeded by far the architectural heritage of Tīmūr with its remarkable size and decorative merit. The entrance *īwān* of the Ulugh Beg Madrasa is the largest in Central Asia⁴⁵⁰. Even the ratio between the main façade of the madrasa to the width of the square, i.e. 5:6, might have been used, according to Bulatov⁴⁵¹, to determine the proportions of the whole square.

Here it should be also pointed out that Ulugh Beg, the “astronomer-king”⁴⁵² chose to build a madrasa and a *khānaqāh* to outstand his predecessors and not a mosque⁴⁵³ or a mausoleum. He most likely wanted to be remembered as a renowned scholar, since the madrasa attracted the most prominent scholars of the time⁴⁵⁴. If he had built a mosque, he could not have exceeded the grandeur and the splendour of the congregational Bībī Khānum mosque (1399-1404 AD), built by Tīmūr. It would have been structurally impossible as well. Furthermore, Ulugh Beg was not a particularly pious worshipper, he was rather a scholar with an affinity to music and to the pleasures of life, which cost him the disdain of the *Naqšbandiyya* shaykhs⁴⁵⁵. Besides, Barthold⁴⁵⁶ presumes that the *khānaqāh* was less patronised than the madrasa though both were generously endowed with *waqfs*.

⁴⁵⁰ Bulatov: *Geometrical harmonisation*, 1978, p.184.

⁴⁵¹ *Ibid.*, p.184.

⁴⁵² Golombek and Wilber: *Timurid Architecture*, 1988, p.263.

⁴⁵³ The only mosque he did built was in Shahr-i Sabz, the birthplace of Tīmūr and the summer capital of the Tīmūrid empire. The mosque is discussed in the chapter on urban development, please see Chapter IV.8.3.a.

⁴⁵⁴ Pugachenkova: *Samarkand, Bukhara*, 1968, p.108.

⁴⁵⁵ Roemer: *Die Nachfolger*, 1974, p.236.

⁴⁵⁶ Barthold: *Four Studies, Volume II, Ulugh Beg*, 1958, p.122.

From the latter statements we can make two assumptions. Firstly, the Ulugh Beg *Khānaqāh* was not meant for the direct *Naqšbandiyya* followers, including peasants and urban merchants, but for the high hierarchy of the order and for distinguished royal guests. Secondly, it might have had a strictly political function, i.e. by creating a *kosh* and positioning a *khānaqāh* in the main axis of the madrasa on the most prestigious square in Samarqand, Ulugh Beg definitely acknowledged the importance of the Sufi order and placed it metaphorically next to the main theological school, represented by the madrasa. This was a smart political move to appease the tensions between him and the *Naqšbandiyya* shaykhs, who overtly disapproved of his way of life⁴⁵⁷.

⁴⁵⁷ Another similarly smart political move from the same period, 1416-1418, were the extensive renovations to the shrine of Imam Riza in Mashhad, initiated by Gauhar Shād, the mother of Ulugh Beg. By intense architectural activity she tried to appease the increasingly powerful Shīʿites in Iran at that time.

V.5 The Three-fold *Kosh*: The *Kosh* Square

V.5.1 Gūr-i Amīr (1400-1404 AD), Samarqand

The Gūr-i Amīr^{458, 459} complex consists of the octagonal tomb with four arched recesses, in which Tīmūr was buried in 1405 AD, a two-*īwān*, two-storey⁴⁶⁰ madrasa and a cruciform Sufi *khānaqāh* with an extended chamber to the west (Fig.656-658). It was Ulugh Beg who established the tomb memorial as a dynastic mausoleum of the Tīmūrids. In 1424 AD, the same year that the Ulugh Beg *Khānaqāh* on Rigistān was built, he carried out extensions to the tomb and built an extra chamber, which was most probably meant for him⁴⁶¹. Ulugh Beg further commissioned⁴⁶² the spectacular main entrance to Gūr-i Amīr (Fig.661,662), i.e. the fourth *īwān* to the south, which completes the whole compound as a four-*īwān* *kosh* square. This means that he consciously chose the layout and attributed extra importance to the four-*īwān* plan in the Tīmūrid dynastic mausoleum.



Fig.656: Samarqand, aerial view of the Gūr-i Amīr, domed main mausoleum to the southeast, two-*īwān* madrasa to the northeast and *khānaqāh* to the southwest, entrance *īwān* to the northwest
Source: Google Earth [Accessed on 1 April 2010]

⁴⁵⁸ For a detailed virtual tour throughout the mausoleum, please visit the following website: <http://www.world-heritage-tour.org/asia/central-asia/uzbekistan/Samarqand/guri-amir-mausoleum-inside/sphere-flash.html> [Accessed on 17 October, 2008].

⁴⁵⁹ For a virtual tour of the courtyard, please visit the following website: <http://www.world-heritage-tour.org/asia/central-asia/uzbekistan/Samarqand/guri-amir-mausoleum-outside/sphere-flash.html> [Accessed on 17 October, 2008].

⁴⁶⁰ Borodina: *Central Asia*, 1985, p.68.

⁴⁶¹ After the assassination by order of his own son, Ulugh Beg was buried in Gūr-i Amīr at the feet of his grandfather Tīmūr.

⁴⁶² Brandenburg: *Samarkand*, 1966, p.114.

The Gūr-i Amīr Sufi *khānaqāh* to the west and the two-*īwān* two-storey madrasa to the east of the compound were originally constructed as a *kosh* (Fig.657, 658). The *kosh* was the most important spiritual centre at the end of the 14th c. AD⁴⁶³ built on behalf of Muhammad Sultan, Tīmūr's grandson and heir-presumptive. According to Blair⁴⁶⁴ the two were built before 1401. The statement of Brandenburg⁴⁶⁵ that the madrasa and the *khānaqāh* can be attributed to Ulugh Beg is, thus, not true. The tomb itself was later added by Tīmūr in 1404 for the body of Muhammad Sultan, who died unexpectedly in 1403. The Gūr-i Amīr Madrasa (Fig.693, 694)) had two storeys and was attended, most likely, according to Arapov⁴⁶⁶, by children of the Tīmūrid royal family and amīrs. Pugachenkova⁴⁶⁷ explicitly points out that the madrasa was not a spiritual academy but trained students from the most prominent aristocratic families to become future governors. She also underlines the fact that the Gūr-i Amīr *Khānaqāh* was not lodging for Sufis but offered shelter to renowned guests and floor for mystic discussions. By this, we can conclude that the tolerance towards the Sufis and their explicit presence close to the royal heirs existed already at the end of the 14th c. AD in Samarqand. The fact that Tīmūr chose the site for the tomb of his heir, and was later buried there, is also in favour of this statement.

In The *Baburnama*⁴⁶⁸ from 1501 AD, Bābur (1483-1530 AD), the founder of the Mughal Empire and a direct descendant of Tīmūr, writes: "After I entered the city and took up my station in the *khānaqāh* [...]". The fact that Bābur, as a distinguished guest to Samarqand, stayed at the *khānaqāh*, implies that it was not simply for wandering Sufis, but for the high aristocracy, including the royal family. Based on what details can we assume that he is referring to the Gūr-i Amīr *Khānaqāh*? Bābur himself tells that "entering through the gate, I proceeded straight to the madrasa and *khānaqāh* and sat down under the *khānaqāh* arch." With "arch" he might have meant the entrance portal of the *khānaqāh*, which most likely was in the form of a *īwān*. The gate, he refers to, is most probably the fourth *īwān* that Ulugh Beg built in Gūr-i Amīr. The above descriptions of Bābur could not have been of the Ulugh Beg madrasa and *khānaqāh*, since there was not, or at least there is not a record of, an extra gate to approach them; their entrance *īwāns* faced the Rīgistān Square. So, the stay of Bābur at the *khānaqāh* verifies the above statement of Pugachenkova that it was meant to shelter distinguished royal guests and not only Sufis.

⁴⁶³ Arapov: *Samarkand*, 2004, p.24.

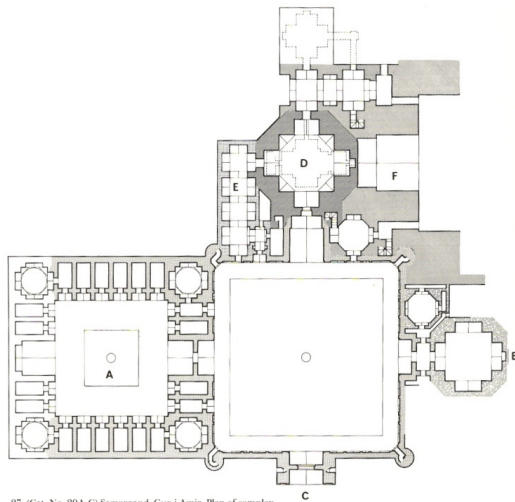
⁴⁶⁴ Blair: *Architecture*, 1994, p.41.

⁴⁶⁵ Brandenburg: *Samarkand*, 1966, p.113.

⁴⁶⁶ Arapov: *Samarkand*, 2004, p.24.

⁴⁶⁷ Pugachenkova: *Samarkand, Bukhara*, 1968, p.76.

⁴⁶⁸ Zahirudin Muhammad Babur Mizra: *Baburnama*, translated by W.M. Thackston. In three parts, Volume 18, Sources of Oriental Languages and Literatures: Central Asian Sources. Harvard: Harvard University Press, 1993.



27. (Cat. No. 29A-C) Samarkand. Gūr-i Amīr. Plan of complex

- A madrasah
- B khanaqah
- C entrance to court
- D mausoleum
- E gallery of Ulugh Beg
- F later building

Fig.657: Samarkand, Gūr-i Amīr, reconstruction after Golombek and Wilber
Source: Golombek and Wilber: *Timurid Architecture*, 1988, Fig.27

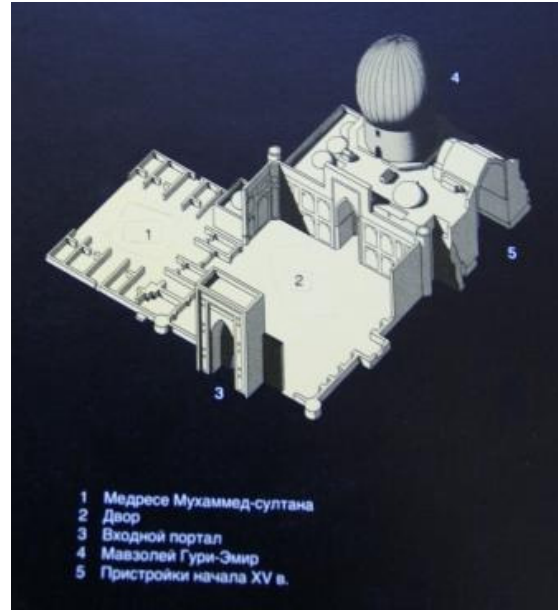


Fig.658: Samarkand, Gūr-i Amīr, isometry of the existing remains after Borodina
Source: Borodina: *Central Asia*, 1985, p.68



Fig.659: Samarkand, bird eye view of Gūr-i Amīr
Source: Archnet [Accessed on 1 April 2010]

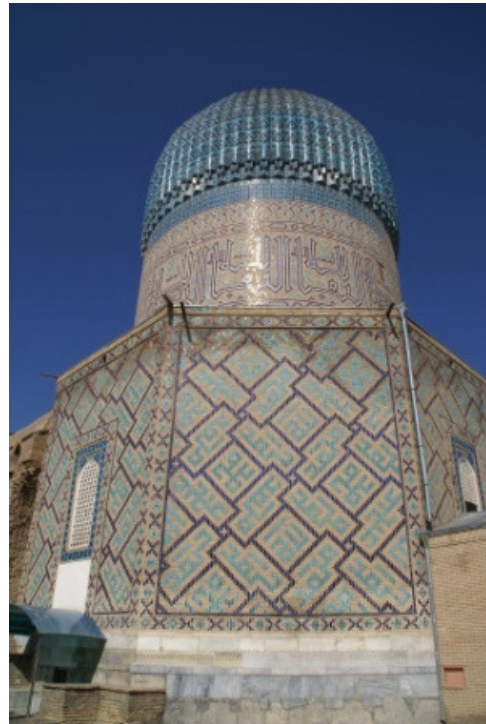


Fig.660: Samarkand, Gūr-i Amīr, mausoleum, September 2006
Source: Author's photograph



Fig.661: Samarqand, Gūr-i Amīr, north-eastern main façade of the mausoleum, September 2006
Source: Author's photograph



Fig.662: Samarqand, Gūr-i Amīr, north-eastern main façade of the mausoleum as seen from the fourth *iwān* built by Ulugh Beg, September 2006
Source: Author's photograph



Fig.663: Samarqand, Gūr-i Amīr, detail of the blind niches and the *iwān* of the north-eastern main façade of the mausoleum, September 2006
Source: Author's photograph



Fig.664: Samarqand, Gūr-i Amīr, detail of the blind niches and the depth of the *iwān* of the north-eastern main façade of the mausoleum, September 2006
Source: Author's photograph



Fig.665: Samarqand, Gūr-i Amīr, current entrance of the mausoleum, September 2006
Source: Author's photograph



Fig.666: Samarqand, Gūr-i Amīr, side entrance of the mausoleum, September 2006
Source: Author's photograph

In 1405 Tīmūr was buried in Gūr-i Amīr, next to the body of Muhammad Sultan (Fig.668, 673). Later Ulugh Beg and Shāh Rukh were also interred there. In 1409 Sayyid Baraka was buried at the feet of Tīmūr (Fig.674) and two of his sons were also interred in Gūr-i Amīr. Sayyid Baraka⁴⁶⁹ accompanied Tīmūr as a spiritual leader in all military campaigns after 1370 until his death in 1403/4. Further, Sayyid Baraka took part in the enthronement of Tīmūr together with the sayyids of Tirmid when Tīmūr received his title of Amīr. The burial of Sayyid Baraka in Gūr-i Amīr is discussed at length by Barthold⁴⁷⁰. Below, we will only mention some important facts that will illustrate the relationship of Tīmūr with the sayyids and the shaykhs.

According to Ibn Arabshāh⁴⁷¹, Tīmūr had three main spiritual leaders: Shamsiddin Kulal⁴⁷², buried in Shahr-i Sabz, Sayyid Baraka and Shaykh Zayn al-din. It is very surprising that

⁴⁶⁹ Paul, J.: "Scheiche und Herrescher im Khānat Čaġatay". In *Der Islam*, Band 67, Heft 2. Berlin: Walter de Gruyter, 1990, pp.278-321.

⁴⁷⁰ Barthold: *O pogrebenii*, p.450.

⁴⁷¹ Quoted by Barthold: *Ulugh Beg*, 1958, p.21. Ibn Arabshah is the only source that mentions the "cleansing" of Gūr-i Amīr of its Turco-Mongolian paraphernalia.

⁴⁷² Discussed under Shahr-i Sabz, please see Chapter IV.8.3.b.

although Bahauddin, the founder of the *Naqšbandiyya* order was a contemporary of Tīmūr (he was 17 years older than Tīmūr), the sources⁴⁷³ mention nothing about his relation to Tīmūr's court and in general about the relation between Tīmūr and the shaykhs of Bukhārā.

Barthold⁴⁷⁴ comments that the historians of Shāh Rukh exaggerated Tīmūr's piety and imposed the *Sharī'a* as superior to Chingiz Khān's law. Tīmūr is portrayed as a patron of the '*ulamā*', "conversed with them as with equals"⁴⁷⁵ and "showed particular respect for the Prophet's descendants". Exactly the sayyids, were the only people within the Tīmūrid Empire, apart from the direct descendants of Tīmūr, whose "life was regarded as inviolate"⁴⁷⁶.

The burial of Sayyid Baraka in Gūr-i Amīr was initiated not by Tīmūr but by Shāh Rukh and it took place five years after Tīmūr's death. Although the proximity of the two sarcophagi is widely analysed as a token of worship by Tīmūr and his close spiritual relationship with Sayyid Baraka, Paul⁴⁷⁷, quoting Barthold, reports that the burial of Sayyid Baraka was used by Shāh Rukh to "cleanse" the mausoleum from its pagan Turkish-Mongolian paraphernalia. In 1409 Shāh Rukh transferred the remains of Sayyid Baraka from the town of Andhūy to Samarqand and claimed that the pagan interior of Gūr-i Amīr was improper for the burial of a sayyid. To support this argument, Shāh Rukh used the widely popular patronage of Tīmūr over Sayyid Baraka. By placing the two sarcophagi next to each other, in a sort of a sarcophagi *kosh*, Shāh Rukh attributed further a royal status to the sayyids, since Sayyid Baraka was buried in the Tīmūrid royal tomb. Furthermore, the fact that two sons of Sayyid Baraka were also interred in Gūr-i Amīr shows that the whole family of Sayyid Baraka was so honoured that received a place at the Tīmūrid dynastic mausoleum.

However, Paul⁴⁷⁸ comments on the probably Turkish origin of Sayyid Baraka and casts his doubt on the likelihood of Shāh Rukh's intentions. Paul argues that Sayyid Baraka was seen as a spiritual leader, facilitating the connections of Tīmūr with the mystic realm. According to Paul, Sayyid Baraka would not have minded the Turco-Mongolian attributes at his own grave such as a horse's tail and the pennants. There is still a horse's tail in Gūr-i Amīr (Fig.675) and there is one also at the tomb of Bahauddin in Bukhārā (Fig.676). Apart from the obvious symbolism of a horse related to the nomadic tribes and underlying the nomadic origin of

⁴⁷³ According to Barthold: *Four Studies, Volume II, Ulugh Beg*, 1958, p.20.

⁴⁷⁴ Ibid., p.22.

⁴⁷⁵ Ibid., p.22.

⁴⁷⁶ Ibid., p.22.

⁴⁷⁷ Paul, J.: "Scheiche und Herrescher im Khānat Čağatay". In *Der Islam*, Band 67, Heft 2. Berlin: Walter de Gruyter, 1990, pp.303-305.

⁴⁷⁸ Ibid., pp.304-305.

Tīmūr, the horse is also a chthonic animal and a mediator that brings the living to the Underworld. In this sense, the horse's tail can be attributed to the chthonic symbolism related to the tomb, i.e. the horse facilitating the mediation of the soul in the afterlife. Further, Paul analyses a drum that Sayyid Baraka gave to Tīmūr during an early meeting as a token of the winner and world-conqueror that Sayyid Baraka saw in Tīmūr. The drum is clearly a Shamanistic attribute, as pointed out by Paul, and reflects the role of Sayyid Baraka as a mediator between the worlds, who could spiritually support Tīmūr in his conquests and could summon supernatural forces to aid Tīmūr's deeds.

To summarise, the ruler (Tīmūr and later Shāh Rukh) was the upholder of the *Sharī'a* and patron of organised religion. The conditions under which the '*ulamā*' and the ruler coexisted were well settled. Secondly, the ruler claimed legitimacy through his own connections to supernatural forces, a process that was facilitated by shaykhs or sayyids that supported the ruler in his conquests. According to Manz⁴⁷⁹ Tīmūr laid claim to a type of spiritual strength similar to the one of the Sufis and some Sufis recognised him as a competitor within this realm. He used, as Paul explains, spiritual recognition by Sufi shaykhs to attest to his personal charisma and fitness to rule.



Fig.667: Samarqand, Gūr-i Amīr, dome of the mausoleum, September 2006
Source: Author's photograph



Fig.668: Samarqand, Gūr-i Amīr, sarcophagi in the mausoleum, September 2006
Source: Author's photograph

⁴⁷⁹ Manz, B.F.: *Power, Politics and Religion in Timurid Iran*. Cambridge: Cambridge University Press, 2007, p.192.



Fig.669: Samarqand, Gūr-i Amīr, interior of the mausoleum, squinches and arched recesses, September 2006
Source: Author's photograph



Fig.670: Samarqand, Gūr-i Amīr, interior of the mausoleum, September 2006
Source: Author's photograph



Fig.671: Samarqand, Gūr-i Amīr, *muqarnas* detail in the interior of the mausoleum, September 2006
Source: Author's photograph

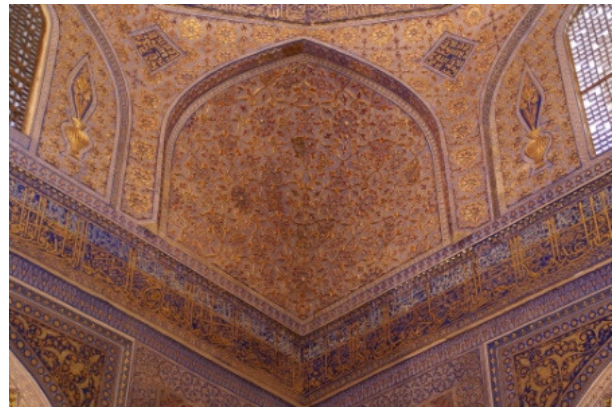


Fig.672: Samarqand, Gūr-i Amīr, squinch detail in the interior of the mausoleum, September 2006
Source: Author's photograph



Fig.673: Samarqand, Gūr-i Amīr, the nephrite sarcophagus of Tīmūr (the black one) in the mausoleum, September 2006
Source: Author's photograph



Fig.674: Samarqand, Gūr-i Amīr, the sarcophagus of Sayyid Baraka in the mausoleum at the feet of Tīmūr, September 2006
Source: Author's photograph



Fig.675: Samarqand, Gūr-i Amīr, a horse tail in the mausoleum, September 2006
Source: Author's photograph



Fig.676: Bukhārā, Bahauddin Complex, a horse tail at the tomb of Bahauddin, September 2006
Source: Author's photograph



Fig.677: Samarqand, Gūr-i Amīr, interior of the mausoleum, gallery added by Ulugh Beg in 1424 AD with Koranic inscriptions of the old museum exterior from the 14th c. AD situated to the right of the current entrance to the main mausoleum chamber, September 2006
Source: Author's photograph



Fig.678: Samarqand, Gūr-i Amīr, interior of the mausoleum, gallery added by Ulugh Beg in 1424 AD with details of the old mausoleum exterior from the 14th c. AD, September 2006
Source: Author's photograph



Fig.679: Samarqand, Gūr-i Amīr, interior of the mausoleum, gallery added by Ulugh Beg in 1424 AD with details of the old museum exterior from the 14th c. AD, September 2006
Source: Author's photograph

The sarcophagus of Tīmūr is situated in the compositional centre of Gūr-i Amīr, exactly under the dome, whose Koranic inscriptions read: “Proud of Allah, thanks to Allah”. The sarcophagus forms an *Axis Mundi*, since it occupies the vertical axis of the mausoleum and thus transpositions Amir Tīmūr in the holy realm. The four arched recesses (interior *īwāns*) of the mausoleum are oriented as follows: the current entrance is 60°N to the northeast, the south-eastern *īwān* is 160°N, the south-western *īwān* is 252°N and the north-eastern *īwān* is 338°N. Compared to the orientation of the *īwāns* of the Bībī Khānum Mosque, the Gūr-i Amīr *īwāns* differ with approximately 10° each. The *īwāns* of the Ulugh Beg Madrasa have about 4°-10° difference. Based on the above measurements, we cannot relate the exact orientation of Gūr-i Amīr to any of the existing Tīmūrid monuments in Samarqand. The orientation of the south-western *īwān* with its 252°N, where the *mihrāb* is situated, might refer to Baghdad, which is 257°51'N to the southwest from Samarqand. Mecca is 239°46'N, which excludes the orientation of the *qibla* of Gūr-i Amīr to Mecca.

THE ARCHITECTURE OF THE FOUR-ĪWĀN BUILDING TRADITION

Building name	Gūr-i-Amīr Mausoleum	Bībī Khānum Mosque	Ulugh Beg Madrasa
Location	Samarqand	Samarqand	Samarqand
Building period	1400-1404	1398-1405	1417-1420
Ruler	Tīmūr	Tīmūr	Ulugh Beg
South-western <i>īwān</i>	252°N	260°N	256°N
North-western <i>īwān</i>	338°N	350°N	346°N
South-eastern <i>īwān</i>	160°N	170°N	170°N
North-eastern <i>īwān</i>	60°N	70°N	76°N
<i>Qibla (mihrāb)</i>	252°N	260°N	258°N
Direction to Mecca	239°46'39"	239°46'39"	239°46'39"
Direction to Baghdad	257°51'12"	257°51'12"	257°51'12"
Direction to Jerusalem	262°51'55"	262°51'55"	262°51'55"



Fig.680: Samarqand, Gūr-i Amīr, side *īwān* of the mausoleum to the west, attributed to Ulugh Beg from the beginning of the 15th c. AD, September 2006
Source: Author's photograph



Fig.681: Samarqand, Gūr-i Amīr, side *īwān* of the mausoleum to the west, attributed to Ulugh Beg from the beginning of the 15th c. AD, September 2006
Source: Author's photograph



Fig.682: Samarqand, Gūr-i Amīr, south-western façade detail of the mausoleum with the addition from 1424 AD, September 2006
Source: Author's photograph

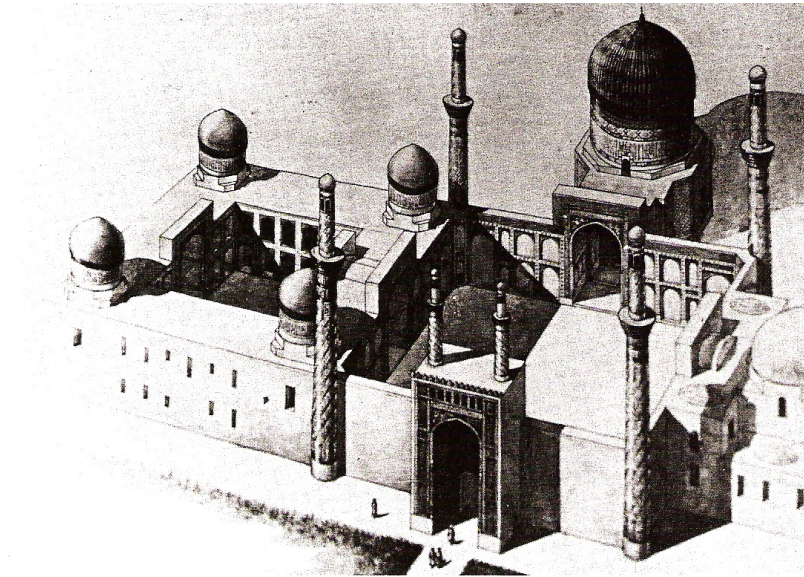


Fig.683: Samarqand, Gūr-i Amīr, south-western façade detail of the mausoleum with the addition from 1424 AD, September 2006
Source: Author's photograph

Fourth *īwān* by Ulugh Beg

As part of his refurbishment of Gūr-i Amīr in 1424 Ulugh Beg erected the imposing entrance *īwān*, which has elongate proportions and a *muqarnas* on both sides (Fig.685-688). The *īwān* leads to the small *čahār-bahr* garden that occupies the original *kosh* courtyard between the madrasa and the *khānaqāh*. The Ulugh Beg *īwān* is erected in the main axis of the entrance to the mausoleum. It accomplishes the whole complex as a symmetrical and orthogonal four-*īwān kosh* compound (Fig.684). Similar to the four-*īwān* courtyard of the Bībī Khānum Mosque, in which each *īwān* leads to a separate mosque, in Gūr-i Amīr each *īwān* leads to a building with a different function, namely, a madrasa, a *khānaqāh* and a mausoleum. The *čahār-bahr* garden and the four *īwāns* unify these different buildings in one architectural *kosh* ensemble. The symbolism of four gates (represented by the *īwāns*) and four corners of the world (represented by the lay out of the *čahār-bahr* garden) clearly define Gūr-i Amīr as a Paradise setting based on the hierophany of the Cosmic Cross.

According to a reconstruction drawing of Gūr-i Amīr by Pletnev (Fig.684), there were also two minarets on the entrance *īwān* to the compound, i.e. the *īwān* built by Ulugh Beg. However, these minarets do not exist nowadays. It is rather unlikely that Ulugh Beg would have used such minarets as they do not appear on any of his buildings and are more typical of Iranian architecture (e.g. the mosque in Yazd).



79. (Cat. No. 29A, B, C) Samarqand. Gur-i Amir complex; madrasah, khanaqah, and mausoleum in a Soviet reconstruction by I. E. Pletnev

Fig.684: Samarqand, Reconstruction of Gūr-i Amīr after Pletnev
Source: Golombek and Wilber: *Timurid Architecture*, 1988, Fig.79



Fig.685: Samarqand, Gūr-i Amīr, the fourth *īwān* built by Ulugh Beg, September 2006
Source: Author's photograph



Fig.686: Samarqand, Gūr-i Amīr, the fourth *īwān* built by Ulugh Beg, view from the courtyard, September 2006
Author's photograph



Fig.687: Samarqand, Gūr-i Amīr, the fourth *iwān* built by Ulugh Beg, September 2006
Source: Author's photograph



Fig.688: Samarqand, Gūr-i Amīr, detail of the fourth *iwān* built by Ulugh Beg, September 2006
Source: Author's photograph



Fig.689: Samarqand, Gūr-i Amīr, courtyard, the main façade to the left, the Ulugh Beg *iwān* to the right, May 2004
Source: <http://www.world-heritage-tour.org> [Accessed on 17 October, 2008]



Fig.690: Samarqand, Gūr-i Amīr, main façade, May 2004
Source: <http://www.world-heritage-tour.org> [Accessed on 17 October, 2008]



Fig.691: Samarqand, Gūr-i Amīr, the remains of the two-īwān madrasa, September 2006
Source: Author's photograph



Fig.692: Samarqand, Gūr-i Amīr, the remains of the *khānaqāh*, September 2006
Source: Author's photograph



Fig.693: Samarqand, Gūr-i Amīr, the remains of the madrasa, May 2004
Source: <http://www.world-heritage-tour.org> [Accessed on 17 October, 2008]



Fig.694: Samarqand, Gūr-i Amīr, the courtyard of the madrasa, May 2004
Source: <http://www.world-heritage-tour.org> [Accessed on 17 October, 2008]



Fig.695: Samarqand, the remains of the *khānaqāh* of Gūr-i Amīr, September 2006
Source: Author's photograph



Fig.696: Samarqand, Gūr-i Amīr, the centre of the courtyard in front of the main façade, September 2006
Source: Author's photograph



Fig.697: Samarqand, Gūr-i Amīr, the courtyard, September 2006
Source: Author's photograph

V.5.2 Labi Hauz Square (16th c.-17th c. AD), Bukhārā

According to Petruccioli⁴⁸⁰ the growth of the Labi Hauz Square (Fig.698-700) is to be ascribed to the rise of Sufism; the domed *khānaqāh* of Nādir Dīvān Beg (Fig.719) being “the pivot of urban planning on a monumental scale”. The increasing political and religious importance of the *Naqṣbandiyya* order in Bukhārā lead to the construction of several monumental *khānaqāhs*, however, only on the Labi Hauz Square we can trace back a similarity with the “*kosh*” principle applied also on the Rīgīstān Square in Samarqand and in particular with the axiality of the entrance *īwāns* in its present organisation. The Labi Hauz Square, similar to Rīgīstān Square, is formed by three entrance *īwāns*: of the two-*īwān* Kukeltash Madrasa, the Nādir Dīvān Beg Madrasa (originally designed as a caravansaray) and the cross-axial domed Nādir Dīvān Beg *Khānaqāh*. The Labi Hauz Square was built during the reign of Imam Qulī Khān (1611-1641 AD). Nādir Dīvān Beg was a high official and maternal uncle of Imam Qulī Khān.

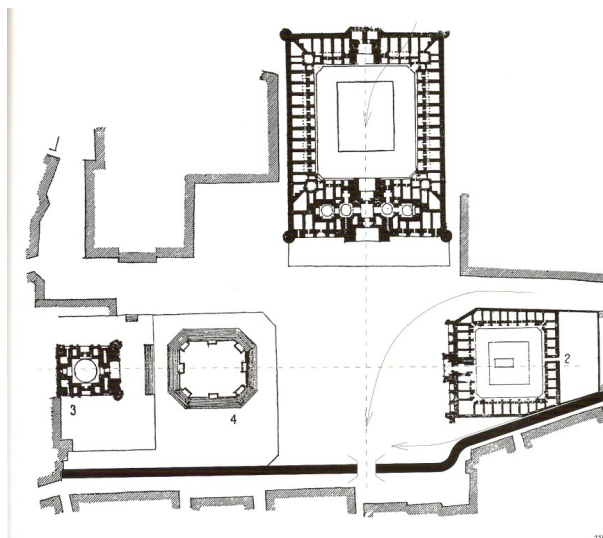


Fig.698: Bukhārā, Labi Hauz Square Plan, 1. Kukeltash Madrasa, 2. Nādir Dīvān Beg Madrasa 3. Domed four-*īwān khānaqāh* Nādir Dīvān Beg, 4. Hauz
Source: Gangler, Gaube and Petruccioli: *Bukhara*, 2004, p.115

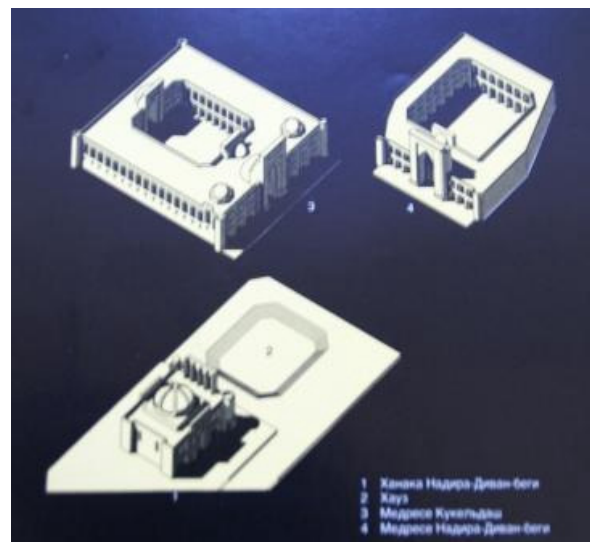


Fig.699: Bukhārā, isometry of the Labi Hauz square, 1. Domed four-*īwān khānaqāh* Nādir Dīvān Beg, 2. Hauz, 3. Kukeltash Madrasa, 4. Nādir Dīvān Beg Madrasa
Source: Borodina: *Central Asia*, 1985, p. 134

⁴⁸⁰ Gangler, Gaube and Petruccioli: *Bukhara*, 2004, p.112.



Fig.700: Bukhārā, aerial view of the Labi Hauz square: Nādir Dīvān Beg Madrasa (to the left), domed four-*īwān* *khānaqāh* Nādir Dīvān Beg (to the right), Kukeltash Madrasa (top)
Source: Google Earth [Accessed on 1 April 2010]

The two-*īwān* Kukeltash Madrasa (1568-1569 AD), the largest surviving madrasa of Bukhārā, is the oldest building of the ensemble, followed by the cruciform Nādir Dīvān Beg *Khānaqāh* (1619-1620 AD) and the Nādir Dīvān Beg Madrasa (1622-1623 AD), the latter two with entrance *īwāns* on the same longitudinal axis. The composition of Labi Hauz (meaning “on the shore of the hauz” or “around the hauz”)⁴⁸¹ is oriented around the central water reservoir, the hauz, which is the largest both in Bukhārā and Samarqand. The hauz and the *khānaqāh* were built at the same⁴⁸² time and form a compositional unity. Below I will cover in short the three monuments.

⁴⁸¹ Baranov et al: *Encyclopaedia*, 1969, pp.324-325.

⁴⁸² Borodina: *Central Asia*, 1985, p.134.

V.5.2.a Kukeltash Madrasa (1568-1569 AD), Bukhārā

The two-*īwān* Kukeltash Madrasa (1568-1569 AD) is the largest in Bukhārā (Fig.701-718), measuring 80m x 60m and it has no less than 160 double-storey *hujras*. The *kosh* façade of the madrasa (Fig.701-705) is very similar to the ‘Abdallāh Khān *kosh*⁴⁸³ (which was built about twenty years later), i.e. with two floors of three arched niches on each side of the entrance *īwān* and *guldasta* at the corners (Fig.709). The most important part of the madrasa from an architectural point of view is the antechamber (Fig.711,712), which consists of three central domed chambers and two cruciform domed chambers (Fig.713-716) with the functions of a mosque and a lecture hall. The two corner rooms at the back of the madrasa are rotated at 45° (Fig.706).

The two courtyard *īwāns* of the Kukeltash Madrasa follow almost exactly the cardinal directions north and south. The *mihrāb* (Fig.717,718) is situated 248°N to the southwest.

The madrasa had originally three floors of *hujras* (Fig.710) but the third floor was destroyed in two consecutive earthquakes in 1868 and 1886 AD. The madrasa was completely restored in the 1990s.



Fig.701: Bukhārā, Kukeltash Madrasa, entrance *kosh* façade, September 2006
Source: Author's photograph



Fig.702: Bukhārā, Kukeltash Madrasa, entrance *kosh* façade, September 2006
Source: Author's photograph

⁴⁸³ See above the Chapter on the two-fold *kosh* V.3.2.



Fig.703: Bukhārā, Kukeltash Madrasa, entrance façade, picture taken in the 1920s, exhibited at the Archaeological Museum of Bukhārā in the Citadel
Source: Author's photograph



Fig.704: Bukhārā, Kukeltash Madrasa, present entrance *kosh* façade
Source: <http://www.panoramio.com/photo/4474997>;
Author: IPAAT [Accessed on 26 November 2008]



Fig.705: Bukhārā, Kukeltash Madrasa before the restoration of the Old City of Bukhārā that won The Aga Khān Award for Architecture in 1995
Source: Archnet [Accessed on 26 November 2008]

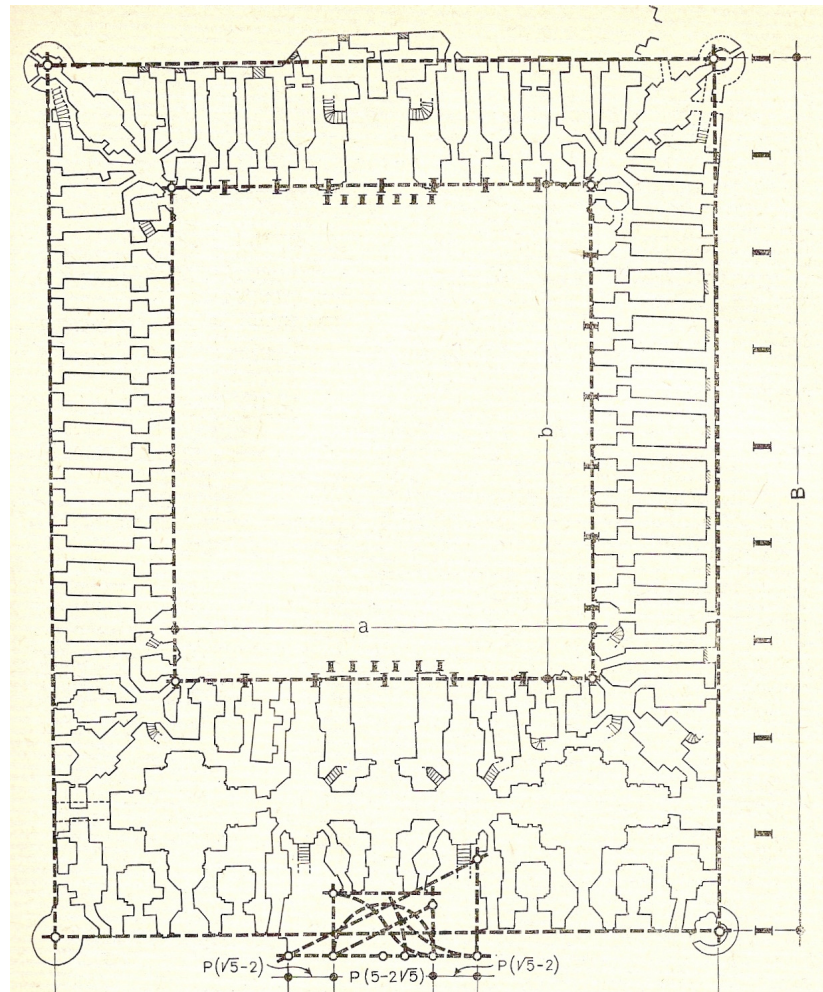


Fig.706: Bukhārā, Kukeltash Madrasa, plan after Bulatov
 Source: Bulatov: *Geometrical harmonisation*, 1978, p.217, Fig.124



Fig.707: Bukhārā, Kukeltash Madrasa, detail of the entrance *īwān*, September 2006
Source: Author's photograph



Fig.708: Bukhārā, Kukeltash Madrasa, detail of the buttresses of the entrance *īwān*, September 2006
Source: Author's photograph



Fig.709: Bukhārā, Kukeltash Madrasa, detail of the *guldasta*, to the left of the main entrance *kosh* façade, September 2006
Source: Author's photograph



Fig.710: Bukhārā, Kukeltash Madrasa, double-storey *hujras*, September 2006
Source: Author's photograph



Fig.711: Bukhārā, Kukeltash Madrasa, detail of the domed antechamber, September 2006
Source: Author's photograph



Fig.712: Bukhārā, Kukeltash Madrasa, restored detail of the domed antechamber, September 2006
Source: Author's photograph



Fig.713: Bukhārā, Kukeltash Madrasa, interior view of the dome in the main sanctuary, September 2006
Source: Author's photograph



Fig.714: Bukhārā, Kukeltash Madrasa, interior view of the dome in the main sanctuary, September 2006
Source: Author's photograph



Fig.715: Bukhārā, Kukeltash Madrasa, detail of an arched recess (*iwān*) in the sanctuary, September 2006
Source: Author's photograph



Fig.716: Bukhārā, Kukeltash Madrasa, detail of an arched recess (*iwān*) in the sanctuary, September 2006
Source: Author's photograph



Fig.717: Bukhārā, Kukeltash Madrasa, *mihrāb* of the sanctuary, September 2006
Source: Author's photograph

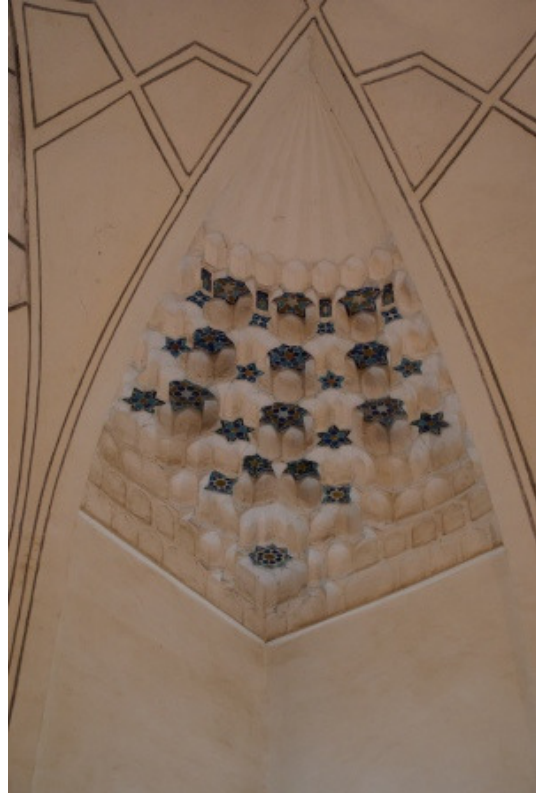


Fig.718: Bukhārā, Kukeltash Madrasa, detail of the *muqarnas* above the *mihrāb*, September 2006
Source: Author's photograph

V.5.2.b Nādir Dīvān Beg *Khānaqāh* (1619-1620 AD), Bukhārā

The Nādir Dīvān Beg *Khānaqāh* (1619-1620 AD) (Fig.719) has a cruciform plan (Fig.723) and is probably the most important *khānaqāh* in Bukhārā from an urban point of view, since it occupies a distinguished place in the prominent Labi Hauz Square. The *khānaqāh* has three external *īwāns* (Fig.720,722) and four arched recesses (internal *īwāns*) (Fig.723,727,738). The whole structure is covered by a ribbed dome (Fig.737) and there are four *hujras* in each corner. The main *kosh* façade has an imposing entrance *īwān* (Fig.721,724,725) with elongated proportions and corner *guldasta*. The two side *īwāns* (the southern and the northern one) are inauspicious in their decoration (Fig.720,722), compared to the lavishly decorated *mihrāb* (Fig.728-736). All four *īwāns* of the Nādir Dīvān Beg *Khānaqāh* are oriented along the ideal cardinal points.



Fig.719: Bukhārā, Nādir Dīvān Beg *Khānaqāh* and Hauz after the restoration of the Old City of Bukhārā that won The Aga Khān Award for Architecture in 1995
Source: Archnet [Accessed on 1 April 2010]

The Nādir Dīvān Beg *Khānaqāh* is the only building on the Labi Hauz Square that is fully reflected in the waters of the hauz (Fig.719).



Fig.720: Bukhārā, Nādir Dīvān Beg *Khānaqāh*, exterior, eastern and southern façades as seen from the hauz, September 2006
Source: Author's photograph

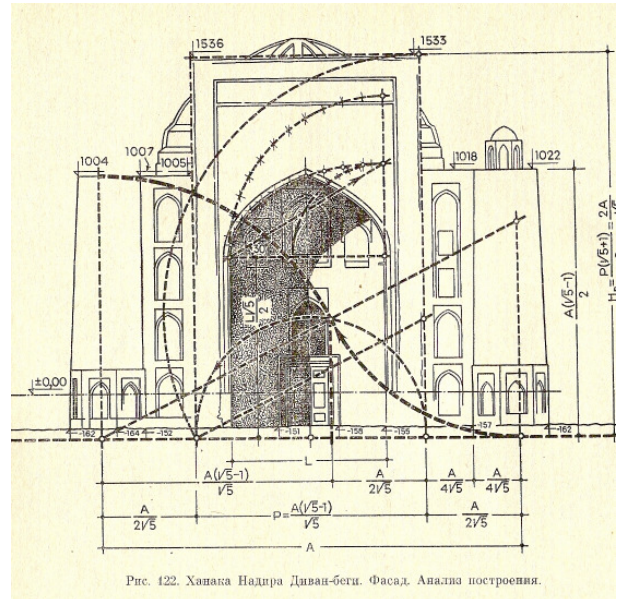


Fig.721: Bukhārā, Nādir Dīvān Beg *Khānaqāh*, elevation of the main entrance *kosh* façade after Bulatov
Source: Bulatov: *Geometrical harmonisation*, 1978, p.217, Fig.122



Fig.722: Bukhārā, Nādir Dīvān Beg *Khānaqāh*, southern façade, exterior *īwān*, September 2006
Source: Author's photograph

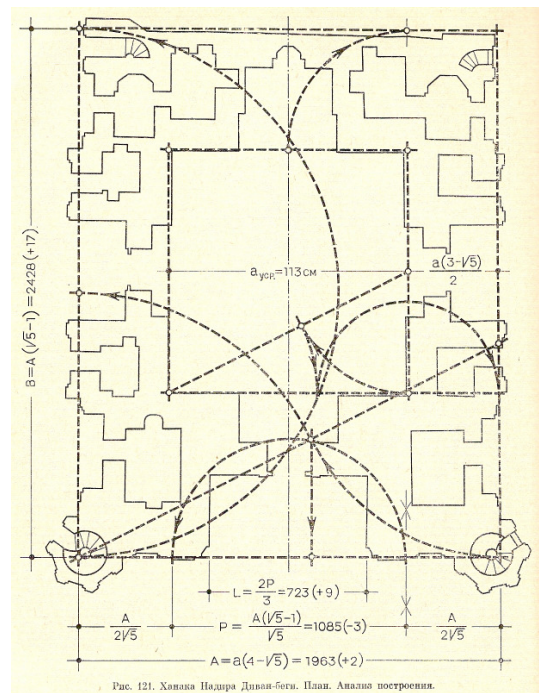


Fig.723: Bukhārā, Nādir Dīvān Beg *Khānaqāh*, plan after Bulatov
Source: Bulatov: *Geometrical harmonisation*, 1978, p.216, Fig.121



Fig.724: Bukhārā, Nādir Dīvān Beg *Khānaqāh*, detail of the main entrance *īwān*, September 2006
Source: Author's photograph



Fig.725: Bukhārā, Nādir Dīvān Beg *Khānaqāh*, main *kosh* façade, September 2006
Source: Author's photograph

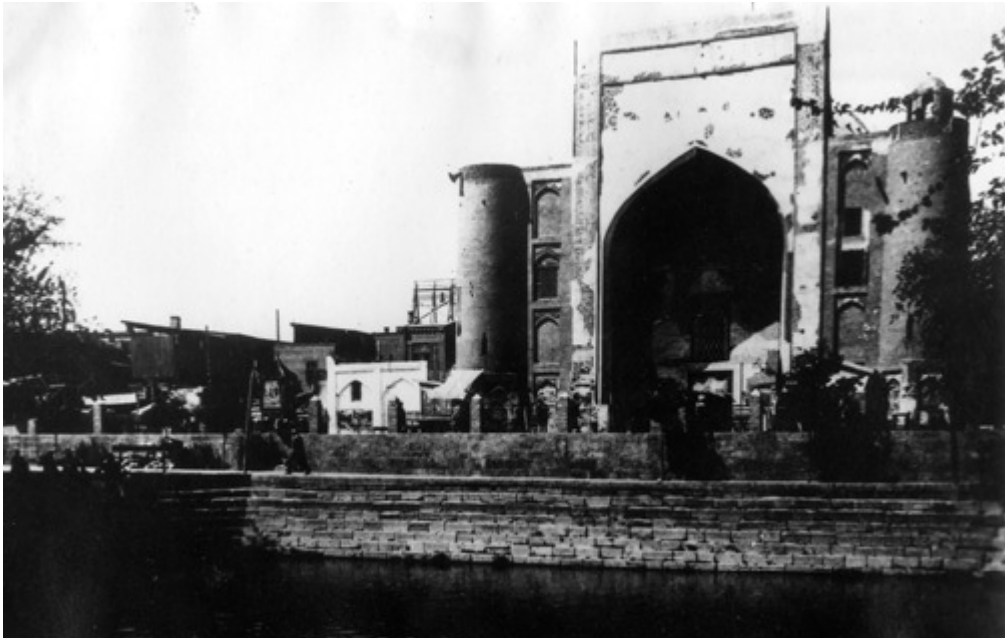


Fig.726: Bukhārā, Nādir Dīvān Beg *Khānaqāh* and Hauz before the restoration of the Old City of Bukhārā
Source: Archnet [Accessed on 1 April 2010]

The Nādir Dīvān Beg *Khānaqāh* represents the importance of the Sufis in the urban life of Bukhārā in the 17th c. AD. Similar to Ulugh Beg in the 15th c. AD, Nādir Dīvān Beg erected a *kosh* of a madrasa and a *khānaqāh*, thus recognising the status of the Sufis in Bukhārā and putting them on equal basis with orthodox Islam. Although we do not have any conclusive evidence, it might be possible that the Nādir Dīvān Beg *Khānaqāh* has been built after the examples of the Gūr-i Amīr *Khānaqāh* (also with a domed cruciform plan) and the Ulugh Beg *Khānaqāh* in Samarqand.



Fig.727: Bukhārā, Nādir Dīvān Beg *Khānaqāh*, interior, *muqarnas* detail above the backside of the main *kosh īwān*, September 2006
Source: Author's photograph



Fig.728: Bukhārā, Nādir Dīvān Beg *Khānaqāh*, interior *īwān* with the *mihrāb*, September 2006
Source: Author's photograph



Fig.729: Bukhārā, Nādir Dīvān Beg *Khānaqāh*, *mihrāb*, September 2006
Source: Author's photograph



Fig.730: Bukhārā, Nādir Dīvān Beg *Khānaqāh*, detail of the arch above the *mihrāb*, September 2006
Source: Author's photograph



Fig.731: Bukhārā, Nādir Dīvān Beg *Khānaqāh*, detail of the *mihrāb*, September 2006
Source: Author's photograph



Fig.732: Bukhārā, Nādir Dīvān Beg *Khānaqāh*, detail of the *mihrāb*, September 2006
Source: Author's photograph



Fig.733: Bukhārā, Nādir Dīvān Beg *Khānaqāh*, detail of the *mihrāb*, September 2006
Source: Author's photograph



Fig.734: Bukhārā, Nādir Dīvān Beg *Khānaqāh*, detail of the *mihrāb*, September 2006
Source: Author's photograph



Fig.735: Bukhārā, Nādir Dīvān Beg *Khānaqāh*, detail of the *mihrāb*, September 2006
Source: Author's photograph



Fig.736: Bukhārā, Nādir Dīvān Beg *Khānaqāh*, detail of the *mihrāb*, September 2006
Source: Author's photograph



Fig.737: Bukhārā, Nādir Dīvān Beg *Khānaqāh*, detail of dome with the squinches, September 2006
Source: Author's photograph



Fig.738: Bukhārā, Nādir Dīvān Beg *Khānaqāh*, detail of the *muqarnas* in an arched recess, September 2006
Source: Author's photograph

V.5.2.c Nādir Dīvān Beg Madrasa (1622-1623 AD), Bukhārā

The two-*īwān* Nādir Dīvān Beg Madrasa (1622-1623 AD) (Fig.739) was the last building erected on the Labi Hauz Square. It was originally designed as a caravansaray but has been used from the very beginning as a madrasa⁴⁸⁴. The madrasa is most interesting because of the anthropomorphic and zoomorphic images on its main *kosh* façade (Fig.744-747). These images remind one of the Shīr Dār Madrasa (1619-1635/36 AD) on Rigistān Square, which was being constructed at the same time. Especially, the anthropomorphic image, i.e. the male head, which is depicted on the tigers on the Shīr Dār Madrasa (Fig.748) is almost identical with the solar head (Fig.749), depicted in the middle of the tympanum of the main entrance *īwān* of the Nādir Dīvān Beg Madrasa. The zoomorphic Paradise images of solar birds (Fig.739,744) rejoicing over domestic animals (Fig.747) can be found on either side of the main entrance *īwān* and are situated in the same bilateral composition as the tigers on the Shīr Dār Madrasa. The arched niches of the main *kosh* façade are all different in their colours and zoomorphic images (Fig.741-744). There are two other pairs of solar birds on the niches to the right of the main entrance *īwān* (Fig.744).

Nowadays, the Nādir Dīvān Beg Madrasa is occupied by workshops for souvenirs (Fig.750, 751). At night, the courtyard turns into a large restaurant that entertains mostly European and Japanese tourists (Fig.752,753).

⁴⁸⁴ Borodina: *Central Asia*, 1985, p.137.



Fig.739: Bukhārā, Nādir Dīvān Beg Madrasa, entrance *kosh iwān*, September 2006
Source: Author's photograph



Fig.740: Bukhārā, Nādir Dīvān Beg Madrasa, main entrance *iwān* after the restoration of the Old City of Bukhārā that won The Aga Khān Award for Architecture in 1995
Source: Archnet [Accessed on 1 October 2008]



Fig.741: Bukhārā, Nādir Dīvān Beg Madrasa, entrance *kosh* façade, to the left of the main *iwān*, September 2006
Source: Author's photograph



Fig.742: Bukhārā, Nādir Dīvān Beg Madrasa, entrance *kosh* façade, to the right of the main *īwān*, September 2006
Source: Author's photograph



Fig.743: Bukhārā, Nādir Dīvān Beg Madrasa, detail of the central niches of the entrance *kosh* façade, to the left of the main *īwān*, September 2006
Source: Author's photograph



Fig.744: Bukhārā, Nādir Dīvān Beg Madrasa, detail of the first row of arched niches with birds, to the right of the main entrance *īwān*, September 2006
Source: Author's photograph



Fig.745: Bukhārā, Nādir Dīvān Beg Madrasa, detail of the Paradise birds on the tympanum of the main entrance *kosh* façade, September 2006
Source: Author's photograph



Fig.746: Bukhārā, Nādir Dīvān Beg Madrasa, detail of the Paradise bird on the tympanum of the main entrance *kosh* façade, September 2006
Source: Author's photograph



Fig.747: Bukhārā, Nādir Dīvān Beg Madrasa, detail of the tympanum of the main entrance *kosh* façade. It might be possible that this is an unicorn, since it has a horn, however, what looks like a horn might be from the leafage decoration, September 2006
Source: Author's photograph



Fig.748: Samarqand, Shīr Dār Madrasa, detail of the male solar head on a tiger chasing a deer on the tympanum of the main entrance *kosh* façade, September 2006
Source: Author's photograph



Fig.749: Bukhārā, Nādir Dīvān Beg Madrasa, detail of the male solar head on the tympanum of the main entrance *kosh* façade, September 2006
Source: Author's photograph



Fig.750: Bukhārā, Nādir Dīvān Beg Madrasa, two-storey courtyard *hujras*, September 2006
Source: Author's photograph



Fig.751: Bukhārā, Nādir Dīvān Beg Madrasa, one-storey courtyard *hujras* used as workshops for souvenirs, September 2006
Source: Author's photograph



Fig.752: Bukhārā, Nādir Dīvān Beg Madrasa, traditional Uzbek dance in the courtyard, September 2006
Source: Author's photograph



Fig.753: Bukhārā, Nādir Dīvān Beg Madrasa, traditional Uzbek dance in the courtyard, September 2006
Source: Author's photograph

V.5.3 Rigistān Square (15th c.-17th c.), Samarqand

The Rigistān⁴⁸⁵ Square in Samarqand (Fig.754-759) was built throughout three centuries from the 15th until the 18th c. AD. The current architectural ensemble is formed by the Ulugh Beg Madrasa (1417-1420 AD) to the west, the Shīr Dār Madrasa (1619-1636 AD) to the east, the Tilā Kārī Madrasa and Mosque (1646-1660 AD) to the north and the 18th c. AD *čahār-suq* domed market, which is behind the Tilā Kārī Complex.

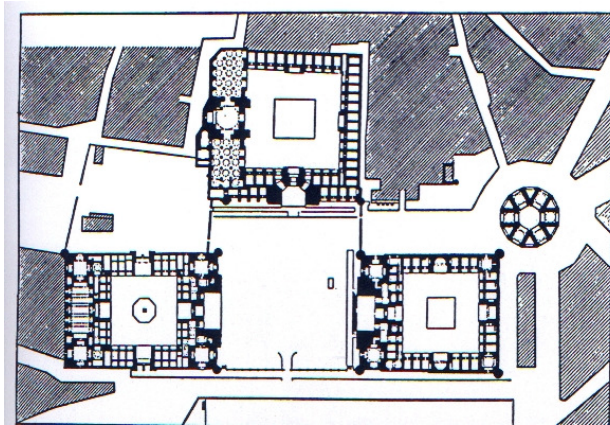


Fig.754: Samarqand, Rigistān Square, plan after Polupanov
Source: Brandenburg: *Samarkand*, 1966, p.159



Fig.755: Samarqand, isometry of the Rigistān Square after Borodina
Source: Borodina: *Central Asia*, 1985, p. 80

The Rigistān Square had gone through many architectural changes before its current layout was formed (Fig.754,755). In the 14th c. AD, Rigistān was the main market place (*čahār-suq*), which was the centre of trade in Samarqand during the reign of Tīmūr (1360-1405 AD). Six main streets radiated from the square⁴⁸⁶ and determined it as the main trading place in the city. The first building, a domed passage, was erected by the wife of Tīmūr, Tuman-Aka, at the beginning of the 15th c. AD. Below we will mention only the most significant Tīmūrid buildings that once stood there.

The composition of Rigistān Square is exemplary for the *architectural palimpsest*, in which every subsequent building was erected at the site of a previous one, since the site was associated with a renowned ruler and thus represented the power aspirations of the new patron. To the south, the Alik Kukeltash Friday Mosque was erected in 1430 AD, replacing

⁴⁸⁵ Rigistān means "place where sand is abundant". Barthold: *Four Studies, Volume II, Ulugh Beg*, 1958, p.119.

⁴⁸⁶ Pugachenkova: *Samarkand, Bukhara*, 1968, p.99.

the old pre-Mongol Friday Mosque. Ali Kukeltash was a famous Tīmūrid amīr, who was obviously powerful enough to demonstrate his might on Rigistān and thus be directly associated with Tīmūr's grandson Ulugh Beg, who had already built his madrasa and *khānaqāh* in the 1420s. By also building on Rigistān, Alik Kukeltash sought fame similar to the royal Tīmūrid dynasty. Next to his mosque, a small mosque Mukatta or Hazret Umar with beautiful carvings was built⁴⁸⁷ and its remains could be still seen in the 19th c. AD⁴⁸⁸. The Mirzoi Caravansaray was constructed to the north of the square and housed the tradesmen (Fig.649).

At the beginning of the 16th c. AD Shaybāni Khān⁴⁸⁹, the founder of the Shaybānid dynasty, started the construction of a madrasa to the east of Rigistān. Another madrasa, the Haniyyah Madrasa was constructed in a *kosh* to the Shaybānid Khān Madrasa. Unfortunately, these two madrasas did not survive. However, their *kosh* composition, repeated the *kosh* composition of the Ulugh Beg Madrasa and *khānaqāh*⁴⁹⁰, which still stood at the Rigistān in the 16th c. AD

During the 1620s the Abu Said Khān Madrasa, known also as Kōk Gunbad was built to the south of Rigistān. The name Kōk Gunbad, meaning a blue dome, can be also interpreted as a link to the famous Kōk Gunbad Mosque⁴⁹¹ that Ulugh Beg erected in Shar-i Sabz, the summer capital of Tīmūr.

In 1647 Samarqand was in need of a new congregational mosque, since the Bībī Khānum Mosque was almost in ruins. That is why, the Tilā Kārī Madrasa and Mosque were built on the site of the Mirzoi Caravansaray. Later the Shīr Dār Madrasa was built on a heap of rubble that remained from the Ulugh Beg *khānaqāh*. Both the Tilā Kārī Madrasa and the Shīr Dār Madrasa were commissioned by the Astarkhānid ruler, Alchin Yalantush Bahadur, who wanted to leave his stamp on Rigistān as part of his extensive building activities in Samarqand in the 17th c. AD. By building the Shīr Dār Madrasa on the site of the Ulugh Beg *khānaqāh*, Yalantush identified with Ulugh Beg and by erecting the Tilā Kārī Madrasa and Friday Mosque, he provided a new religious centre that substituted the great Bībī Khānum Mosque, the most grandeur building of Tīmūr. In this, Yalantush created both a mosque and a madrasa on Rigistān, which was an accomplishment in its own that overshadowed anything built by his predecessors.

⁴⁸⁷ Pugachenkova: *Samarkand, Bukhara*, 1968, p.102.

⁴⁸⁸ Arapov: *Samarkand*, 2004, p.42.

⁴⁸⁹ Ibid., p.42.

⁴⁹⁰ See above the Chapter on the two-fold *kosh* V.4.1.

⁴⁹¹ See above the Chapter on Shahr-i Sabz IV.8.3.a.

The most characteristic feature of the current Rigistān Square⁴⁹² is that it utilises the four-*īwān* plan as an urban architectural principle. The square consists of a three-fold *kosh* of four-*īwān* madrasas with central courtyards, organised along two intersecting axes (Fig.754-759). Each of the three madrasas, totally restored in the 1990s, presents its main entrance *īwān* to the square (Fig.757,758). The *īwāns* are flanked by *guldasta*, which reinforce the symmetry of the entrance façades. In Rigistān, we can observe a double utilisation of the four-*īwān* concept on two scales: single building and urban ensemble. The monumental *īwāns* reinforce the representational function of the square.

The choice of the four-*īwān* plan can be explained not only with the function of the buildings as religious schools, in the case of the madrasas, but with creating holy space. The cosmic setting is evoked by stressing the four cardinal points within each of the buildings by placing *īwāns* along their main orthogonal axes. The three madrasas in turn are incorporated into a square, formed by their three entrance *īwāns*.

What is very interesting is that the imaginary position of the fourth *īwān* in the urban setting of the square to the south is left open and it constitutes the most prominent access of the public to the square. Thus, the people (worshippers, pilgrims, theology students, traders) are attached the importance of the fourth element. With their anthropomorphic presence on the square they fulfil an architectural role by combining the existing strictly religious complex with the human element. In this way, the religious contemplation and prayers are conceived as an inseparable part of the human being, who is in turn adorned also with divine presence by being part of the holy setting. The co-existence of the divine world (represented by the religious complex of the three madrasas and a mosque) with the human world (represented by the human presence and activities on the square) is one of the basic philosophical concepts of Islam. Thus, the urban utilisation of the four-*īwān* plan on Rigistān fulfils not only a representational function but also a deeply philosophical concept represented by the combination of human and divine presence on urban scale. Yet, the spatial division between the solid volumes of the buildings and the small scale of the human being marks the division between the two levels of existence: the timeless (the divine) and the temporal (the human).

⁴⁹² For a bird-eye virtual tour of the Rigistān, shot from the minaret of the Ulugh Beg Madrasa, please visit the following website: <http://www.world-heritage-tour.org/asia/central-asia/uzbekistan/Samarqand/Rigistān-minaret-at-ulughbek-madrasa/sphere-flash.html> [Accessed on 17 October, 2008].

For a virtual tour of the Rigistān, shot from the main entrance of the Ulugh Beg Madrasa, please visit the following website: <http://www.world-heritage-tour.org/asia/central-asia/uzbekistan/Samarqand/Rigistān-ulughbek-madrasa/sphere-flash.html> [Accessed on 17 October, 2008].



Fig.756: Samarqand, aerial view of the Rigistān Square, 2008
Source: Google Earth [Accessed on 1 April 2010]



Fig.757: Samarqand, Rigistān Square, view of the three *kosh iwāns*, September 2006
Source: Author's photograph



Fig.758: Samarqand, bird eye view of the Rigistān Square
Source: Archnet [Accessed on 1 April 2010]

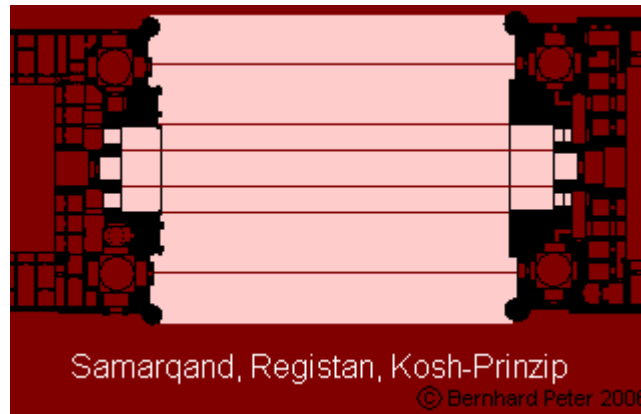


Fig.759: Samarqand, Rīgistān Square, symmetrical *kosh* between the Ulugh Beg Madrasa and the Shīr Dār Madrasa after Peter
 Source: Website of B. Peter
<http://www.kultur-in-asien.de/Usbekistan/architektur/kosh.htm> [Accessed on 19 August 2009]



Fig.760: Samarqand, Rīgistān Square, main *kosh* entrance *īwān* of the Ulugh Beg Madrasa , September 2006
 Source: Author's photograph



Fig.761: Samarqand, Rīgistān Square, main *kosh* entrance *īwān* of the Shīr Dār Madrasa , September 2006
 Source: Author's photograph

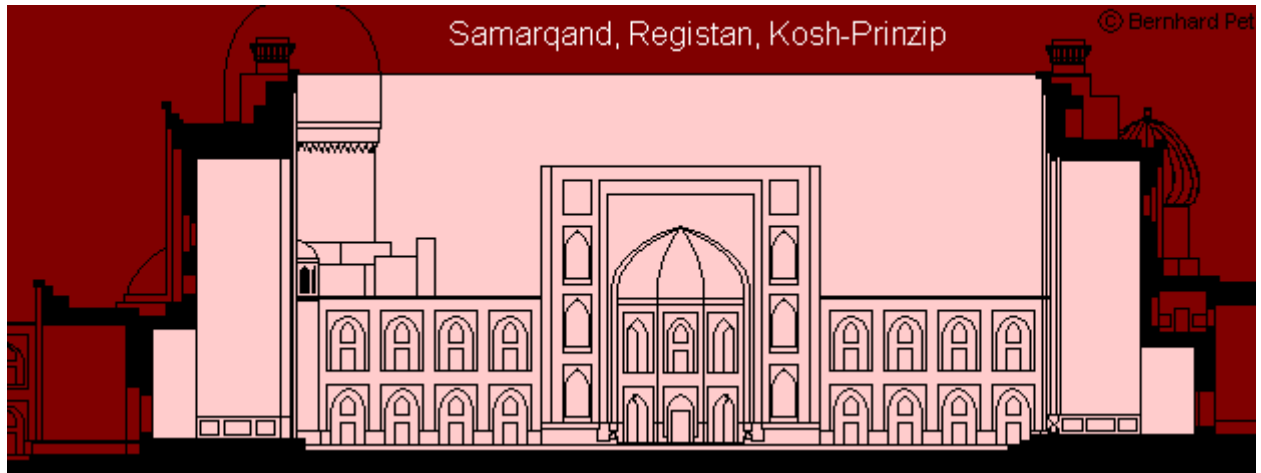


Fig.762: Samarqand, Rigistān Square, cross section through the Ulugh Beg Madrasa and the Shīr Dār Madrasa after Peter

Source: Website of B. Peter

<http://www.kultur-in-asien.de/Usbekistan/architektur/kosh.htm> [Accessed on 19 August 2009]



Fig.763: Samarqand, Rigistān Square, view of the three *kosh iwāns* as seen from the northern façade of the Ulugh Beg Madrasa, September 2006

Source: Author's photograph



Fig.764: Samarqand, Rigistān Square, view of the three *kosh iwāns* as seen from the northern façade of the Ulugh Beg Madrasa, September 2006

Source: Author's photograph

V.5.3.a Ulugh Beg Madrasa (1417-1420 AD), Samarqand

The four-*īwān* Ulugh Beg Madrasa (Fig.765) on the Rīgistān Square in Samarqand was the most prominent building in the post-Tīmūrid capital. Why did Ulugh Beg choose the four-*īwān* plan for it? One explanation might be that he followed the representational four-*īwān* architectural heritage left by his grandfather Tīmūr, as he wanted to be associated with the glorious past and assert himself as the new Tīmūrid ruler of Samarqand. The largest building commissioned by Tīmūr was the Bībī Khānum Mosque (1399-1404) and it does have a four-*īwān* plan. According to Godard⁴⁹³ the model for all four-*īwān* madrasas in Turkestan is exactly the Bībī Khānum Mosque. Furthermore, the choice of four corner minarets is also exceptional for Tīmūrid madrasas, since only the Bībī Khānum Mosque⁴⁹⁴ had four minarets. However, nowadays, there are only two minarets at the front *kosh* façade of the Ulugh Beg Madrasa (Fig.765) and two *guldasta* at the back.



Fig.765: Samarqand, Rīgistān Square, main *kosh* façade of the Ulugh Beg Madrasa, September 2006
Source: Author's photograph

⁴⁹³ Godard: *Iran*, 1964, p.247. This statement is incorrect since one of the earliest four-*īwān* madrasas also in Samarqand is the Tamghach Bughra Khān Madrasa at Shāh-i Zinda from 1066, which was built about three centuries prior to Bībī Khānum Mosque.

⁴⁹⁴ See the previous chapter on the Two-fold *kosh*: Madrasa versus Mosque.

The court of the Ulugh Beg Madrasa is square (30m on each side), the four *īwāns* are situated along two orthogonal axes (Fig.651-653). The situation of the *īwāns* is not entirely along the ideal cardinal points. The south western *īwān* (Fig.774), marking the entrance to the sanctuary with the mosque (Fig.777-780), is 256°N to the southwest. The backside of the entrance *īwān* (Fig.773) is 76°N to the northeast. The two side *īwāns* are respectively 346°N to the northwest (Fig.775) and 170°N to the southeast (Fig.776). The coordinates of the *īwāns* are measured by a manual compass⁴⁹⁵ from the centre of the courtyard. However, slight deviations in the measurements are possible due to the manual compass.

It is remarkable that the orientation of the *īwāns* of the Ulugh Beg Madrasa copy almost exactly the orientation of the *īwāns* of the Bībī Khānum Mosque. The entrance *īwān* of the congregational mosque is 70°N to the northeast. The largest *īwān*, in which the *mihrāb* is situated, is 260°N to the southwest, compared only to 260°N to the southwest of the Ulugh Beg Madrasa. The side *īwāns* have the following coordinates: 170°N to the southeast and 350°N to the northwest. Based on these measurements, we can conclude that Ulugh Beg commissioned his madrasa not only according to the four-*īwān* plan of the Bībī Khānum Mosque and its four minarets but also almost meticulously copied the orientation of the *īwāns* along the cardinal points. On the Google Earth map the parallel orientation of the two compounds can be clearly seen (Fig.766).

Building name	Gūr-i-Amīr Mausoleum	Bībī Khānum Mosque	Ulugh Beg Madrasa
Location	Samarqand	Samarqand	Samarqand
Building period	1400-1404	1398-1405	1417-1420
Ruler	Tīmūr	Tīmūr	Ulugh Beg
South-western <i>īwān</i>	252°N	260°N	256°N
North-western <i>īwān</i>	338°N	350°N	346°N
South-eastern <i>īwān</i>	160°N	170°N	170°N
North-eastern <i>īwān</i>	60°N	70°N	76°N
<i>Qibla (mihrāb)</i>	252°N	260°N	258°N
Direction to Mecca	239°46'39"	239°46'39"	239°46'39"
Direction to Baghdad	257°51'12"	257°51'12"	257°51'12"
Direction to Jerusalem	262°51'55"	262°51'55"	262°51'55"

⁴⁹⁵ Compass type: RECTA DP6

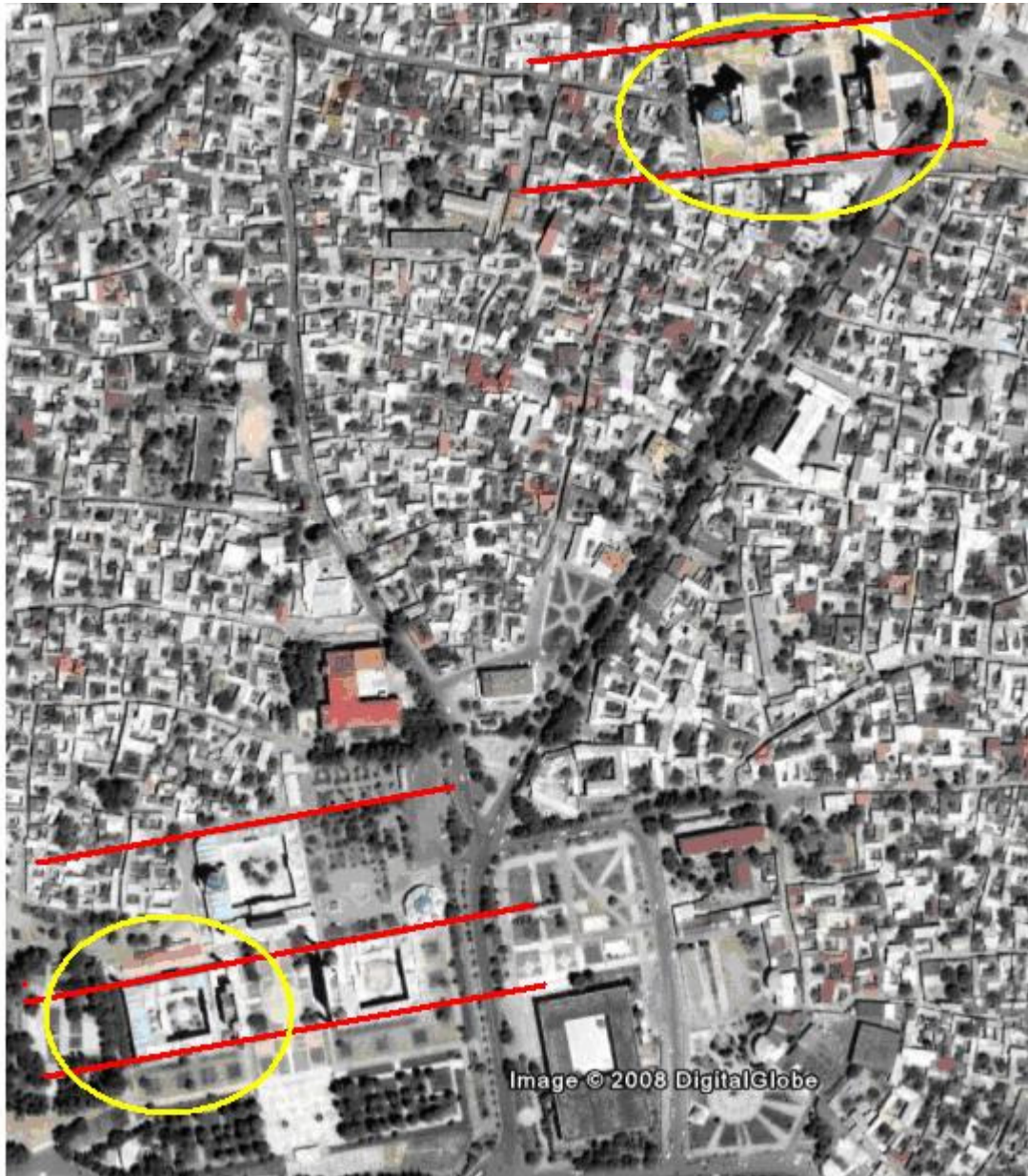


Fig.766: Samarqand, aerial view of the Rigistān Square, the Ulugh Beg Madrasa (below to the left, marked by the yellow ellipse) and the Bibi Khānum Mosque (top to the right, marked by the yellow ellipse)
Source: Google Earth [Accessed on 1 April 2010]

Additionally, we can compare the orientation of the Ulugh Beg Madrasa also to Gūr-i Amīr. Measured from the centre of the courtyard, the coordinates of the *īwāns* in Gūr-i Amīr are as follows: the entrance of the madrasa is 60°N to the northeast, the entrance of the *khānaqāh* is 252°N to the southwest, the entrance of the tomb is 160°N to the southeast and the majestic fourth *īwān*, i.e. the entrance to the complex is 338°N to the northwest. However, we cannot verify whether Ulugh Beg followed the coordinates of the Tīmūrid dynastic mausoleum in his madrasa, since the comparison between the geographical orientation of the Ulugh Beg Madrasa and Gūr-i Amīr shows slight differences.

Furthermore, the situation of the mosque at the rear of the Ulugh Beg Madrasa in Samarqand, in a special sanctuary containing the *qibla wall* (Fig.777-780), is unique to all previous examples of Tīmūrid madrasas, in which the mosque was situated along the entrance *īwān* as part of two symmetrical rooms in the antechamber, and it was distinguished only by the *mihrāb*. In the Ulugh Beg Madrasa, the orthogonal symmetry is carried out throughout the building. Whereby, the mosque is situated in the south-western *īwān* at the back end of the courtyard, which is a new architectural solution that provides more space for religious worship. Although Golombek and Wilber⁴⁹⁶ list this detail as an innovation in the building history of Tīmūrid madrasas, we should not consider it only within that group of buildings but regard it as an attempt to follow the plan of the Bībī Khānum Mosque, the greatest Congregational mosque, built by Tīmūr. As we have seen above, Ulugh Beg followed exactly its plan and spatial orientation, which probably allowed him to situate the mosque and the *mihrāb* of his madrasa in the south-western *īwān* and define it as the main sanctuary.

To further illustrate this phenomenon, we can compare the Ulugh Beg Madrasa in Samarqand with the Ulugh Beg Madrasa in Bukhārā⁴⁹⁷, both built at the same time, namely from 1417 to 1420 AD. The major difference between the two is that the madrasa in Bukhārā is smaller in scale and has only two *īwāns*, compared to the four *īwāns* in Samarqand. Given the outspoken preference of Ulugh Beg to Samarqand as the new Tīmūrid capital, it makes sense that he built the larger and more representative madrasa in Samarqand. Here, we should point out the fact that the choice of the number of *īwāns* must have also played a role. The four *īwāns* were most likely seen as more monumental and illustrated better the parallels with the Tīmūrid architectural heritage, e.g. with the Bībī Khānum Mosque and Gūr-i Amīr as seen in the above paragraphs.

Another difference between the two Ulugh Beg madrasas is the situation of the *mihrāb*. While in Samarqand, the *mihrāb* is situated in the southwest *īwān*, especially built as a mosque, the *mihrāb* in Bukhārā is situated in the antechamber, to the left of the entrance *īwān*. However, both *mihrābs* are oriented approximately 250°N to the southwest. The *īwāns* of the Bukhārā Madrasa follow exactly the geographical orientation of the side *īwāns* of the Samarqand

⁴⁹⁶ Golombek and Wilber: *Timurid Architecture*, 1988, p. 87.

⁴⁹⁷ See the previous chapter on the Two-fold *kosh*: Madrasa versus Madrasa V.3.1.

Madrasa, i.e. 340°N to the northwest and 170°N to the southeast⁴⁹⁸. These coordinates are also measured by a manual compass from the centre of the respective courtyards.

Building name	Ulugh Beg Madrasa	Ulugh Beg Madrasa
Location	Samarqand	Bukhārā
Building period	1417-1420	1417-1420
Ruler	Ulugh Beg	Ulugh Beg
South-western <i>īwān</i>	256°N	-
North-western <i>īwān</i>	346°N	340°N
South-eastern <i>īwān</i>	170°N	170°N
North-eastern <i>īwān</i>	76°N	-
<i>Mihrāb</i>	258°N	250°N



Fig.767: Samarqand, Rigistān Square, Ulugh Beg Madrasa, view from the southeast, September 2006
Source: Author's photograph



Fig.768: Samarqand, Rigistān Square, Ulugh Beg Madrasa, view from the southeast, September 2006
Source: Author's photograph



Fig.769: Samarqand, Rigistān Square, Ulugh Beg Madrasa, view from the north, September 2006
Source: Author's photograph



Fig.770: Samarqand, Rigistān Square, Ulugh Beg Madrasa, view from the southwest, September 2006
Source: Author's photograph

⁴⁹⁸ In the plan of Golombek and Wilber: *Timurid Architecture*, 1988, Cat. No.4 the *īwāns* of the Bukhārā Madrasa (Fig.542) are ideally oriented along the cardinal points: entrance *īwān* to the south and back *īwān* to the north. However, according to my compass measurements from 2006, the *īwāns* deviate with about 20° from the cardinal points.



Fig.771: Samarqand, Rigistān Square, Ulugh Beg Madrasa, view from the north with a corner minaret, September 2006
Source: Author's photograph



Fig.772: Samarqand, Rigistān Square, Ulugh Beg Madrasa, detail of the main *kosh* entrance *īwān*, September 2006
Source: Author's photograph



Fig.773: Samarqand, Rigistān Square, Ulugh Beg Madrasa, detail of the backside of the entrance *īwān* as seen from the courtyard, September 2006
Source: Author's photograph



Fig.774: Samarqand, Rigistān Square, Ulugh Beg Madrasa, detail of the *īwān* of the sanctuary to the southwest, September 2006
Source: Author's photograph



Fig.775: Samarqand, Rigistān Square, Ulugh Beg Madrasa, detail of the northern *īwān*, September 2006
Source: Author's photograph



Fig.776: Samarqand, Rigistān Square, Ulugh Beg Madrasa, detail of southern *īwān*, September 2006
Source: Author's photograph



Fig.777: Samarqand, Rigistān Square, Ulugh Beg Madrasa, *mihrāb* in the main sanctuary, September 2006
Source: Author's photograph



Fig.778: Samarqand, Rigistān Square, Ulugh Beg Madrasa, *mihrāb* and interior of the main sanctuary, September 2006
Source: Author's photograph



Fig.779: Samarqand, Rigiṣtān Square, Ulugh Beg Madrasa, detail of the ceiling of the main sanctuary, September 2006
Source: Author's photograph



Fig.780: Samarqand, Rigiṣtān Square, Ulugh Beg Madrasa, interior of the main sanctuary, September 2006
Source: Author's photograph



Fig.781: Samarqand, Rigiṣtān Square, Ulugh Beg Madrasa, a praying shaykh, September 2006
Source: Author's photograph



Fig.782: Samarqand, Rigiṣtān Square, Shīr Dār Madrasa, the same praying shaykh, September 2006
Source: Author's photograph

It might be possible that both the Ulugh Beg and the Shīr Dār Madrasa in Samarqand were also open to Sufi scholars for discussions and meals. Even today, there are Sufi shaykhs (Fig.781,782) that pray in the madrasas and facilitate the spiritual connection between the worshippers and God. The shaykhs sit in the courtyard of the madrasa and perform prayers upon request. They pray at any time of the day and receive small donations from the grateful worshippers.

V.5.3.b Shīr Dār Madrasa (1619-1635/36 AD), Samarqand

The four-*īwān* Shīr Dār Madrasa (Fig.783) was built between 1619 and 1635/36 AD by the Astrarkhānid ruler, Alchin Yalantush Bahadur (died in 1655/56 AD). The site was very significant, since the Shīr Dār Madrasa was erected in the main axis of the Ulugh Beg Madrasa and the two form a perfect symmetrical *kosh* (Fig.759). The madrasa followed the same axial compositional solution as the Ulugh Beg *Khānaqāh*⁴⁹⁹ that was originally built across the Ulugh Beg Madrasa in 1424 AD. By the time of Yalantush in the 17th c. AD, the *khānaqāh* must have been already in ruins.



Fig.783: Samarqand, Rigistān Square, Shīr Dār Madrasa, main *kosh* façade, September 2006
Source: Author's photograph

Yalantush not only wanted to be associated with the Tīmūrid royal dynasty but he had also solid connections with the Sufi *Naqšbandiyya* order. Yalantush was the head of the Uzbek clan – *alchin* and he was “boosted into power”⁵⁰⁰ by the powerful *Naqšbandiyya* shaykh Khodja Hoshim, who, according to Arapov⁵⁰¹, was “enjoying the highest authority” in the Bukhārā khānate at the time of the first Astarkhānids. Yalantush became an independent ruler of Samarqand during the time of Imam Qulī Khān (1611-1642 AD) and ‘Abd al’Azīz

⁴⁹⁹ Please see Chapter V.4.1.

⁵⁰⁰ Arapov: *Samarkand*, 2004, p.46.

⁵⁰¹ *Ibid.*, p.46.

Khān (1645-1680 AD), the famous rulers of Bukhārā. Yalantush had the title of “*atalik*” (“taking the place of the father”), which was the highest title in the Bukhārā khānate. The Shīr Dār Madrasa was the most significant building by the Astarkhānids in Samarqand at that time and represented their ruling domain that included both Bukhārā and Samarqand. Thus, the Astarkhānids, in the face of Yalantush, claimed their rule both over the religious capital - Bukhārā and the imperial capital – Samarqand. Furthermore, the Shīr Dār Madrasa should be seen as a dynastic monument that represented the power aspirations of the Astarkhānids in the 17th c. AD and legitimised their connections to the Sufis. The madrasa also utilised the same building site of the Ulugh Beg *Khānaqāh*, which represented the relations of tolerance and acceptance between the Sufis and the Tīmūrids in the 15th c. AD.

The Shīr Dār Madrasa is most famous for the two solar tigers (Fig.784,785) that chase a deer each and for the male human faces (Fig.787) incorporated in the bodies of the tigers that adore the tympanum of the main entrance *īwān*. It is needless to say that the combination of zoomorphic and anthropomorphic images is prohibited on monuments of orthodox Islam. However, the Shīr Dār Madrasa (meaning “having/bearing tigers”) seems to take pride in these representations, since they occupy its main *kosh* façade to the Rigistān Square (Fig.783).

Arapov⁵⁰² tries to explain the existence of the solar tigers with connections to Shī'a Islam, since the tiger was one of the symbols of Ali (Fig.789). Further, the tomb of imam Muhammad ibn Dja'far is situated in the southern wing of the Shīr Dār Madrasa. This tomb is in turn related to the son and follower of the Shī'a imam Dja'far as-Sadik (702-765 AD), whose ideas had also an important influence on the development of early Sufism. The imam Dja'far as-Sadik was the sixth imam of Shī'a Islam⁵⁰³. He suggested four levels of Koranic perception: 1) exoteric – for the ordinary people, 2) esoteric – for the favoured few, 3) “touching of the grace” – for saints and 4) “realities” – for the prophets. It might be possible that the tomb of the imam Muhammad ibn Dja'far was the first sacred edifice erected at the site of the current Shīr Dār Madrasa. The tomb invariably attracted pilgrims and the site was undoubtedly venerated long before the construction of the Ulugh Beg *Khānaqāh* in 1424 AD. The relation to Sufism of the imam might partially explain the choice of Ulugh Beg to build a *khānaqāh*, encompassing the tomb of the Shī'a imam.

As part of the *architectural palimpsest*, the Shīr Dār Madrasa occupies one of the most representational and at the same time sacred sites in Samarqand. Most surely its

⁵⁰² Ibid., p.46.

⁵⁰³ He was poisoned in Medina, Saudi Arabia on the order of Caliph Al-Mansur and buried in Jannat al-Baqi.

construction utilised building material of the collapsed Ulugh Beg *Khānaqāh*. On the other hand, it is a bit dubious that Ulugh Beg would favour a Shī'a monument and choose it for the site of his *khānaqāh* and most important four-*īwān kosh* ensemble, since Tīmūr and the whole royal family were Sunnīs. The decision of Ulugh Beg might be related to his mother, Gauhar Shād, who also patronised the Shī'a holy city of Mashhad, where she constructed her most important mosque and madrasas, all of them having a four-*īwān* plan⁵⁰⁴.



Fig.784: Samarqand, Rigistān Square, Shīr Dār Madrasa, detail of the tigers with an anthropomorphic image on the tympanum of the main *kosh* façade, September 2006
Source: Author's photograph



Fig.785: Samarqand, Rigistān Square, Shīr Dār Madrasa, detail of the tiger with an anthropomorphic image to the right of the tympanum of the main *kosh* façade, September 2006
Source: Author's photograph

In my view, the zoomorphic and anthropomorphic representations on the Shīr Dār Madrasa do not have Islamic roots. The human faces (Fig.784,785,787) incorporated in the bodies of the tigers clearly show a strong Buddhist influence. Their eyes, elongated ears and noses bear similarities with for example the depiction of the Buddha's all seeing eyes on the *harmikā* of the Swayambhunath Stupa in Kathmandu, Nepal (Fig.786,788). The Swayambhunath Stupa dates back to the 5th c. AD and it is a holy site both for Buddhists and Hindus. The body of the stupa is seen as the body of Buddha, the *harmikā* represents the head of Buddha and the Nepalese draw his eyes on its all four sides to represent the eyes of the Adi Buddha⁵⁰⁵. This representation is based on the hierophany of the Cosmic Cross and the *Axis Mundi*. The stupa can be interpreted as the *Axis Mundi*. Further, the sunrays that stem from the anthropomorphic head on the Shīr Dār Madrasa can be also associated with the *jyotis*, the flame that burns on the Buddha's *usnīsa*, this is the flame that comes out of Buddha's head.

⁵⁰⁴ Since the current dissertation discusses mainly the monuments in present Uzbekistan, Mashhad is not covered here. It will be extremely interesting to measure the orientation of the *mihṛābs*, commissioned by Gauhar Shād and compare them to the Tīmūrid monuments in Transoxiana in the future.

⁵⁰⁵ Snodgrass: *The Stupa*, 1985, p.361.



Fig.786: Kathmandu, Buddha's all seeing eyes on the *harmika* of the Swayambhunath Stupa
Source: <http://www.heritage-images.com/Preview/PreviewPage.aspx?id=1638058&pricing=true&licenseType=RM>
[Accessed on 4 April, 2010]



Fig.787: Samarqand, Rigistān Square, Shīr Dār Madrasa, detail of the tiger with an anthropomorphic image on the tympanum of the main *kosh* façade, September 2006
Source: Author's photograph



Fig.788: Near Kathmandu, Swayambhunath Stupa, the largest stupa of Nepal from the 5th c. AD
Source: <http://www.spiridoc.nl/nepal.htm> [Accessed on 4 April, 2010]

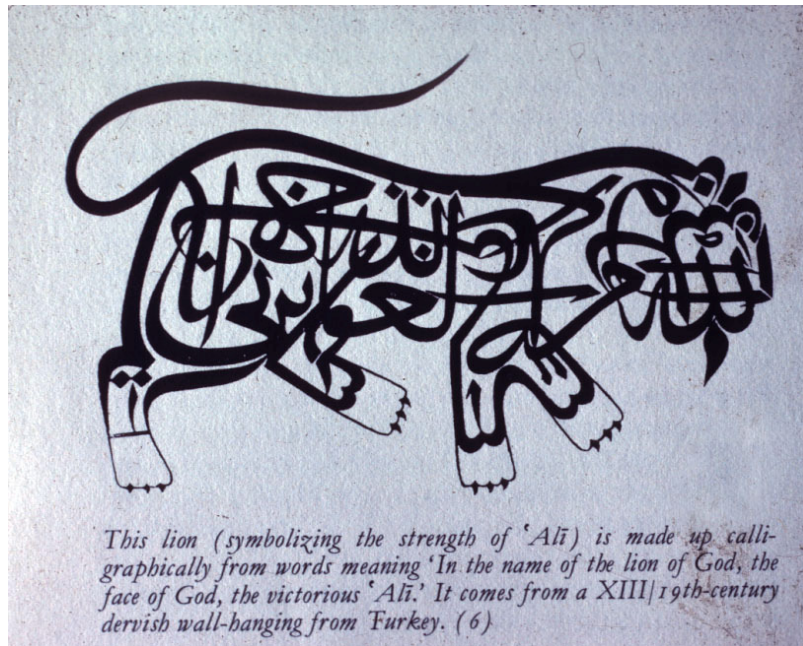


Fig.789: Lion, symbolising the strength of Ali. Although this depiction is attributed to a lion, I see more a tiger in it, the geometry of the head (no main) and the lineage of the calligraphy seem more appropriate for a tiger.
Source: <http://instruct1.cit.cornell.edu/lanar524/IslamicImages.html> [Accessed on 1 April 2010]

In China, the tiger (and not the lion!) is regarded as the king of all animals and is the utmost representation of power. Further, the tiger is associated with Tsai Shen Yeh, the Chinese God of Wealth, and this god is usually seen sitting on a tiger in Asian art. Of course, the tiger bears the symbolism of solar energy and this can also explain the sun rays on the male head on the tympanum of the Shīr Dār Madrasa. What is more, there are five tigers in the Chinese cosmology, four of them rule the seasons and the four directions of the world and the fifth one - the yellow tiger - symbolises the sun and rules all other tigers. These four plus one overruling tigers can be analysed with the hierophany of the Cosmic Cross (four corners of the world, four seasons, etc.) and the central (fifth) element that acts as the *Axis Mundi*. As part of the *hierophanic palimpsest*, the four cardinal points are also architecturally represented by the four *īwāns*. The centre of the four-*īwān* courtyard is the location of the fifth element, i.e. the *Axis Mundi* that initiates contact with the other two vertical worlds (the Underworld and the Upper world).

The zoomorphic depiction on the Shīr Dār Madrasa can be further explained by the fact, according to Clavijo⁵⁰⁶, that the figure of the lion⁵⁰⁷ and the sun are “the arms of the lord of Samarqand”. In 1404 Clavijo saw a representation of a lion and a sun on the doorway of the

⁵⁰⁶ Clavijo: *The Embassy*, 2005, p.124.

⁵⁰⁷ There seems to be a bit of confusion on the fact whether the representations were of a lion or of a tiger. Probably the two animal symbolism were interchanging; the lion is still regarded as the king of the animals in the west and the tiger is the king of the animals in the east.

four-*īwān*⁵⁰⁸ Āq Sarāy Palace in Shahr-i Sabz, the summer capital of Tīmūr. The “doorway” that Clavijo describes must have been an imposing courtyard *īwān*, leading to the main building of the palace, where Tīmūr welcomed the ambassadors. In the 17th c. AD Yalantush saw himself as the only omnipotent ruler of Samarqand, so he might have chosen the tiger and the sun also as his coat of arms. Such references to Tīmūr as the first great ruler of Samarqand are also quite plausible.

The two tigers on the tympanum of the entrance *īwān* might be also related to the depiction of two symmetrical dragons facing each other on the Tīmūrid shrine of Shaykh Jamal al-Din in Anau⁵⁰⁹, Turkmenistan from (1455-1456 AD), built on the site of a Parthian fortress. The whole complex in Anau must have been a three *īwān kosh* consisting of a mosque, a madrasa and a *khānaqāh*, with their entrance *īwāns* open to a courtyard; whereby the madrasa and the *khānaqāh* were situated across each other, similar to the Rīgistān *kosh* of Ulugh Beg. The *kosh* complex in Anau is almost identical with the *kosh* of the Rīgistān Square, the only differences being that the madrasa and the *khānaqāh* were domed structures and that the tomb of the shaykh was in front of the entrance *īwān* of the mosque. Golombek and Wilber attribute the situation of the three monuments in Anau to the funerary mosque complexes, however they do not use the term “*kosh*” at all. Unfortunately, the *kosh* in Anau was almost completely destroyed during earthquakes in 1948 and 1966 AD.

The Shīr Dār Madrasa follows the four-*īwān* plan of the Ulugh Beg Madrasa. The two storeys of *hujras* (Fig.793) also repeat the composition of the latter, although the second story of *hujras* of the Ulugh Beg Madrasa collapsed and has not been restored. The central *īwāns* of the internal courtyard’s northern, eastern and southern façades served as open classrooms. One of the major differences between the Shīr Dār Madrasa and the Ulugh Beg Madrasa is that there is no mosque in the Shīr Dār Madrasa, though a *ziyarat khaneh* or a hall of pious visit was accommodated. There must have been a water reservoir in the centre of the courtyard as suggested by Brandenburg⁵¹⁰. Nowadays, there is only a stone tile with stellar carvings in the centre of the cobbled courtyard (Fig.804,805).

The orientation of the *īwāns* of the Shīr Dār Madrasa follows approximately the orientation of the respective *kosh īwāns* of the Ulugh Beg Madrasa. The eastern courtyard *īwān* (Fig.793) is 76°N to the northeast (also 76°N of the Ulugh Beg Madrasa), the southern *īwān* (Fig.798,

⁵⁰⁸ The fact that the Āq Sarāy had four *īwāns* has not been fully verified. The four-*īwān* plan has been reconstructed from the description that Clavijo provides. Golombek and Wilber: *Timurid Architecture*, 1988, p.272 have also suggested that the palace had a four-*īwān* courtyard plan based on the same description by Clavijo. See also Chapter IV.8.1.

⁵⁰⁹ Golombek and Wilber: *Timurid Architecture*, 1988, pp.291-294.

⁵¹⁰ Brandenburg: *Samarkand*, 1966, p.173.

800) is 166°N to the southeast (170°N of the Ulugh Beg Madrasa), the western *īwān* (backside of the entrance *īwān*) (Fig.792) is 260°N to the southwest (256°N of the Ulugh Beg Madrasa) and the northern *īwān* (Fig.801-803) is 344°N to the northwest (compared to 346°N of the Ulugh Beg Madrasa).

Building name	Ulugh Beg Madrasa	Shīr Dār Madrasa
Location	Samarqand	Samarqand
Building period	1417-1420	1619-1636
Ruler	Ulugh Beg	Yalantush
South-western <i>īwān</i>	256°N	260°N
North-western <i>īwān</i>	346°N	344°N
South-eastern <i>īwān</i>	170°N	166°N
North-eastern <i>īwān</i>	76°N	76°N
<i>Qibla (mihrāb)</i>	258°N	No mosque
Direction to Mecca	239°46'39"	239°46'39"
Direction to Baghdad	257°51'12"	257°51'12"
Direction to Jerusalem	262°51'55"	262°51'55"



Fig.790: Samarqand, Rigistān Square, Shīr Dār Madrasa, exterior of the northern façade, September 2006

Source: Author's photograph



Fig.791: Samarqand, Rigistān Square, Shīr Dār Madrasa, exterior of the southern façade, September 2006

Source: Author's photograph



Fig.792: Samarqand, Rigistān Square, Shīr Dār Madrasa, courtyard view of the backside of the entrance *īwān* (western *īwān*), September 2006
Source: Author's photograph



Fig.793: Samarqand, Rigistān Square, Shīr Dār Madrasa, courtyard view of the eastern *īwān*, September 2006
Source: Author's photograph



Fig.794: Samarqand, Rigistān Square, Shīr Dār Madrasa, courtyard view of the *hujras* to the left of the western *īwān* and the dome, September 2006
Source: Author's photograph



Fig.795: Samarqand, Rigistān Square, Shīr Dār Madrasa, courtyard view of the *hujras* to the right of the western *īwān* and the dome, September 2006
Source: Author's photograph



Fig.796: Samarqand, Rigistān Square, Shīr Dār Madrasa, courtyard view of the southern *īwān* (to the left) and the western *īwān* (backside entrance *īwān*), September 2006
Source: Author's photograph



Fig.797: Samarqand, Rigistān Square, Shīr Dār Madrasa, courtyard view of the northern *īwān* (to the right) and the western *īwān* (backside entrance *īwān*), September 2006
Source: Author's photograph



Fig.798: Samarqand, Rigistān Square, Shīr Dār Madrasa, courtyard view of the southern façade, September 2006
Source: Author's photograph



Fig.799: Samarqand, Rigistān Square, Shīr Dār Madrasa, courtyard view of the northern façade, September 2006
Source: Author's photograph



Fig.800: Samarqand, Rigistān Square, Shīr Dār Madrasa, courtyard view of the southern *iwān*, September 2006
Source: Author's photograph



Fig.801: Samarqand, Rigistān Square, Shīr Dār Madrasa, courtyard view of the northern *iwān*, September 2006
Source: Author's photograph



Fig.802: Samarqand, Rigistān Square, Shīr Dār Madrasa, detail of the northern *iwān*, September 2006
Source: Author's photograph



Fig.803: Samarqand, Rigistān Square, Shīr Dār Madrasa, detail of the northern *iwān*, September 2006
Source: Author's photograph



Fig.804: Samarqand, Rigiṣṭān Square, Shīr Dār Madrasa, detail of the courtyard cobbles, September 2006
Source: Author's photograph



Fig.805: Samarqand, Rigiṣṭān Square, Shīr Dār Madrasa, detail of the centre of the courtyard, September 2006
Source: Author's photograph



Fig.806: Samarqand, Rigiṣṭān Square, Shīr Dār Madrasa, detail of the ceiling of a *hujra*, September 2006
Source: Author's photograph



Fig.807: Samarqand, Rigiṣṭān Square, Shīr Dār Madrasa, interior of a *hujra*, September 2006
Source: Author's photograph

A restored *hujra* (Fig.806-807) gives an impression of the students' life at the madrasa.

V.5.3.c Tilā Kārī Madrasa and Mosque (1646-1660 AD), Samarqand

The four-*īwān* Tilā Kārī Madrasa and Mosque (Fig.808) were commissioned a decade after the adjacent Shīr Dār Madrasa by the same patron Alchin Yalantush Bahadur in the period 1646-1660 AD. The Tilā Kārī is also part of the *architectural palimpsest*, since it was erected on the original site of the bazaar, built by Tīmūr's wife, Tuman-Aka in the 14th c. AD. Afterwards, the same site was used for the Mirzoi Caravansaray. However, when the Bībī Khānum Mosque (built in 1399 AD) collapsed and the Alik Kukeltash Mosque (1439-1440 AD) was also dismantled, Samarqand was in need of a new Congregational Mosque. The Tilā Kārī Mosque was erected to welcome the worshippers of Samarqand on Friday prayers in 1646-1660 AD.



Fig.808: Samarqand, Rīgistān Square, Tilā Kārī Madrasa, main *kosh* façade, September 2006
Source: Author's photograph

The name Tilā Kārī means “covered with gold” and refers to the ponderous gilded inner dome that has to be replenished every three years. The dome was restored in 1978 AD (Fig.818-820). The central chamber is richly gilt (Fig.819-826) in relief ornamentation (*kundal*) and embellished with glazed mosaic faience inlay (*kashi* after their production centre in Kashan) and incised stucco. Shades of blue and gold dominate the interior.

The main *kosh* façade (Fig.808) is different from the façades of the Ulugh Beg and Shīr Dār Madrasas, since it has four bays of two-storied arched niches on each side of the entrance *īwān*, similar, for example, to the *kosh* madrasas of ‘Abdallāh Khān in Bukhārā⁵¹¹, which have three bays of arched niches. The façade is also flanked with *guldasta* (corner towers) and not with minarets as is the case with the other two *kosh* madrasas on Rīgistān.

The three courtyard *īwāns* are lower than the fourth *īwān*, which is the entrance to the main domed sanctuary (Fig.817,818). Their orientation follows approximately the orientation of the *īwāns* of the other two Rīgistān *kosh* madrasas. The eastern *īwān* (Fig.816) is 74°N to the northeast; the southern *īwān* (Fig.811,812), which is the backside of the main *kosh* *īwān*, is 168°N to the southeast; the western *īwān* (Fig.817), which is the entrance to the main sanctuary is 258°N to the southwest and the northern *īwān* (Fig.813-815) is 344°N to the northwest. The *mihrāb* (Fig.821-823) is respectively 258°N to the southwest. Mecca is situated at 239°46'N to the southwest, which inevitably means that the *mihrāb* of the main Friday Mosque of Samarqand in the 17th c. AD was not oriented towards Mecca. Compared to the direction to Baghdad, the difference in the orientation is only 1°, Baghdad is situated 257°51'N to the southwest of Samarkand.

Building name	Tilā Kārī Madrasa
Location	Samarqand
Building period	1646-1660
Ruler	Yalantush
South-western <i>īwān</i>	258°N
North-western <i>īwān</i>	344°N
South-eastern <i>īwān</i>	168°N
North-eastern <i>īwān</i>	74°N
<i>Qibla</i> (<i>mihrāb</i>)	258°N

⁵¹¹ Please see Chapter V.3.2.

Direction to Mecca	239°46'39"
Direction to Baghdad	257°51'12"
Direction to Jerusalem	262°51'55"



Fig.809: Samarqand, Rigistān Square, Tilā Kārī Madrasa as seen from the east, September 2006
Source: Author's photograph

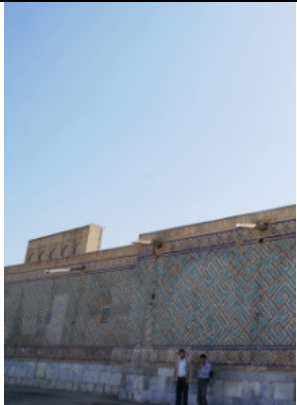


Fig.810: Samarqand, Rigistān Square, Tilā Kārī Madrasa as seen from the north, September 2006
Source: Author's photograph



Fig.811: Samarqand, Rigistān Square, Tilā Kārī Madrasa, courtyard view of the backside of the main entrance īwān, September 2006
Source: Author's photograph

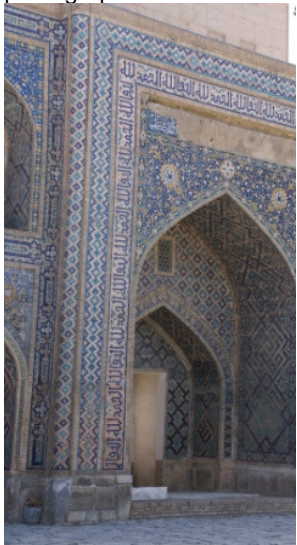


Fig.812: Samarqand, Rigistān Square, Tilā Kārī Madrasa, detail of the southern īwān (backside of the main entrance īwān), September 2006
Source: Author's photograph



Fig.813: Samarkand, Rigistān Square, Tilā Kārī Madrasa, detail of the northern *īwān* with adjacent arched cells, September 2006
Source: Author's photograph

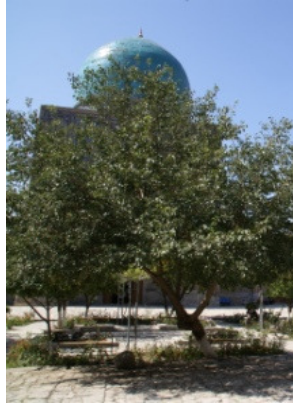


Fig.814: Samarkand, Rigistān Square, Tilā Kārī Madrasa, courtyard view of the northern and the western *īwān* (main sanctuary), September 2006
Source: Author's photograph

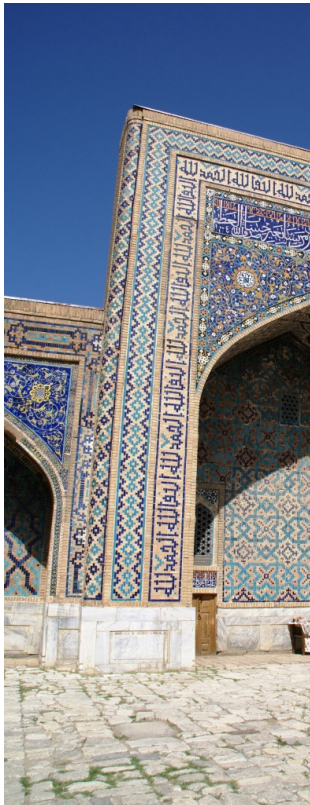


Fig.815: Samarkand, Rigistān Square, Tilā Kārī Madrasa, detail of the northern *īwān*, September 2006
Source: Author's photograph

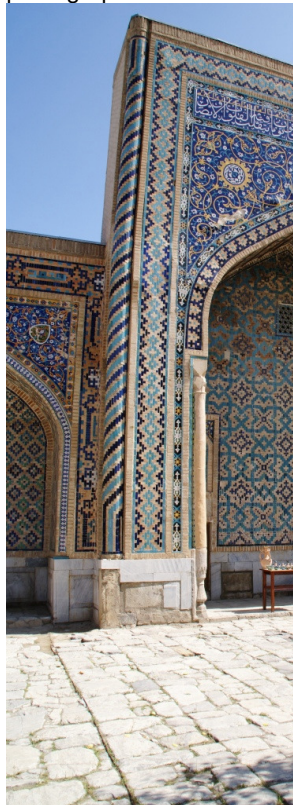


Fig.816: Samarkand, Rigistān Square, Tilā Kārī Madrasa, detail of the eastern *īwān*, September 2006
Source: Author's photograph



Fig.817: Samarkand, Rigistān Square, Tilā Kārī Madrasa, main mosque sanctuary, September 2006
Source: Author's photograph



Fig.818: Samarkand, Rigistān Square, Tilā Kārī Madrasa, detail of the mosque's dome, September 2006
Source: Author's photograph

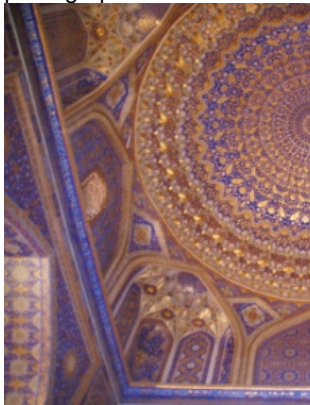


Fig.819: Samarkand, Rigistān Square, Tilā Kārī Madrasa, interior of the dome of its main mosque sanctuary, September 2006
Source: Author's photograph

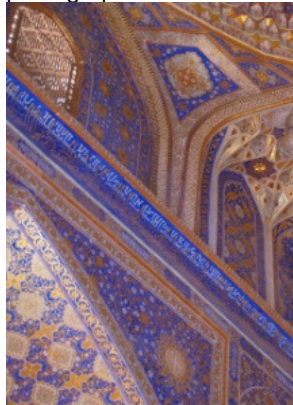


Fig.820: Samarkand, Rigistān Square, Tilā Kārī Madrasa, interior of the dome squinches of its main mosque sanctuary, September 2006
Source: Author's photograph



Fig.821: Samarkand, Rigistān Square, Tilā Kārī Madrasa, *iwān* with the *mihrāb* of its main mosque sanctuary, September 2006
Source: Author's photograph



Fig.822: Samarkand, Rigistān Square, Tilā Kārī Madrasa, detail of the *mihrāb* of its main mosque sanctuary, September 2006
Source: Author's photograph

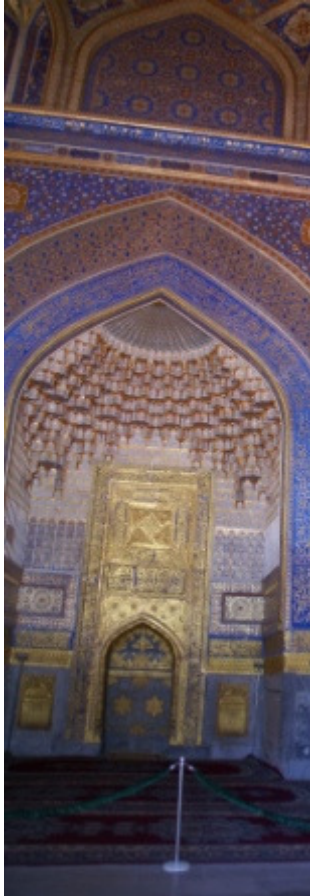


Fig.823: Samarkand, Rīgistān Square, Tilā Kārī Madrasa, *mihrāb* and *minbar* of the its mosque sanctuary, September 2006

Source: Author's photograph



Fig.824: Samarkand, Rīgistān Square, Tilā Kārī Madrasa, detail of the *minbar* of the its mosque sanctuary, September 2006

Source: Author's photograph

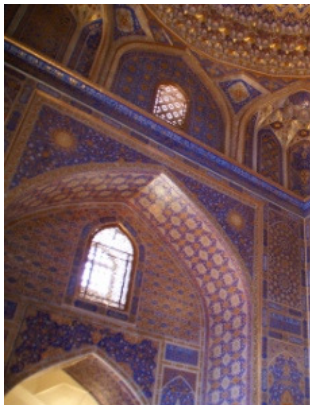


Fig.825: Samarkand, Rīgistān Square, Tilā Kārī Madrasa, interior arched recesses (*iwāns*) of its main mosque sanctuary, September 2006

Source: Author's photograph

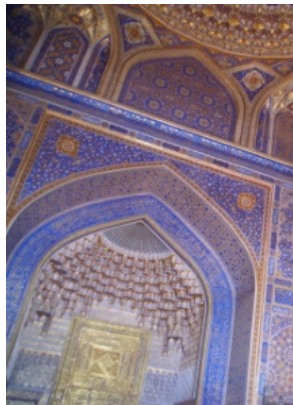


Fig.826: Samarkand, Rīgistān Square, Tilā Kārī Madrasa, interior arched recesses (*iwāns*) of its main mosque sanctuary, September 2006

Source: Author's photograph

It is worth mentioning that the current *kosh* lay out of Rīgīstān Square is graphically similar to the anthropomorphic lay out of Chinese temples and house mansions. In these compounds, the most sacred place is at the back and occupies the position of the head of the human body (Fig.827). In Rīgīstān, this most sacred position is represented by the Tilā Kārī Mosque with its dome above the main mosque sanctuary. The stretched arms of the anthropomorphic Chinese representation (Fig.827) have equal functions that can be related to the *kosh* ensemble of two madrasas, i.e. the Ulugh Beg and the Shīr Dār Madrasa. The anthropomorphic composition of the Rīgīstān Square and the Chinese temples places the Tīmūrid (i.e. Ulugh Beg Madrasa) and later Shaybānid (i.e. the *kosh* Haniyyah Madrasa versus Shaybānid Khān Madrasa, which did not survive) and Astarkhānid (i.e. Shīr Dār Madrasa and Tilā Kārī Mosque) buildings in Samarqand in the same *hierophanic palimpsest* relation to the much older Chinese temples. The human body, that defines the principles of the spatial orientation in the built environment, based on the hierophany of the Cosmic Cross, is universal and can be analysed within the long-cycle theme of anthropomorphic realities as proposed by Mekking⁵¹² and within the frame of the shorter-cycle theme of the Cosmic Cross and the *Axis Mundi*. The *hierophanic palimpsest* can be explained with the usage of the human body to define the lay out of temples and sacred compounds that spans across pagan and theophanic beliefs.

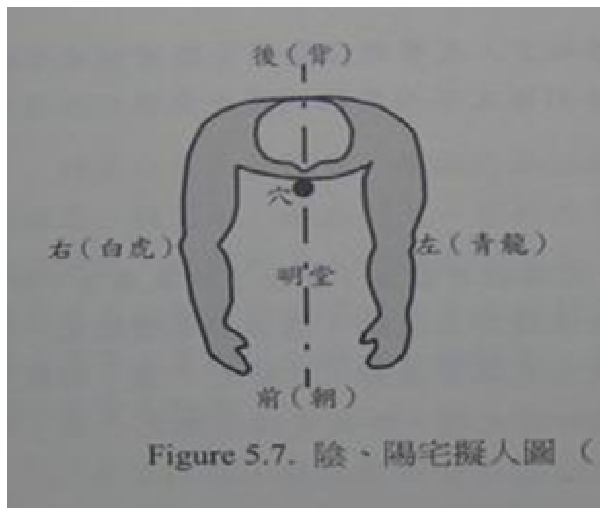


Fig.827: Anthropomorphic rendering of Chinese building tradition
Source: Courtesy of En-Yu Huang

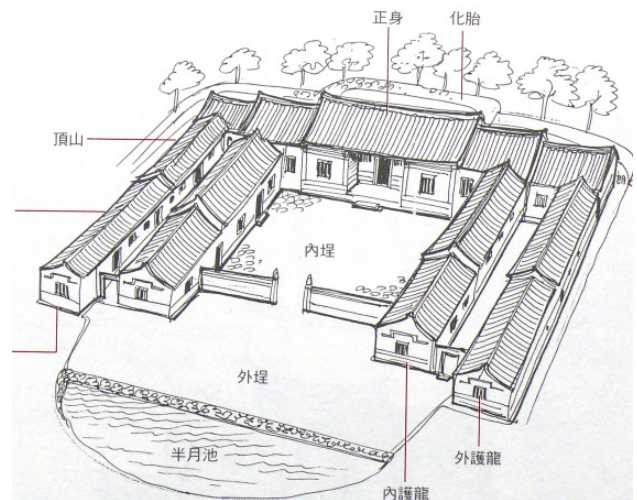


Fig.828: Traditional Chinese house based on an anthropomorphic plan
Source: Courtesy of En-Yu Huang

⁵¹² Mekking: *The Architectural Representation of Reality*, 2009, pp.23-51.

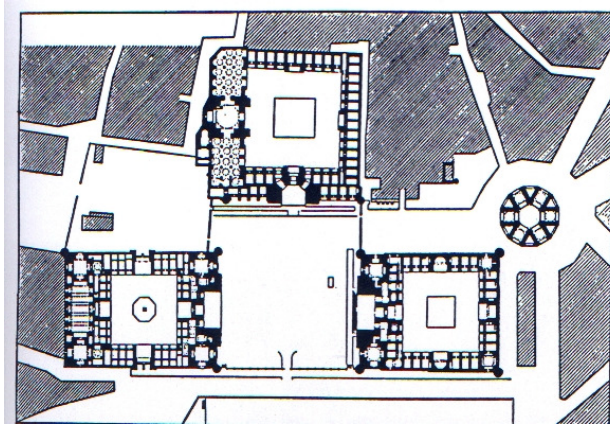


Fig.829: Samarqand, Rīgistān square, plan after Polupanov
Source: Brandenburg: *Samarkand*, 1966, p.159.

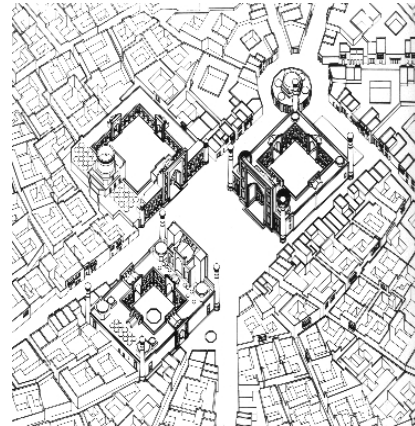


Fig.830: Samarqand, Rīgistān square, axonometric perspective after Herdeg
Source: Archnet [Accessed on 1 April 2010]

Another similarity is the existence of two *Axis Mundi* or two holy places (cosmic centres) within each four-*īwān* compound: 1) the centre of the courtyard, at the intersecting point of the two orthogonal axes that define the four-*īwāns* (based on the hierophany of the Cosmic Cross and with clear cosmological origin) and 2) the *mīhrāb*, presumably facing Mecca (based on the hierophany of the *Axis Mundi* and with (much later) theophanic origin).

Similarly, in the Chinese temple, there are also two cosmic centres: 1) the altar, situated at the centre of the courtyard and 2) the altar in the main body of the temple (compared to the anthropomorphic representation of the head of the human body).

We can summarise that there is a three-fold hierarchy of the hierophany of the *Axis Mundi* in the three-fold, four-*īwān* *kosh* square at Rīgistān (Fig.829,830): 1) the centre of the courtyard of each four-*īwān* building, 2) the *mīhrābs* in each mosque (of the Ulugh Beg Madrasa and of the Tilā Kārī Madrasa; there is no mosque at the Shīr Dār Madrasa), 3) the centre of the square, formed by the intersection of the orthogonal axes that define the main *kosh* entrance *īwāns* of the three madrasas. I regard the latter as the main *Axis Mundi* of the square. The *Axis Mundi*, created by the intersection of the *kosh* orthogonal axes and by the intersection of the orthogonal axes within each four-*īwān* courtyard, is the primary one. It is defined by geometrical principles that represent the ordering of the world as designed by God. The geometry of the *kosh* is opposed to the chaos of the unorganised urban space. The *Axis Mundi*, defined by the *mīhrābs* has a secondary importance since it is defined by the religious necessity of a praying niche to Mecca.

Firstly, the essence of the hierophany of the *Axis Mundi* is that it marks the centre of the world. The centre of the courtyard of the four-*īwān* compound becomes thus an architectural representation of the centre of the world. The *Axis Mundi*, i.e. the centre of the courtyard

created by the geometrical principles of orthogonal symmetry is older than any religious thought. Secondly, in the four-*īwān* compound, the religious Paradise setting of the four gates (i.e. four-*īwāns*) is associated with the ideal, well-organised world and it mirrors on a microcosmic scale the creation of the whole world by God, defined by the four cardinal points. This hierophany of Paradise is of a later origin than the *Axis Mundi*, but still precedes religious thought. Thirdly, the necessity of a *mihrāb*, prescribed by Islam is definitely rooted in the Islamic religious thought. In the four-*īwān* compound, the *mihrāb* is situated either in a separate sanctuary opposite the entrance or in an antechamber mosque. In the Islamic iconography, the *mihrāb* is seen as a gate to Paradise, which means that the human being is uplifted in a different realm (the realm of the divine world) while praying towards Mecca. Yet, in the current dissertation I have shown that none of the measured *mihrābs* face Mecca, they might face Baghdad or Jerusalem, since both cities are situated almost on the same geographical line as seen from Samarqand, Bukhārā or Khīva. The direction to Jerusalem can be explained with the early Medieval and pre-Islamic tradition of depicting Jerusalem as the centre of the world and the Islamic representation of the *miraj*, which presumably also takes place above Jerusalem. The direction to Baghdad can be explained with the ambition of Tīmūr to show his allegiance and descend from the caliphate in Baghdad, and stage him as the sole emperor, who encompasses the world, receiving divine blessing from the caliph.

Conclusion

The four-*ṭwān kosh* ensemble represents new political and spiritual realities as early as the 11th c. AD. The two and three-fold *kosh* ensembles formed by four-*ṭwān* buildings were erected to manifest the power aspirations of the ruling dynasties as late as the 19th AD in Khīva, Bukhārā and Samarqand.

The majority of the four-*ṭwān kosh* ensembles were built on sites, previously occupied by other sacred buildings. As such, the site was used in the frame of the *architectural palimpsest* and offered new rendering of religious views, both of orthodox Islam and Sufism. Some Sufi sites were reused for *kosh* buildings of orthodox Islam and vice versa. The fact that building material of one building was reused for another (*kosh*) building can be analysed within the framework of the *architectural palimpsest*.

The most characteristic feature of these two and three-fold, four-*ṭwān kosh* ensembles is that all of them contained a madrasa. These madrasas had considerable *waqfs* and were erected to represent the political power of the respective ruler of the Tīmūrid, Shaybānid or Astarkhānid dynasties⁵¹³. In some cases, the madrasas were paired with a *khānaqāh*, whereby the madrasa represented the views of orthodox Islam and the *khānaqāh* the views of the Sufi orders (most often of the *Naqšbandiyya* order). The choice of a madrasa and not a mosque can be further explained with the fact that even today the madrasas are open to Sufi shaykhs. Whereas, for example, Sufi praying and preaching would not be directly allowed in a mosque, the madrasa had or at least allowed for some more freedom for the spread of Sufi beliefs and access to Sufi shaykhs. Here, it should be also pointed out that the dynastic four-*ṭwān kosh khānaqāhs* were not directly meant for wandering Sufis but were also used by the ruling elite as lodgings and educational centres.

The *kosh* ensembles were erected on major urban axes that defined the market routes. These market routes were essential for the economies of the cities and were seen as the main representational arena of the political relations between the local ruling dynasties and the increasingly growing economic and political power of the Sufi shaykhs.

The intersection of the longitudinal axis of the two-fold *kosh* ensembles and the axis of the trading routes formed a new urban *Axis Mundi*. This new *Axis Mundi* transferred the urban

⁵¹³ The only examples analysed in this dissertation.

importance from the old structures defined by the citadel, to the new structures, e.g. the *kosh* ensembles, that developed along the new trading routes. The citadel as an isolated domain of the ruler was substituted by the ruler, joining forces with the Sufi shaykhs, and erecting *kosh* ensembles along commercial junctions.

The architectural tools of symmetry and geometry were developed to perfection in the four-*ṭwān kosh* ensembles. The majority of the *kosh* façades are symmetrical along the main longitudinal axis of the *kosh*. The organisation of the cosmos by geometrical means such as the orthogonal four *ṭwāns* can be analysed as a representation of divine order. In this, the ordered and well-structured cosmos (of the four-*ṭwān* compound) was opposed to the chaos (of the desert or the unregulated trading routes). Exactly the creation of order in the chaos was seen as a task of God for the ruler to perfect the world; the ruler being God's representative on earth. As such, the creation of orthogonal cities (on a macrocosmic scale) and the creation of symmetrical four-*ṭwān kosh* ensembles (on a microcosmic scale) can be also interpreted as a representation of divine order. Thus, the patron identifies him/herself with God and the building project is seen as God's creation on Earth. The orthogonal symmetry of the four-*ṭwān kosh* ensembles evokes divine imagery of the ideal topography, associated with Paradise. The hierophany of Paradise is further developed in an iconographic way by numerous representations of Paradise birds, unicorns, green landscapes and effluent water supplies. In this, the desolate landscape of the desert (regarded as chaos) is opposed to the ordered, symmetrical landscape of the four-*ṭwān kosh* (regarded as divine order) with abundant water in the central water reservoir.

No man power and means were spared for the decoration of the main *kosh* façades. Contrary to all rules, prescribed by orthodox Islam, some *kosh* façades were decorated with anthropomorphic and zoomorphic images with clear Buddhist and pagan origin.

The majority of the four-*ṭwān kosh* madrasas had a mosque, situated either in a separate sanctuary in the courtyard or alongside the main *kosh* entrance in the antechamber. None of the measured *mihrābs* in these madrasa-mosques and none of the *mihrābs* in the traditional mosques are directed towards Mecca. The *mihrābs* have been measured with a manual compass. A hypothesis has been proposed that some of the *mihrābs* are oriented towards Baghdad as the seat of the 'Abbāsid Caliphate. However, in order to verify or falsify this hypothesis, the respective *mihrābs* have to be (re)measured with a digital compass in the future.

Major Conclusions

The aim of the current dissertation is to analyse the four-*Ṭwān* plan as a representation of Paradise and dynastic power aspirations. For the first time, the four-*Ṭwān* plan has been discussed in terms of the hierophanic and *architectural palimpsest*. This approach offers comparative analysis encompassing the current theories that regard the four-*Ṭwān* plan only as a strictly Islamic phenomenon. The first main conclusion of the dissertation is that the origin and the essence of the four-*Ṭwān* plan is hierophanic and transcends religious thought.

The four-*Ṭwān* plan is based on a geometrical grid, very similar to the grid of the mandala. This relates automatically the four-*Ṭwān* plan to Buddhist, Hindu and Jain sacred monuments also based on the mandala. All these settings have cross-axial design based on the hierophanies of the Cosmic Cross and the *Axis Mundi*.

The schematic comparisons between the Hindu temple and the Buddhist stupa with the four-*Ṭwān* plan show that the basic compositional features such as the orientation along two orthogonal axes, situation of the sanctuary in their crossing point, four massive gates, etc. are similar. Although there is not a direct historical link between the two architectural settings, the hierophanies of the *Axis Mundi* and the Cosmic Cross, of the navel of the world, of the holy mountain, etc. are basically the same. They represent two architectural traditions based on the same anthropomorphic and physiomorphic beliefs and cosmological schemes.

In order to exemplify further the orthogonal sacred nature of the geometry of the four-*Ṭwān* plan, several Islamic imperial capitals have been analysed as well. All these cities have a rectangular (in the case of Harāt and Parthian Marv, a square) urban plan, divided into four quadrants by four main roads stretching between four gates in the middle of each city wall. The roads and the position of the gates are oriented along the ideal cardinal points. The streets are defined also by a geometrical grid and sometimes follow the natural flow of local rivers or canals, thus reinforcing the imagery of Paradise and the hierophany of the Cosmic Cross.

These cities are also covered in the dissertation because they contain a cross-axial four-*Ṭwān* compound at their urban centre (a four-*Ṭwān* palace, a four-*Ṭwān* mosque or a four-*Ṭwān* madrasa), which reinforces the imagery as the centre of the world. The capital as the seat of the ruler, from whom divine power emanates, is based on an orthogonal grid which can be analysed as a microcosmic representation of the macrocosmic world. Staging the ruler at its centre reinforces the divine origin of political and royal power.

For any future references, it will be interesting to analyse all major Tīmūrid cities and compile a comprehensive study covering their urban plans, any four-*īwān* complexes and the orientation of their *qiblas* and respective *mihrābs*. The current study is limited only to several cities and monuments on the territory of present-day Uzbekistan. That is why, due to time and format restrictions the current dissertation cannot cover all these examples.

The aim of this dissertation is to analyse the four-*īwān* plan as a representation of Paradise and dynastic power aspirations. The four-*īwān kosh* ensemble (two four-*īwān* compounds built across each other) represents new political and spiritual realities as early as the 11th c. AD. The two and three-fold *kosh* ensembles formed by four-*īwān* buildings were erected to manifest the power aspirations of the ruling dynasties as late as the 19th in Khīva, Bukhārā and Samarqand.

The *kosh* ensembles were erected on major urban axes that defined the market routes. These market routes were essential for the economies of the cities and were seen as the main representational arena of the political relations between local ruling dynasties and the growing economic and political power of the Sufi shaykhs.

The intersection of the longitudinal axis of the two-fold *kosh* ensembles and the axis of the trading routes formed a new urban *Axis Mundi*. This new *Axis Mundi* transferred the urban importance from the old palatial structures, defined by the citadel, to the new non-palatial structures, e.g. the *kosh* ensembles, that developed along the new trading routes. The citadel as an isolated domain of the ruler was substituted by the *kosh* ensembles erected by the ruler along commercial junctions, joining forces with the Sufi shaykhs in most of the cases. The rulers did not build isolated palaces (e.g. in the citadel) anymore; instead they built pious religious institutions such as mosques, madrasas and *khānaqāhs* in the thriving economic centres of the new growing cities. These non-palatial compounds reflected the shifts of power from the old image of the ruler as a sole representative of God on earth to the pious ruler who needed the support of the multi-cultured population in order to avoid unrest, as well as the support of the economically influential Sufi shaykhs in order to secure the booming trade and its revenues and the support of the '*ulamā*' in order to promote their political ideology (including Sunnī revival). Here it should be noted that Sufism and orthodox Islam coexisted peacefully and contradictory affiliations were quite common, given the close connection of '*ulamā*' to Sufism.

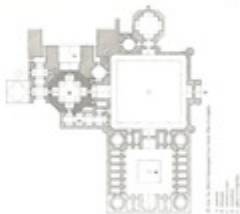
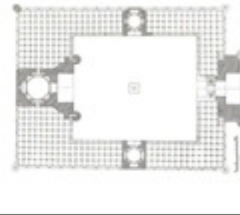
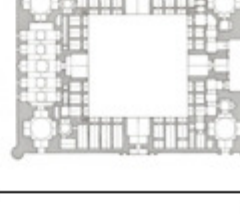
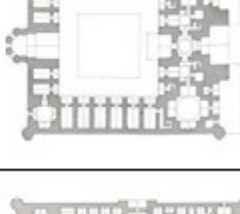
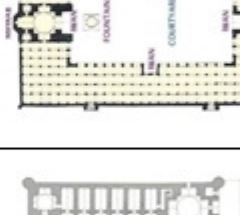
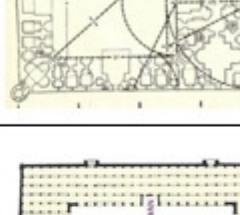
An attempt has been made to determine the orientation of the *qiblas* of the major four-*īwān* compounds in the cities of Samarqand and Bukhārā. For this reason, the respective *mihrābs* were measured with a hand compass in the autumn of 2006.

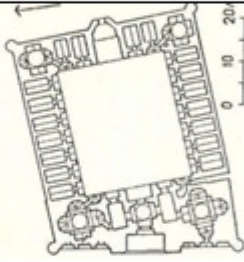
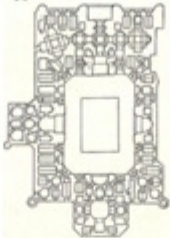
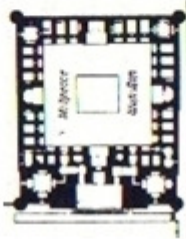
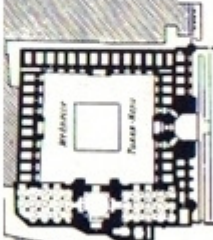
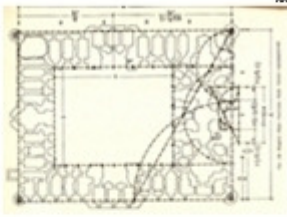
The compass results lead to the major find of this dissertation, namely, that none of the Tīmūrid *qiblas* is oriented towards Mecca. This can be explained with the political context of the Tīmūrid empire. A hypothesis has been proposed that the *qiblas* of the Bībī Khānum Mosque (the major monument erected by Tīmūr) and of the Ulugh Beg Madrasa (the major monument erected by Ulugh Beg) in Samarqand could be oriented towards Baghdad. Such orientation would be in line with Tīmūr's attempt to affiliate his empire to the 'Abbāsīd Caliphate in Baghdad. However, in order to verify or falsify this hypothesis, all *mihṛābs* have to be re-measured by a digital compass in the future. Other key four-*īwān* compounds have to be explored and measured, in particular in the capitals of Harāt, Baghdad and Cairo and in the earliest four-*īwān* mosques in Iran. Analysing their orientation would shed more light on the political affiliations of the respective rulers and on their dynastic aspirations.

Further, the latter two compounds in Samarqand have geographical orientation almost as similar as the orientation of the Ka'ba in Mecca. By copying the orientation of the Ka'ba, the Bībī Khānum Mosque and the Ulugh Beg Madrasa in Samarqand acquire the status of *Axis Mundi*, i.e. a cosmic centre of the Tīmūrid empire. The empire, in turn, gains the status of the most prominent Islamic empire of the 15th c. AD with the capital of Samarqand, surrounded by villages bearing the names of former glorious Islamic capitals: Damascus, Baghdad, Cairo, and Sultaniya.

The late 14th c. AD innovation of situating the main mosque sanctuary along the main longitudinal axis of the four-*īwān* mosques and madrasas can be also explained with the attempt to rotate the whole building similar to the orientation of the Ka'ba. The *qibla* in the southwest is thus situated "as closest" to Mecca and is parallel to the respective eastern wall of the Ka'ba.

The main aim of the dissertation, then, is to show that the four-*īwān* plan was used to represent political agendas and imperial ambitions. Its hierophanic essence has been utilised to relate to the glorious imperial past by re-evoking the imagery of Paradise in a four-*īwān* setting. The ruler professes his omnipotent divine power as a commissioner of a pious building based on a paradisiacal plan, situated at the centre of an orthogonal imperial capital, representing in turn the totality of the macrocosmic world on a microcosmic scale.

Annex-I:-Qibla-Orientations-in-Samarqand-and-Bukhārā						
Building-name#	Gūr-i-Amīr- Mausoleum#	Bībī-Khānum# Mosque#	Ulugh-Beg-# Madrāsā#	Ulugh-Beg-# Madrāsā#	Kalyān-# Mosque#	Mīr-i-'Arab-# Madrāsā#
Location#	Samarqand#	Samarqand#	Samarqand#	Bukhārā#	Bukhārā#	Bukhārā#
Building period#	1400-1404#	1398-1405#	1417-1420#	1417-1420#	Completed-1514#	1535-1536#
Ruler#	Timūr#	Timūr#	Ulugh-Beg#	Ulugh-Beg#	Completed-under- 'Abdallāh-Khān-#	'Abdallāh-Khān-#
South-western-īwān#	252°N#	260°N#	256°N#	-#	260°N#	262°N#
North-western-īwān#	338°N#	350°N#	346°N#	340°N#	350°N#	350°N#
South-eastern-īwān#	160°N#	170°N#	170°N#	170°N#	170°N#	170°N#
North-eastern-īwān#	60°N#	70°N#	76°N#	-#	70°N#	70°N#
Qibla-(mihrāb)#	252°N#	260°N#	258°N#	250°N#	258°N#	No-mosque#
Direction-to-Mecca#	239°46'39" #	239°46'39" #	239°46'39" #	236°02'40" #	236°02'40" #	236°02'40" #
Direction-to-Baghdad#	257°51'12" #	257°51'12" #	257°51'12" #	254°26'31" #	254°26'31" #	254°26'31" #
Direction-to-Jerusalem#	262°51'55" #	262°51'55" #	262°51'55" #	260°23'56" #	260°23'56" #	260°23'56" #
Plan-#						

Annex I: Qibla-Orientations in Samarqand and Bukhārā					
Building-name	Madār-i-Khān-ī Madrasa	'Abdallāh-Khān-ī Madrasa	Shūr-Dār-ī Madrasa	Tilā-Kār-ī Madrasa	'Abd-al-'Azīz-Khān-Madrasa
Location	Bukhārā	Bukhārā	Samarqand	Samarqand	Bukhārā
Building period	1566-1567	1588-1590	1619-1636	1646-1660	1651-1652
Ruler	Abdallāh-Khān II	Abdallāh-Khān II	Yalantush	Yalantush	'Abd-al-'Azīz-Khān
South-western Īwān	-	209°N	260°N	258°N	257°N
North-western Īwān	283°N	299°N	344°N	344°N	324°N
South-eastern Īwān	118°N	114°N	166°N	168°N	160°N
North-eastern Īwān	-	21°N	76°N	74°N	68°N
Qibla-ī-mihrāb	283°N	275°N	No-mosque	258°N	260° (summer-mosque) / 250° (winter-mosque)
Direction to Mecca	236°0'24.0"	236°0'24.0"	239°46'39"	239°46'39"	236°0'24.0"
Direction to Baghdad	254°26'31"	254°26'31"	257°51'12"	257°51'12"	254°26'31"
Direction to Jerusalem	260°23'56"	260°23'56"	262°51'55"	262°51'55"	260°23'56"
Plan					

Selected Bibliography

- Agni Puranam*, AD 8th-11th c. A Prose English Translation by Manmatha Nath Dutt Shastri. Varanasi: The Chowkhamba Sanskrit Series Office, 1967.
- Akhvlediani, E. and Khimshiashvili, K.: "Impact of the Achaemenian on Iberian Architecture". In *CAIS, the Circle of Ancient Iranian Studies*. Electronic edition: http://www.cais-soas.com/CAIS/Architecture/achamenid_architecture_georgia.htm [Accessed on 1 April 2010]
- Akkach, S.: *Cosmology and Architecture in Premodern Islam*. New York: State University of New York Press, 2005.
- Allan, J.W.; Creswell, K.A.C.: *A Short Account of Early Muslim Architecture*. Aldershot: Scolar Press, 1989.
- Allen, T.: *Five Essays on Islamic Art*. Solipsist Press, 1988
- Timurid Herat*. Wiesbaden: Dr. Ludwig Reichert Verlag, 1983.
- Ananth, S.: *Vastu. A path to harmonious living*. New Delhi: Lustre Press, 2001.
- Arapov, A.V.: *Samarkand*. Tashkent, 2004.
- Masterpieces of Central Asia Samarkand*. Tashkent: San'at, 2004.
- "Buddhist Mandalas and Symbolics of the Samanids". Electronic edition: http://www.sanat.orexca.com/eng/4-02/history_art4.shtml [Accessed on 1 April 2009]
- Architecture of Manasara*. Translated from original Sanskrit. Manasara Series: Volume IV. Prasanna Kumar Acharya. New Delhi: Munshiram Manoharlal Publishers Pvt. Ltd., 1934.
- Ardalan, N. and Bakhtiar, L.: *The Sense of Unity. The Sufi Tradition in Persian Architecture*. Chicago: Chicago University Press, 1973.
- Babur: *The Baburnama, Memoirs of Babur, Prince and Emperor*. Translated, edited and annotated by W. M. Thackston. New York: The Modern Library, 2002.
- Bacharach, J.: "Administrative Complexes, Palaces, and Citadels: Changes in the Loci of
- Baranov, N.V. et al: *General History of Architecture, Volume 8, Architecture of the Mediterranean, Africa and Asia 6th-19th c*. Moscow: Publishing House of Architecture, 1969. (Russian edition)
- Barthold, V.V.: *Four Studies on the History of Central Asia*. Leiden: Brill, 1958.
- Begley, W.E.: "The Myth of the Taj Mahal and a New Theory of Its Symbolic Meaning". In *The Art Bulletin*, 61, 1979, pp.7-37.
- Begley, W.E.; Desai, Z. A.: *Taj Mahal. The Illuminated Tomb*. Cambridge: MIT Press, 1989.
- Bianca, St.: *Urban Form in the Arab World. Past and Present*. London: Thames and Hudson, 2000.
- Blair, S. and Bloom, J.: *The Art and Architecture of Islam 1250-1800*. New Haven [Conn.]: Yale University Press, 1994.

- Bolshakov, O.F.: "Two waq of Ibrahim Tamghach Khan in Samarqand". In *Countries and people of the East*, 1971. (Russian edition)
- Borodina, I.: *Central Asia. Architectural Monuments from the 9th -19th c.* Photo album. Moscow: Science Publishing House, 1985. (Russian edition)
- Bosworth, C.E.: *The Islamic Dynasties*. Islamic Surveys 5. Edinburgh: University Press, 1967.
- Brandenburg, D.: *Die Madrasa. Ursprung, Entwicklung, Ausbreitung und künstlerische Gestaltung der islamischen Moschee-Hochschule*. Graz, 1978.
- Samarkand. Studien zur islamischen Baukunst in Uzbekistan Zentralasien*. Berlin: Bruno Hessling Verlag, 1966.
- Bravmann, M.M.: *The Spiritual Background of Early Islam. Studies in Ancient Arab Concepts*. Leiden: E. J. Brill, 1972.
- Brookes, J.: *Gardens of Paradise: The History and Design of the Great Islamic Gardens*. New York, 1987.
- Bulatov, M.C.: *Geometrical harmonisation in the architecture of Central Asia 9th-15th c.* Moscow: Science publishing house, 1978. (Russian edition)
- Bulatova, V.: *Samarqand: A Museum in the Open*. Tashkent: Gafur Gulyam, 1986. (Russian edition)
- Bunce, F.W.: *The Iconography of Architectural Plans. A Study of the Influence of Buddhism and Hinduism on Plans of South and Southeast Asia*. New Delhi: D.K. Printworld (p) Ltd., 2002.
- Bussagli, M.: *Oriental Architecture*, Volume 1. Milan: Electa, 1981.
- Butterworth, E.A.S.: *The Tree at the Navel of the Earth*. Berlin: Walter de Gruyter & Co., 1970.
- Chevalier, J. and Gheerbrant, A.: *Dictionnaire des symboles*. Paris: Laffont S.A., 1991.
- Chittick, W.C.: *The Sufi Path of Knowledge. Ibn al-ʿArabi's Metaphysics of Imagination*. New York: State University of New York Press, 1989.
- Clavijo, R.G.: *Narrative of the Embassy of Ruy González de Clavijo to the Court of Timour at Samarcand A.D. 1403-6*. Elibron Classics. Replica edition of the facsimile edition published in 1859 by the Hakluyt Society, 2005, London.
- Compareti, M.: "Traces of Buddhist Art in Sodgia". In *Sino-Platonic Papers*. Number 181. Philadelphia: University of Pennsylvania, 2008. Electronic edition: http://www.sino-platonic.org/complete/spp181_buddhist_art_sogdiana.pdf [Accessed on 1 April 2010]
- Corbin, H.: *Creative Imagination in the Sufism of Ibn-ʿArabi*. Bollingen Series XCI, Princeton: Princeton University Press, 1969.

Creswell, K.A.C.: *The Muslim Architecture of Egypt*. 2 vols. New York, 1979.

Early Muslim Architecture. 2 vols. 2nd ed. Oxford, 1969.

"The Origin of the Cruciform Plan of Cairene Madrasas". In *Bulletin de l'Institut français d'archéologie orientale*, XXI, 1922.

Critchlow, K.: *Islamic Patterns. An Analytical and Cosmological Approach*. London: Thames and Hudson, 1976.

Coupe, L.: *Myth*. London: Routledge, 1997.

Crowe, S.; Haywood, S.; Jellicoe, S.; Patterson, G.: *The Gardens of Mughul India. A history and a guide*. London: Thames and Hudson, 1972.

Davies, J.G.: *Temples, Churches and Mosques. A Guide to the Appreciation of Religious Architecture*. Oxford: Basil Blackwell, 1982.

Delumeau, J.: *History of Paradise. The Garden of Eden in Myth & Tradition*. Chicago: University of Illinois Press, 2000.

Deva, K.: *Temples of India*. Volume I. New Delhi: Aryan Books International, 1995.

Dickie, J.: "The Mughal Garden: Gateway to Paradise". In *Muqarnas: An Annual on Islamic Art and Architecture*, ed. O. Grabar, Volume III. Leiden: E.J. Brill, 1985, pp.128-137.

"Garden and Cemetery in Sinan's Istanbul". In *Environmental Design* 12, 1987, pp.70-85.

Diez, E.: *Die Kunst der islamischen Völker*. Berlin-Neubabelsberg: Akademische Verlagsgesellschaft Athenaion m.b.h., 1915.

Endres, F.C.; Schimmel, A.: *Das Mysterium der Zahl. Zahlensymbolik im Kulturvergleich*, 7.Auflage. Muenchen: Eugen Diedrichs Verlag, 1993.

Edrmann, K.: *Die Kunst Irans zur Zeit der Sasaniden*. Berlin: Florian Kupferberg Verlag, 1943.

Edwardes, M.: *Indian Temples and Palaces. Great Buildings of the World*. Feltham: The Hamlyn Publishing Group Limited, 1969.

Eliade, M.: *Cosmos and History: The Myth of the Eternal Return*. New York: Harper, 1959.

The Myth of the Eternal Return: Or, Cosmos and History. Princeton: Princeton University Press, 1971.

Esmeijer, A.C.: *Divina Quaternitas. A preliminary study in the method and application of visual exegesis*. Assen: Van Gorcum, 1978

Ettinghausen, R.; Grabar, O. and Jenkins-Madina, M.: *Islamic Art and Architecture 650-1250*. Yale: Yale University Press, 2001.

Finster, B.: *Frühe iranische Moscheen. Vom Beginn des Islam bis zur Zeit Salgūqischer Herrschaft*. Archäologische Mitteilungen aus Iran, Ergänzungsband 19. Berlin: Verlag von Dietrich Reimer in Berlin, 1994.

- Fischel, W.J.: *Ibn Khaldūn and Tamerlane. Their historic meeting in Damascus, 1401 A.D. (803 A.H.): A Study Based on Arabic Manuscripts of Ibn Khaldūn's "Autobiography," with a Translation into English, and a Commentary.* Berkeley: University of California Press, 1952.
- Frishman, M. and Khan, H.-U.: *The Mosque: History, Architectural Development and Regional Diversity.* New York, 1994.
- Frye, R.: "The Iranicization of Islam". In *Islamic Iran and Central Asia (7th-12th centuries)*. London: Variorum reprints, 1979.
- Gangler, A.; Gaube, H. and Petruccioli, A.: *Bukhara. The Eastern Dome of Islam*, Stuttgart/London: Edition Axel Menges, 2004.
- Godard, A.: *L'Art de l'Iran*. Paris: Arthaud, 1962. (German translation: *Die Kunst des Iran*, 1964).
- "L'Origine de la madrasa, de la mosquée et du caravansérail à quatre īwāns." In *Ars Islamica*, XV-XVI, 1951, pp.1-9.
- Golombek, L.: "The Gardens of Timur: New Perspectives". In *Muqarnas: An Annual on Islamic Art and Architecture*. Oleg Grabar (ed), Volume 12. Leiden: E.J. Brill, 1995, pp.137-147.
- "Discourses of an Imaginary Arts Council in Fifteenth-Century Iran". In *Timurid Art and Culture: Iran and Central Asia in the Fifteenth Century*, ed. L. Golombek and M. Subtelny. Leiden: E.J. Brill, 1992.
- The Timurid Shrine at Gazur Gah: An Iconographical Interpretation of Architecture.* University of Michigan. 1968.
- Golombek, L. and Wilber, D.: *The Timurid Architecture of Iran and Turan*. Princeton: Princeton University Press, 1988.
- Goodwin, G.: *A History of Ottoman Architecture*. London: Thames and Hudson, 1971.
- Grabar, O.: "The Architecture of Middle Eastern Cities: The Case of the Mosque," in *Middle Eastern Cities in Comparative Analysis*, ed. Ira Lapidus. University of California Press, 1969, pp.26-46.
- The Formation of Islamic Art*. New Haven: Yale University Press, 2nd ed., 1987.
- The Great Mosque of Isfahān*. New York: New York University Press, 1990.
- Grube, E.J.: *Welt des Islam. Architektur, Keramik, Malerei, Teppiche, Metallarbeiten, Schnitzkunst*. Gütersloh: Bertelsmann Kunstverlag Reinland Mohn, 1968.
- Havell, E.B.: *Indian Architecture. Its Psychology, Structure, and History from the First Muhammadan Invasion to the Present Day*. London: John Murray, Albemarle Street, W., 1913.
- Herdeg, K.: *Formal Structure in Islamic Architecture of Iran and Turkistan*. New York: Rizzoli International Publications, 1990.
- Herzfeld, E.: "Damascus". In *Ars Islamica* 9 and 10, 1942 and 1943.
- Hoag, J.D.: *Islamic Architecture*. New York: Harry N. Abrams, 1977.
- Hillenbrand, R.: *Islamic Architecture: Form, Function and Meaning*. Edinburgh : Edinburgh University Press, 1994.

- Höfer, O.: *Kultbauten des Islam*. Leipzig: Wilhelm Goldmann Verlag, 1922.
- Huang, En-Yu: "The Architectural Representation of the Taboo: Toilet Taboos as Guardians of Old Tawanese Representations of Family Life". In *The Global Built Environment as a Representation of Realities*, ed. A.J.J. Mekking and E. Roose. Pallas Publications, 2009, pp.141-173.
- Ibn 'Arabī: *The Universal Tree and the Four Birds*. Translated by A. Jaffray. Oxford: Anqa Publishing, 2006.
- Irwin, R.: *Islamic Art in Context. Art, Architecture, and the Literary World*. New York: Perspectives, Harry N. Abrams, Inc., Publishers, 1997.
- Jachimowicz, E.: "Islamic Cosmology". In *Ancient Cosmologies*, ed. C. Blacker and M. Loewe. London: George Allen & Unwin Ltd, 1975, pp.143-171.
- Jellicoe, G. and Jellicoe, S.: *The Landscape of Man*. London: Thames and Hudson, 1975.
- Joolaei, A.G.: *Islamische Architektur in der Stadt Meschhed-Tus (Iran) mit besonderer Berücksichtigung des Astane Ghods (Imam-Reza-Heiligtum)*. Dissertation an der Rheinischen Friedrich-Wilhelms-Universität Bonn. Bonn, 1977.
- Karamatov, X.: Termez. *Ancient and New Town at the Crossroad of Great Roads*. Tashkent: Shark, 2001. (Russian edition)
- Khakimov, Z.: *The architectural masterpieces of the emerald city*, 2002. Electronic edition: http://www.sanat.orexca.com/eng/1-02/history_art3.shtml [Accessed on 1 April 2008]
- Kheiri, S.: *Islamische Architektur*. Orbis Pictus/Weltkunst-Bücherei. Herausgegeben von Paul Westheim, Band 14. Berlin: Verlag Ernst Wasmuth A.G.
- King, D.A.: *In Synchrony with the Heavens. Studies in Astronomical Timekeeping and Instrumentation in Medieval Islamic Civilization*. Studies I-IX. Volume One. The Call of the Muezzin. Leiden: Brill, 2004.
- World Maps for Finding the Direction and Distance to Mecca*. Leiden: Brill, 1999.
- "Al-Bazdawī on the Qibla in Transoxania". In *Journal for the History of Arabic Science*. 7, 1983, pp. 3-38.
- Kleiss, W.: *Die Entwicklung von Palästen und palastartigen Wohnbauten in Iran*. Wien: Verlag der Österreichischen Akademie der Wissenschaften, 1989.
- Koch, E.: "The Mughal Waterfront Garden". In *Gardens in the Time of the Great Muslim Empires: Theory and Design*. A. Petruccioli (ed). Leiden, New York: E. J. Brill, 1997, pp.140-159.
- Mughal Architecture. An Outline of Its History and Development (1526-1858)*. New Delhi: Oxford University Press, 2002.
- Kuban, D.: *Muslim Religious Architecture*. Leiden: E. J. Brill, 1974.
- Kuran, A.: *The Mosque in Early Ottoman Architecture*. Chicago: The University of Chicago Press, 1968.

- Kühnel, E.: *Die Kunst des Islam*. Springers Handbuch der Kunstgeschichte. Stuttgart: Alfred Kröner Verlag, 1962.
- Lapidus, I.M.: *Muslim Cities in the Later Middle Ages*. Cambridge, Massachusetts: Harvard University Press, 1967.
- Lehrman, J.B.: *Earthly Paradise: Garden and Courtyard in Islam*. London, 1980.
- Lentz, T.W., Lowry, G.D.: *Timur and the Princely Vision. Persian Art and Culture in the Fifteenth Century*. Los Angeles: Museum Associates, 1989.
- Lewis, B. (ed.): *The World of Islam. Faith, People, Culture*. London: Thames and Hudson, 1994.
- Lent, v. J.: *Glossary and Index of Technical Terms to Volumes I-VIII*. The Encyclopaedia of Islam, ed. P.J. Bearman. Leiden: Brill, 1997.
- Litvinsky, B.A. and Zeymal, T.I.: *Adzhina Tepa*. Moscow: Iskustvo, 1971. (Russian edition)
- MacDougal, E. and Ettinghausen, R. (ed.). *The Islamic Garden*. Dumbarton Oaks Colloquia on the History of Landscape Architecture, 4. Washington, 1976.
- Madaminov, M.; Masharipov, B. and Abdurasulov, A.: *Khiva. Guidebook*. Moscow: Ruz Co, 2001.
- Mankovskaya, L.Y.: *Typological Basis of the Architecture of Central Asia 9th-20th c.* Tashkent, 1980.
- Manz, B.F.: *Power, Politics and Religion in Temürid Iran*. Cambridge: Cambridge University Press, 2007.
- The rise and rule of Tamerlane*. Cambridge: Cambridge University Press, 1989.
- Mayamatam: Treatise of Housing, Architecture and Iconography AD 9th-13th c.* Sanskrit text edited and translated by Bruno Dagens. New Delhi: Indira Gandhi National Center for the Arts and Motilal Banarsidass Publishers Pvt. Ltd., 1994.
- Mekking, A.J.J.: "The Architectural Representation of Reality. The Built Environment as the Materialization of a Mental Construct". In *The Global Built Environment as a Representation of Realities*, ed. A.J.J. Mekking and E. Roose. Pallas Publications, 2009.
- "Een kruis van kerken rond Koenraads hart". In *Utrecht Kruispunt van de middeleeuwse kerk*. Utrecht: De Walburg Pers, 1988, pp.21-53.
- Michell, G.: *Hindu Art and Architecture*. London: Thames and Hudson, 2000.
- Architecture of the Islamic World: Its History and Social Meaning*. London: Thames and Hudson, 1978.
- The Hindu Temple*. Tiptree: Elek Books Limited, 1977.
- Moore, Ch.; Mitchell, W. and Turnbull, W.Jr.: *The Poetics of Gardens*. New York: John Wiley & Co., 1988.
- Mostafa, S.L.: "The Cairene Sabil: Form and Meaning". In *Muqarnas: An Annual on Islamic Art and Architecture*. Oleg Grabar (ed), Volume 6, 1989, pp.33-42.
- Moynihan, E.: *Paradise as a Garden in Persia and Mughal India*. New York: Braziller, 1979.

Nasr, H.N.: *The Garden of Truth. The Vision and Promise of Sufism, Islam's Mystical Tradition*. New York: Harper Collins Publishers, 2007.

An Introduction to Islamic Cosmological Doctrines. New York: State University of New York Press, 1993.

Necipoğlu, G.: "An outline of shifting paradigms in the palatial architecture of the pre-modern Islamic World". In *Ars orientalis* 23, 1993, pp.3-24.

"Geometric Design in Timurid/Turkmen Architectural Practice: Thoughts on a Recently Discovered Scroll and Its Late Gothic Parallels". In *Timurid Art and Culture*, ed. L. Golombek and M. Subtelny. Leiden: Brill, 1992, pp.49-66.

Nemceva, N.B.: *Mashad Qusam in Samarqand*. Edition Cultural values -2004-2006. Sanct Petersburg, 2008. (Russian edition)

"History of the Madrasa in Central Asia". In *The Role of the City of Samarqand in the World's Cultural History*. Tashkent-Samarqand, 2007, pp.235-241. (Russian edition)

Nemceva, N.B. and Schwab, J.Z.: *The ensemble of Shah-i Zinda. Historical-architectural survey*. Tashkent: Gafur-Guliam, 1979. (Russian edition)

Notkin, I.I.: "The Ensemble at the Eastern Gate of the Ichan-Kala in Khiva". In *Architectural Heritage of Uzbekistan*, ed. Pugachenkova, I. Tashkent: Publishing House of the Academy of Science of the Uzbek SSR, 1960, pp.85-110. (Russian edition)

O'Kane, B.: *Studies in Persian Art and Architecture*. Cairo: The American University in Cairo Press, 1995.

"Iran and Central Asia". In *The Mosque*, ed. M. Frishman and H. Khan. London: Thames and Hudson, 1994.

"From Tents to Pavilions: Royal Mobility and Persian Palace Design". In *Ars Orientalis*, Vol. 23, Pre-Modern Islamic Palaces, 1993, pp. 249-268.

Timurid Architecture in Khurasan. Mazdâ Publishers, 1987.

Oldham, J.: *Gardens in Time*. Sydney: Lansdowne Press, 1980.

Pander, K.: *Zentralasien*. Köln: Dumont, 1966.

Paul, J.: *Die politische und soziale Bedeutung der Naqšbandiyya in Mittelasien im 15. Jahrhundert*. Berlin: Walter de Gruyter, 1991.

"Scheiche und Herrescher im Khanat Čağatay". In *Der Islam*, Band 67, Heft 2. Berlin: Walter de Gruyter, 1990, pp.278-321.

Petrucchioli, A.: *Gardens in the Time of the Great Muslim Empires: Theory and Design*. Leiden & New York, 1997.

"Der Garten als Antizipation der Stadt Parallele Entwicklungen". In *Der Islamische Garten*. Stuttgart: Deutsche Verlags-Anstalt, 1994, pp.85-108.

"Gardens and Religious Topography in Kashmir". In *Environmental Design: Journal of the Islamic Environmental Design Research Centre* 1-2, 1991, pp.64-73.

- Pinder-Wilson, R.: "The Persian Garden: Bagh and Chahar Bagh". In *The Islamic Garden*, ed. E. MacDougal and R. Ettinghausen. Dumbarton Oaks Colloquia on the History of Landscape Architecture, 4. Washington, 1976.
- Prochazka, A.B.: *Mosques*. Zurich: Muslim Architecture Research Program, 1986.
- Pugachenkova, G.A.: *Temurid Architectural Heritage*. Tashkent: Main encyclopaedic editorial office, 1996. (Russian edition)
- Chefs d'oeuvre d'architecture de l'Asie Centrale XIVe-XVe siècle*. Paris, 1981.
- Samarkand, Bukhara*. Moskva: Izdatelstvo Izkustvo, 1968. (Russian edition)
- Architectural Heritage of Uzbekistan*. Tashkent: Publishing House of the Academy of Science of the Uzbek SSR, 1960. (Russian edition)
- Rabbat, N.: Religious Architecture and Islamic Cultures MIT:
<http://web.mit.edu/4.614/www/bibliography.html> [Accessed on 1 April 2009]
- "Shadirwan". In *Encyclopedia of Islam*, 2nd edition, ed. by H.A.R. Gibbs, B. Lewis, Ch. Pellat, C. Bosworth *et al.*, 11 vols. Leiden: E. J. Brill, 1960-2002, Volume 9, pp.175-76.
- Rahman, F.: *Islam*. Chicago: University of Chicago Press, 1979.
- Rempel, L.I.: *Architectural ornament of Uzbekistan*. Tashkent: National Publishing House for LiteratureUSSR, 1961. (Russian edition)
- Roemer, H.R.: "Die Nachfolger Temür s". In *Islamwissenschaftliche Abhandlungen. Fritz Meier zum sechzigsten Geburtstag*. Wiesbaden: Franz Steiner Verlag GmbH, 1974.
- Rogers, M.: *The Spread of Islam*. New York: Elsevier-Phaidon, 1976.
- Roose, E. in an interview with Aart Mekking. "Breaking Boundaries: Towards a Global Theory of Architectural Representation". In *The Global Built Environment as a Representation of Realities*. Pallas Publications, 2009.
- The Architectural Representation of Islam. Muslim-Commissioned Mosque Design in the Netherlands*. Amsterdam: Amsterdam University Press, 2009.
- Ruggles, D.F.: "Humayun's Tomb and Garden: Typologies and Visual Order". In *Gardens in the Time of the Great Muslim Empires: Theory and Design*. Attilio Petruccioli (ed.). Leiden, New York: E. J. Brill, 1997, p.174.
- Rustomji, N.: *The Garden and the fire. Heaven and Hell in Islamic Culture*. New York: Columbia University Press, 2009.
- Ruziev, M.: Traditional Decorative and Applied Arts of the Tajiks. Electronic edition:
http://arzhang.tajik.net/index.php?theme=5&id_lang=2 [Accessed on 21 Jan 2010]
- Sabri, J.; Riedlmayer, A. and Spurr, J. B.: *Resources for the Study of Islamic Architecture*. Harvard University (c) 1994 Aga Khan Program for Islamic Architecture. Electronic edition:
<http://archnet.org/courses/resourcesforthestudy.html> [Accessed on 1 April 2008]
- Séguy, M.-R.: *The Miraculous Journey of Mahomet. Mirâj Nâme*. London: The Scholar Press, 1977.

- Scafi, A.: *Mapping Paradise. A History of Heaven on Earth*. Chicago: The University of Chicago Press, 2006.
- Schimmel, A.: *Deciphering the Signs of God. A Phenomenological Approach to Islam*. Edinburgh: Edinburgh University Press, 1944.
- “The Celestial Garden in Islam”. In *The Islamic Garden*, ed. E. MacDougal and R. Ettinghausen. Dumbarton Oaks Colloquia on the History of Landscape Architecture, 4. Washington, 1976.
- Schlumberger, D.; Le Berre, M.; Garcin, J.C. and Casal, G.: *Lashkari Bazar: Une Résidence Royale Ghaznevide et Ghoride*. Paris: Diffusion de Boccard, 1A. 1963.
- Shirvani, H.: “Philosophy of Persian garden design: The Sufi tradition”. In *Landscape Journal* 4(1), 1985, pp.23-30.
- Shterenshis, M.: *Tamerlane and the Jews*. London: Routledge, 2002.
- Shukurov, Sh.: “On the Depiction of the Image of the Prophet Muhammad and the Problem of Concealment of His Image in the Medieval Islamic Culture”. In *Sufism in the Context of Islamic Culture*. Moscow: Science Publishing House, 1989, pp.252-267. (Russian edition)
- Smith, B.E.: *The Dome. A Study in the History of Ideas*. Princeton: Princeton University Press, Second Hardcover Edition, 1971.
- Smith, M.: *Studies in Early Mysticism in the Near and Middle East*. London: The Sheldon Press, 1931.
- Snodgrass, A.: *The Symbolism of the Stupa*. New York: Cornell Southeast Asia Program, 1985.
- Starodub, T.H.: “Medieval Sufi Architecture: Khanaka, Zavia, Takiya”. In *Sufism in the context of Islamic culture*. Moscow: Science Publishing House, 1989, pp.268-279. (Russian edition)
- Subtelny, M.: “The Cult of 'Abdullāh Ansārī under the Timurids” In *God ist schön und Er liebt die Schönheit/God is Beautiful and He loves Beauty*, ed. A. Giese and J. Christoph Bürgel. Berlin, New York, Paris: Peter Land, 1994, pp.377-406.
- Tabbaa, Y.: “The Medieval Islamic Garden: Typology and Hydraulics”. In *Garden History: Issues, Approaches, Methods*, John Dixon Hunt (ed.), Dumbarton Oak, 1992, pp.303-329.
- Thacker, C.: *The History of Gardens*. Berkeley: The University of California Press, 1979. Thackston, W.M.: *A Century of Princes. Sources on Timurid History of Art*. The Aga Khan Program for Islamic Architecture, 1989.
- Thackston, W.M.: *A Century of Princes. Sources on Timurid History and Art*. Cambridge, Massachusetts. The Aga Khan Program for Islamic Architecture, 1989.
- Timur: *The Mulfuzat Timury or Autobiographical memoirs of the Moghul Emperor Timur*, translated by Major Charles Stewart, reprint from 1830.
- Tobey, G.B.: *A history of Landscape Architecture: The Relationship of People to Environment*. New York: American Elsevier Publishing Co., Inc., 1973.
- Van Berchem, M.: *Matériaux pour un Corpus Inscriptionum Arabicarum, I, Egypte*. Cairo, 1899, pp.265-66.

- Vogt-Göknil, U.: *Die Moschee. Grundformen sakraler Baukunst*. Zürich: Verlag für Architektur Artemis, 1978.
- Volwahren, A.: *Islamisches Indien. Weltkulturen und Baukunst*. München: Hirmer Verlag, 1969.
- Indien. Bauten der Hinus, Buddhisten und Jains*. Architektur der Welt. Fribourg: Office du Livre, 1968.
- Walcher, H.: "Between Paradise and Political Capital: The Semiotics of Safavid Isfahān". Electronic edition: <http://environment.research.yale.edu/documents/downloads/0-9/103walcher.pdf> [Accessed on 1 April 2008]
- Wheatley, P.: *The Places Where Men Pray Together. Cities in Islamic Lands Seventh through the Tenth Centuries*. Chicago: The University of Chicago Press, 2001.
- Wilber, D.: *The Architecture of Islamic Iran: the Il Khanid Period*. Princeton Monographs in Art and Archaeology, 29, Oriental Studies, 17. Princeton, NJ, 1955.
- Persian Gardens and Garden Pavilions*. 2nd edition. Washington D.C., 1979.
- Wilkonson, R.: *Symbol and Magic in Egyptian Art*. London: Thames and Hudson, 1994.
- Williams, T. and Kurbansakhatov, K.: "The Ancient Marv Project, Turkmenistan. Preliminary Report on the Second Season (2002)". In *Iran*, Vol. 41, 2003, pp. 139-170.
- Wirth, E.: *Die Orientalische Stadt im islamischen Vorderasien und Nordafrika*. Mainz: Verlag Philipp von Zabern, 2. Auflage, 2001.
- Wolper, E.S.: *Cities and saints. Sufism and the Transformation of Urban Space in Medieval Anatolia*. Pennsylvania: The Pennsylvania State University Press, 2003.
- "The Politics of Patronage: Political Change and the Construction of Dervish Lodges in Sivas". In *Muqarnas*, Vol. XII, 1995.
- Yusupova, M.: "Evolution of Architecture of the Sufi Complexes in Bukhara". In *Bukhara: The Myth and the Architecture*, ed. A. Petruccioli. Cambridge, Massachusetts: The Aga Khan Program for Islamic Architecture, 1999.

Samenvatting in het Nederlands

Het vier-*īwān* schema, waarin de vier kardinale punten worden aangegeven door majestueuze portalen die een binnenplaats omgeven, is herleid tot de Parthische paleizen van Hatra en Assūr uit de tweede eeuw n.Chr. en wordt geassocieerd met de Sassanidische periode (224-637 n.Chr.). Oorspronkelijk werd het schema gebruikt voor paleizen als uitbeelding van koninklijke en goddelijke macht. Door de opkomst van de Islam werd vanaf de tiende eeuw het vier-*īwān* schema algemeen aangewend voor religieuze gebouwencomplexen zoals moskeeën met open binnenplaatsen, madrasa's, mausolea met centrale koepels, tombes en soefistische *khānaqāhs*.

Aanvankelijk was de *īwān* een poort of boog die toegang bood tot een heiligdom, die al werd aangetroffen in de eerste vuurtempels uit de vijfde eeuw v.Chr. Later ontwikkelde hij zich tot gewijde doorgang naar een heilige plek. Het was een doorgang via welke men de grens tussen het wereldlijke (de stedenbouwkundige structuur) en het sacrale (het heilige gebouw) overstak. Hoewel de religieuze werkelijkheid van de *īwān* van een vier-*īwān* moskee heel anders is dan die van een zoroastriestische vuurtempel, is de werkelijkheid van de heilige poort die de mens van zijn wereldlijke domein overbrengt naar het goddelijke domein bewaard gebleven. Zoals bij andere godsdiensten is de religieuze essentie van de islam bij uitstek te vinden in het snijpunt van deze twee domeinen, zodat de *īwān* het meest geschikte architectonische element is om de sacrale ruimte van de moskee te bepalen en duidelijk af te bakenen van de wereldlijke omgeving van de hectische buitenwereld.

De huidige architectuurtheorie analyseert het bestaan van vier-*īwān* gebouwencomplexen meestal binnen het regionale historische perspectief. Dit leidt tot een verkeerde interpretatie van het architectonische schema, dat wordt herleid tot de plaatselijke symboliek van het architectonische erfgoed, en uitsluitend met de islam in verband wordt gebracht. De bouwtraditie van de vier *īwāns* is na de tweede eeuw n.Chr. vrijwel onveranderd gebleven. Het schema werd algemeen gebruikt voor paleizen, moskeeën met open binnenplaatsen, madrasa's, karavanserais, tombes met centrale koepels en *khānaqāhs*, maar tot nu toe zijn er geen pogingen ondernomen om deze brede toepassing te verklaren. Hoewel het esthetische aspect niet cruciaal is voor de betekenis van het vier-*īwān* schema, is de esthetiek onderdeel van de heersende wetenschappelijke architectonische analyses van O' Kane, Golombek en Wilber, Pugachenkova, Ettinghausen, Grabar en Jenkins-Madina.

Godard verklaart de alomtegenwoordige toepassing van het vier-*īwān* schema als middel om de Iranese nationale identiteit uit te drukken en schrijft de oorsprong van de vier *īwāns* toe aan de woonhuizen van Khurasan. Deze stelling, die voorheen door Van Berchem en

Herzfeld werd verdedigd, is onhoudbaar wanneer hij wordt toegepast op heilige bouwwerken zoals moskeeën en madrasa's. Voorts weerspiegelt hij niet de diepgaande religieuze en sociale veranderingen die leidden tot de keuze voor het vier-*ṭwān* schema als meest gebruikelijke bouwplan van de heersende dynastieën van Centraal-Azië tot aan de 19de eeuw.

Hoewel de kosmologische aspecten van gebouwen met vier *ṭwāns* werden geanalyseerd door Hillenbrand, Vogt-Göknil, Ardelan en Bakhtiar, zijn ze nooit in detail bestudeerd. De relatie tussen de soefi-traditie en het vier-*ṭwān* schema is bovendien nooit beschouwd als een mogelijke verklaring voor de wijdverbreide toepassing van de vier-*ṭwān khānaqāhs*, dwz. als uitbeelding van een soefistische werkelijkheid.

Een plausibele verklaring die meer licht werpt op het veronderstelde gebrek aan ontwikkeling binnen de vier-*ṭwān* bouwtraditie is het feit dat het vier-*ṭwān* schema alleen werd aangewend voor gebouwen als representatie, die in opdracht van soevereine vorsten en plaatselijke heersers werden gebouwd. Het vier-*ṭwān* schema was een uitdrukking van macht, herontdekt door een latere heerser die zijn macht trachtte te verbinden met een vroegere, onbetwiste leider. Aangezien de Tīmūrīden goede betrekkingen onderhielden met de soefi-gemeenschap, waren de vier-*ṭwān* gebouwencomplexen een aanvaardbare symbolische bouwvorm voor zowel de soefi-orden als de oelema. Het vier-*ṭwān* schema is namelijk een architectonische weergave van de kosmologieën van zowel het soefisme als de orthodoxe islam.

De methodologische benadering in dit proefschrift is gebaseerd op Mekking's theorie over architectuur als representatie. Verdere parallellen worden getrokken met bestaande architectonische theorieën met betrekking tot het gebruik van kosmologische schema's en feitelijkheden die aan de orde zijn gesteld door Snodgrass, Koch, Ardelan en Bakhtiar en Petruccioli.

Dit proefschrift analyseert hoe architectuur een sacrale werkelijkheid weergeeft. Het is meer een architectonische dan historische studie en is slechts deels op historische gegevens gebaseerd. De aandacht ligt voornamelijk op de architectuur van de Tīmūrīden als instrument om extreme en universele macht te legitimeren. Het vier-*ṭwān* schema wordt bestudeerd als een dynastiek architectonisch middel om het middelpunt van de wereld aan te geven, van waaruit de macht zich langs de kardinale punten naar alle delen van de macrokosmos verspreidt. Om deze benadering te illustreren zijn voorbeelden van Tīmūrīdische moskeeën, madrasa's en tombes gebruikt. Het concept van een herschepping van het paradijs op aarde is verder ontwikkeld in overeenstemming met dynastieke

oppermacht en de rol van de vorst als wereldheerser. Om dit voorbeeld te illustreren worden het architectonische erfgoed van Tīmūr (1336-1405), zijn zoon Shāh Rukh Mīrzā (1377-1447) en kleinzoon Mīrzā Muhammad Tāregh bin Shāh Rukh (Ulugh Beg) (1393-1449) besproken. Hun bouwactiviteiten worden geanalyseerd volgens deze triade: de grootvader (koning van de wereld, ofwel Tīmūr), vrome zoon (ofwel Shāh Rukh) en kleinzoon (die de iconografie en ambities van zijn grootvader had en zich opwierp als koning van de wereld, ofwel Ulugh Beg). Geografisch is de aandacht gericht op Transoxanië (hedendaags Oezbekistan) en deels op Khurasan (hedendaags Afghanistan).

Dit is de eerste keer dat het vier-*īwān* schema wordt bestudeerd als zijnde een hiërofanische en *architectonische palimpsest*. Deze benadering biedt de mogelijkheid tot een vergelijkende analyse van boeddhistische en hindoeïstische vierassige monumenten, inclusief actuele theorieën die het vier-*īwān* schema slechts als puur islamitisch fenomeen beschouwen. De eerste hoofdconclusie van het proefschrift is dat de oorsprong en de essentie van het vier-*īwān* schema niet islamitisch zijn.

Het concept van de hiërofanie is gebruikt om onderscheid aan te brengen tussen elementen van een sacrale orde (de ideale wereld zoals geschapen door de primordiale God) en voorwerpen van wereldlijke ervaring (de menselijke perceptie van de werkelijke wereld). Daarnaast is de hiërofanie een middel om een 'gevoel van kosmische harmonie', zoals Coupe het formuleert, te bewerkstelligen. Deze kosmische harmonie staat tegenover de ervaring van wereldlijke tijd volgens Eliade, waardoor er tussen het sacrale en het wereldlijke een dichotomische interrelatie bestaat. Hiërofanie is dus een middel om de sacrale orde binnen een wereldlijke werkelijkheid te ervaren. Via de hiërofanie overstijgt de mens tijd en ruimte en wordt overgebracht in de *illo tempore*, de mythische tijd waarin de wereld werd geschapen. In zekere zin is de hiërofanie zelf een microkosmische *Axis Mundi*, een sacraal kanaal dat de mens toegang biedt tot het domein van Gods schepping. De visuele weergave van de hiërofanie is een mimetisch proces dat een bepaald aspect van God (manifestatie van het heilige) of een element van Gods schepping (heilige rivieren en bergen, de kosmische oceaan, enzovoort) aanduidt. Het proces van hiërofanische visualisering kan worden beschouwd als een poging om op aarde Gods schepping te herscheppen met wereldlijke middelen in een wereldlijke omgeving. Zodra de gevisualiseerde hiërofanie door de mens wordt waargenomen, verkrijgt hij de status van sacrale entiteit en krijgt de voorheen wereldlijke omgeving ook gewijde eigenschappen toebedeeld.

De basishiërofanie van de vier elementen gecombineerd met een centraal element is overal ter wereld in alle mythologieën en religies terug te vinden. De opmerkelijkste representaties zijn gerelateerd aan de vier kardinale punten: het Kosmische Kruis en het kosmische

middelpunt: de *Axis Mundi*. De hiërofanie van de vier heeft een antropomorfe oorsprong die verklaarbaar is uit de symmetrie van het menselijk lichaam en zijn positie en oriëntatie ten opzichte van de horizon. Daarnaast verwijst het getal vier naar de symmetrie van het menselijk lichaam, met een vierzijdige verdeling van de horizon: een voor- en achterkant, een linker- en rechterzijde. Het kan een poging zijn om de ‘onbekende’ wereld te beschrijven op een manier die dicht bij de mens staat, om de primordiale wereld te begrijpen en greep te krijgen op de angsten en rampen die natuurkrachten met zich meebrengen. De hiërofanie van de vier kan daarnaast worden geïnterpreteerd aan de hand van antropomorfe tradities met een lange cyclus en het thema van de *Axis Mundi* en het Kosmische Kruis met een kortere cyclus, dat door Mekking werd ontwikkeld om de bebouwde omgeving te analyseren.

In het mythologische gedachtegoed is de hiërofanie van de vier te vinden in de representaties van de vier winden, de vier seizoenen, de vier elementen, de vier temperamenten van het menselijk lichaam, de vier wereldregenten, vier reuzen die de wereld torsten, enzovoort. In het polytheïstische gedachtegoed ontwikkelde de hiërofanie van de vier zich tot de representatie van de vier belangrijkste godheden plus een almachtige centrale godheid, de vier kasten, de vier Veda's, enzovoort.

Bij de opkomst van monotheïstische geloven ontwikkelde de hiërofanie van de vier zich verder als representatie van de vier evangelisten (christendom), de vier pilaren (engelen) die de Troon Gods vasthouden (islam), enzovoort. In het Oude Testament en in de Koran zijn er de vier rivieren van het paradijs die uit één bron afkomstig zijn (Genesis 2:10 en Soera 47:15), de vier ‘animalia’ en de vier belangrijkste profeten. In het Nieuwe Testament zijn er de vier evangelisten en de vier evangeliën die over de wereld worden verspreid, de vier mysteriën van Christus, de vier kardinale deugden en het visioen van het Wezen op de Troon te midden van de vier levende wezens (Openbaringen 4).

In het mystieke geloof dat het monotheïstische gedachtegoed begeleidde, zoals het manicheïsme (christendom) en soefisme (islam), bleef de hiërofanie van de vier voortbestaan en werd er extra beeldspraak aan toegevoegd, zoals *De universele boom en de vier vogels* die Ibn ‘Arabī in een verhandeling bespreekt. In de soefistische kosmologie heeft de versterking van de vier richtingen kosmische dimensies, en zijn de vier spirituele meesters (*awṭād*, ‘grenspalen’ of ‘zuilen’) verbonden met het oosten, westen, noorden en zuiden. Ibn ‘Arabī stelt dat God een zuil voor elke richting heeft bestemd en één centrale ‘paal’, *al-qutb*, die als kosmische as kan worden opgevat (hetgeen het equivalent is van de hiërofanie van de *Axis Mundi*, als representatie thema met een kortere cyclus).

Langs deze centrale as kunnen mensen transcenderen via de drie kosmische zones. Vanuit de onderwereld begint de onheilige zone (zoals tombes waarbij de sarcofaag onder de grond is geplaatst, bijvoorbeeld in de Ishrat Khāneh in Samarqand), waar men de horizontaliteit van de aardse wereld ervaart. Daarna volgt de eerste heilige zone, waar de aarde de hemel (dwz. het gebouw zelf, waarvan het middelpunt wordt aangegeven door de kruisende assen van de vier *īwāns*) ontmoet. De verticaliteit van de hemel wordt uitgedrukt door de tweede of hemelse heilige zone (die geassocieerd kan worden met de koepel, die oprijst boven het snijpunt van de assen, zoals in de *khānaqāhs*). Akkach stelt dat de verticaliteit in soefistische leerstellingen (de representatie van de hiërofanie van de *Axis Mundi*) een uitdrukking van menselijke uniciteit is, terwijl de nadruk op de geografische richtingen (dwz. de representatie van het Kosmische Kruis volgens de terminologie die in dit proefschrift wordt gehanteerd) de veelomvattendheid van de menselijke realiteit uitdrukt.

Aangezien de hiërofanie van de vier oorspronkelijk was gerelateerd aan de ruimtelijke oriëntatie van de mens in de wereld, waren er ruimtelijke, geometrische representaties vereist. Deze werden toegepast in de bouw van vierledige steden (bv. *urbs dei*), paleizen, tempels (bv. boeddhistische stoepa's, hindoetempels, christelijke kruisvormige kerken en martyria, islamitische vier-*īwān* moskeeën, madrasa's en soefistische vier-*īwān khānaqāhs* met koepel, enzovoort), tombes en tuinen (bv. *čahār-bahrs*). Al deze architectonische en landschappelijke locaties hadden strakke, rechthoekige begrenzingen met twee elkaar kruisende, orthogonale assen die de vier hoeken van de wereld aanduiden. De geometrische principes van de symmetrie werden overal toegepast om een weergave van de gebouwde omgeving te scheppen die zo veel mogelijk leek op Gods schepping van de wereld. De geometrische organisatie van ruimte (die aan God werd toegeschreven) staat tegenover de chaos van de wereldlijke, ongeorganiseerde ruimte (als tegenstelling tot Gods volmaaktheid). Orde scheppen in de chaos door middel van symmetrie wordt beschouwd als een ideale topografie, de enige die een complete weergave is van orde en die alleen onderworpen is aan Gods regels voor perfectie.

De architectuur van de vier-*īwān* gebouwencomplexen kan ook worden verklaard als representatie van de hiërofanie van het paradijs, dat is ontleend aan de hiërofanie van de vier (dwz. de vier rivieren van het paradijs die uit een centrale bron ontspringen). Het paradijs is rechtstreeks verbonden met het islamitische gebed en is ook de plaats waar de menselijke Mohammed Allah bereikt. Op gelijksoortige wijze kan een menselijke gelovige, die het echte paradijs nooit tijdens zijn of haar leven zal bereiken, Allah alleen in het gebed ontmoeten, in een omgeving die lijkt op het domein van Allah, bv. het paradijs. Het vier-*īwān* schema,

gebaseerd op de vier rivieren van het paradijs, lijkt hierdoor de geschiktste gebedsplaats te zijn waarin direct contact met Allah mogelijk wordt geacht.

Ik onderbouw de stelling dat het vier-*ṭwān* schema, met de vier poorten (*ṭwāns*) die idealiter de vier kardinale punten weergeven, een visuele representatie is van de hiërofanie van de vier: het Kosmische Kruis en de hiërofanie van het kosmische centrum: de *Axis Mundi*. Zoals ik hierboven heb aangetoond is de hiërofanie van de vier erg complex en omvat hij uiteenlopende visuele representaties die zich in de loop der tijd als *hiërofanische palimpsest* hebben ontwikkeld, los van het mythologische en religieuze gedachtegoed. In hun heilige essentie verschillen de vier *ṭwāns* weinig van bijvoorbeeld de vier zuilen die in de islam de Troon van God schragen. Om de analyse van het bestaan en de essentie van het vier-*ṭwān* schema te beperken tot islamitische iconografie en architectonische morfologie is dan ook een beperking die de hiërofanie van de vier ontdoet van zijn bredere en veel complexere betekenis.

De bouw van het vier-*ṭwān* complex kan worden beschouwd als een sacrale daad, die een herhaling is van Gods schepping van de wereld. Het verticale aspect van de hiërofanie van de *Axis Mundi* valt samen met het geometrische middelpunt van het gebouwencomplex en brengt een representatie van kosmogenezis voort: het centrale punt van al het geschapene (als statische dimensie). De orthogonale assen die vanuit het middelpunt als Kosmisch Kruis uitwaaiëren zijn een weergave van de geschapen wereld in zijn totaliteit en kunnen worden geduid als kosmogeen evolutie. De hiërofanie van de *Axis Mundi* kan daardoor worden geïnterpreteerd als een heldere representatie in ruimte en tijd van de gebouwde leefomgeving, vanwege de afbakening van de ruimte via de centrale verticaal en langs de horizontale assen van de hiërofanie van het Kosmische Kruis.

Aangezien het geometrische centrum atemporaal is en wordt begrensd door de kruisende assen, kan het overal voorkomen, zonder rechtstreekse verwijzing naar een bepaald punt in de tijd of in de ruimte. In deze hoedanigheid wordt het centrum, dwz. de *Axis Mundi*, gelijkgesteld aan de primordiale eenheid van de schepping. Aan de andere kant vertegenwoordigen de assen die vanuit het middelpunt ontspringen de verscheidenheid en meervoudigheid van de wereld als een goddelijke, door tijd geregeerde manifestatie vanwege het gebruik van menselijke coördinaten als architectonisch middel.

Een ander aspect van symmetrie is dat Gods volmaaktheid, die wordt opgeroepen en weergegeven door volmaakt samengestelde ontwerpen van gebouwen en landschappen, contrasteert met de menselijke onvolkomenheid. De mens wordt beschouwd als ondergeschikt aan goddelijke organisatorische principes. In tegenstelling tot zich sporadisch

ontwikkellende stedenbouwkundige structuren kan het vier-*Īwān* schema worden beschouwd als een volmaakt georganiseerd systeem dat op geometrische symmetrie is gebaseerd. Hierdoor zijn er twee tegenstellingen: enerzijds het contrast tussen de menselijke onvolmaaktheid en de goddelijke symmetrie, anderzijds het contrast tussen de quasiongestructureerde omringende stedelijke structuur en plaatsen van goddelijke aanwezigheid en verering zoals de moskee of madrasa. Daarnaast is er de asymmetrische 'chaos' van stedelijke structuren versus de symmetrische 'kosmos' die door de vier *Īwāns* wordt aangeduid. De kosmos (van het Grieks κόσμος, 'geordende wereld') die door God is geschapen om orde aan te brengen, wordt op aarde herschapen door degene die een vier-*Īwān* gebouwencomplex laat bouwen, en die op zijn beurt de rol van God op aarde vertolkt in een soort hiërofanische mimesis. Met betrekking tot de cycli die Mekking beschrijft, kan de 'ongestructureerde' stedenbouwkundige structuur in het kader van de uitsluitende-insluitende gebouwde representaties met een kortere cyclus verklaard en vergeleken worden als de uitsluitende wereld, terwijl het symmetrisch gestructureerde gebouwencomplex met vier *Īwāns* het allesomvattende, volmaakte paradijs aanduidt.

Het vier-*Īwān* schema is gebaseerd op een geometrisch raster dat veel op het raster van de mandala lijkt. Dit verbindt het vier-*Īwān* schema rechtstreeks met boeddhistische, hindoeïstische en jaïnistische heiligdommen die op de mandala zijn gebaseerd. Al deze bouwwerken hebben een schema van kruisende assen dat is gebaseerd op de hiërofanieën van het Kosmische Kruis en de *Axis Mundi*.

De geometrische overeenkomsten tussen de mandala en het vier-*Īwān* schema zijn:

- het orthogonale symmetrische grondplan;
- het raster waarop het gebouwencomplex is gestructureerd;
- de centrale structuur en het schema met kruisende assen (met nadruk op de vier kardinale richtingen, door middel van godheden, trappen of kleuren in op mandala's gebaseerde stoepa's en hindoeïstische of boeddhistische tempels; of met *pishtaqs* in geval van de *Īwāns*);
- de antropomorfe organische eenheid en vier windrichtingen van de wereld.

Het afgesloten rechthoekige geheel is zowel in de boeddhistische stoepa als in het vier-*Īwān* gebouwencomplex gebaseerd op orthogonale symmetrie. De bepalende ruimtelijke factor van hiërofanische geometrische patronen is symmetrie. De metaforische interpretatie van architectuur zorgt voor orthogonale symmetrie met Gods volmaaktheid en transcendente zuiverheid. Binnen de islam vertegenwoordigen de rechte lijnen wellicht *tawhid*, de

goddelijke eenheid en gewijde orde tussen mens en natuur. Deze orde werd gevormd door goddelijke geometrische patronen en werd uitgedrukt met wiskundige regelmatigheid.

Een ander aspect van symmetrie is dat Gods volmaaktheid, die wordt opgeroepen en weergegeven door volmaakt samengestelde ontwerpen van gebouwen en landschappen, contrasteert met de menselijke onvolkomenheid. De mens wordt beschouwd als ondergeschikt aan goddelijke organisatorische principes. Binnen de stedelijke structuren kan het vier-*īwān* schema als een volmaakt geordend systeem worden beschouwd dat is gebaseerd op orthogonale symmetrie.

Terwijl de *Axis Mundi* in de hindoetempel duidelijk wordt gerepresenteerd door het horizontale middelpunt van de mandala en door de verticaliteit van de bergachtige toren, heeft het vier-*īwān* schema twee potentiële plaatsen voor de *Axis Mundi*. De ene ligt uiteraard in het centrum van de binnenplaats, dat het geometrische middelpunt van het gebouwencomplex en het snijpunt van de twee orthogonale assen is. De andere is de *mihrāb*, die zich in het heiligdom bevindt. Enerzijds neemt de imam of de sjeik die de dienst leidt de functie van kosmische mens in de *mihrāb* op zich en gaat hij daarmee een metaforische verbinding met de hemel aan. Anderzijds fungeert de gemeente in de binnenplaats als een *Axis Mundi*, die ongehinderd door architectonische elementen zoals een koepel rechtstreeks in verbinding staat met de goddelijke realiteit. Deze twee architectonische centra (het middelpunt van de binnenplaats en de *mihrāb*) zijn te verklaren aan de hand van de *hiërofanische palimpsest*. Aanvankelijk was het orthogonale centrum van de middenplaats ook de locatie van de *Axis Mundi* en de allerheiligste plek. Door de opkomst van het monotheïstische gedachtegoed en de islamitische noodzaak om de *mihrāb* in de *qibla* onder te brengen als allerheiligste plaats in het gebouwencomplex, kreeg het vier-*īwān* schema echter twee hiërofanische centra: het middelpunt van de binnenplaats, aangegeven door het waterbassin en de *mihrāb* als allerheiligste deel van de *qibla*.

Deze schematische vergelijking tussen de hindoetempel en het vier-*īwān* schema toont de gelijkenis aan tussen de basale samenstellende delen zoals de oriëntatie via twee orthogonale assen, de situering van het heiligdom op het snijpunt, vier grote poorten, enzovoort. Hoewel er geen rechtstreeks historisch verband bestaat tussen de twee architectonische stijlen, zijn de hiërofanieën van de *Axis Mundi* en het Kosmische Kruis, van de navel van de wereld, van de heilige berg, enzovoort, in essentie dezelfde. Zij vertegenwoordigen twee architectonische tradities die beide zijn gebaseerd op dezelfde antropomorfe en fysiomorfe geloven en kosmologische ontwerpen.

Als illustratie van de orthogonale, gewijde aard van de geometrie van het vier-*īwān* schema, zijn er ook meerdere islamitische hoofdsteden geanalyseerd. Deze steden hebben allemaal een rechthoekig (vierkant in het geval van Harāt en het Parthische Marv) stadsplan dat in vier kwadranten is verdeeld door vier hoofdstraten die vier stadspoorten in het midden van elke stadsmuur met elkaar verbinden. De straten en poorten zijn langs de ideale kardinale punten gerangschikt. De straten zijn ook geplaatst binnen een geometrisch raster en volgen soms de natuurlijke loop van plaatselijke rivieren of vaarten, waarmee het beeld van het paradijs en de hiërofanie van het Kosmische Kruis versterkt wordt.

Deze steden zijn ook in het proefschrift opgenomen aangezien er zich in het stadscentrum een vier-*īwān* gebouwencomplex met kruisende assen bevindt (een paleis met vier-*īwāns*, moskee met vier-*īwāns* of madrasa met vier-*īwāns*) dat hun beeld als middelpunt van de wereld versterkt. De hoofdstad is de zetel van de heerser, die goddelijke macht uitstraalt, en is gebaseerd op een orthogonaal raster dat geanalyseerd kan worden als microkosmische representatie van de macrokosmische wereld. De plaatsing van de heerser in het middelpunt van de hoofdstad versterkt het idee van de goddelijke oorsprong van de politieke of koninklijke macht.

Het doel van dit proefschrift is het vier-*īwān* schema te analyseren als representatie van het paradijs en van dynastieke machtsaspiraties. Het vier-*īwān kosh*-complex (twee vier-*īwān* gebouwencomplexen die tegenover elkaar zijn gebouwd) vertegenwoordigen sinds de elfde eeuw nieuwe politieke en spirituele werkelijkheden. De twee- en drievoudige *kosh*-complexen gevormd door vier-*īwān* gebouwen werden tot in de 19de eeuw aangelegd om de machtsaspiraties van de regerende dynastieën uit te dragen, bijvoorbeeld in Khīva, Bukhārā en Samarqand.

Het merendeel van de vier-*īwān kosh*-complexen werd gebouwd op plaatsen waar zich voorheen andere heilige bouwwerken bevonden. Als zodanig werd de locatie gebruikt in het kader van de *architectonische palimpsest* en bood het een nieuwe weergave van religieuze standpunten, zowel van de orthodoxe islam als van het soefisme. Sommige soefistische locaties werden gebruikt voor *kosh*-gebouwen van de orthodoxe islam en vice versa. Het feit dat het bouw materiaal van het ene gebouw werd hergebruikt voor een ander (*kosh*) gebouw is te verklaren binnen het kader van de *architectonische palimpsest*.

De *kosh*-complexen werden gebouwd op stedelijke hoofdassen die de marktroutes aangaven. Deze marktroutes waren essentieel voor de stadseconomie en werden beschouwd als de belangrijkste representatieve arena van de politieke relaties tussen

plaatselijke regerende dynastieën en de groeiende economische en politieke macht van de soefistische sjeiks.

Het snijpunt van de lengteas van de tweevoudige *kosh*-complexen en de as van de handelsroutes vormden een nieuwe stedelijke *Axis Mundi*. Deze nieuwe *Axis Mundi* verlegde het stedelijk belang van de oude vorstelijke bouwwerken die door het vestingwerk werden begrensd naar de nieuwe niet-vorstelijke bouwwerken, bv. de *kosh*-complexen, die langs de nieuwe handelsroutes ontstonden. De citadel als afgesloten domein van de vorst werd vervangen door de *kosh*-complexen die de vorst in samenwerking met de soefistische sjeiks bij handelsknooppunten liet bouwen. De vorsten bouwden niet langer afgezonderde paleizen maar kozen in plaats daarvan voor religieuze instituten zoals moskeeën, madrasa's en *khānaqāhs* in de centra van economisch welvarende delen van de nieuwe, uitdijende steden. Deze "niet-paleisachtige" gebouwencomplexen weerspiegelden de machtsverschuivingen van het oude beeld van de vorst als enige vertegenwoordiger van God op aarde naar de vrome heerser die de steun van de multi-culturele bevolking nodig had om sociale onrust te voorkomen, de steun van de economisch invloedrijke soefistische sjeiks om de bloeiende handel en de daaruit voortvloeiende belastinginkomsten veilig te stellen, en de steun van de oelema om hun politieke ideologie (inclusief de soennitische herleving) te bevorderen. Hierbij hoort de kanttekening dat het soefisme en de orthodoxe islam vreedzaam naast elkaar bestonden en dat tegenovergestelde stromingen heel normaal waren, gezien de hechte verbondenheid van oelema met het soefisme.

Er is getracht de oriëntatie van de *qiblas* van de belangrijke vier-*ṭwān* gebouwencomplexen in de steden Samarqand en Bukhārā te bepalen. Hiertoe werden in de herfst van 2006 de respectievelijke *mihṛābs* met een handmatig kompas gemeten.

De kompasmetingen leidden tot de belangrijkste ontdekking van dit proefschrift, namelijk dat geen van de *qiblas* op Mekka zijn georiënteerd. Dit kan worden verklaard uit de politieke context van het *tīmūridische* rijk. Een hypothese wordt opgeworpen dat de *qiblas* van de Bībī Khānum Moskee (het belangrijkste monument dat Tīmūr liet bouwen) en de Ulugh Beg Madrasa (het belangrijkste monument van Ulugh Beg) in Samarqand op Bagdad zijn georiënteerd. Een dergelijke oriëntatie kan overeenstemmen met Tīmūr's poging om zijn rijk te affiliëren aan het 'Abbāsīdische kalifaat van Bagdad. Daarnaast hebben de twee laatstgenoemde gebouwencomplexen vrijwel dezelfde geografische oriëntatie als de Ka'ba in Mekka. Door de oriëntatie van de Ka'ba te volgen, verkrijgen de Bībī Khānum Moskee en de Ulugh Beg Madrasa in Samarqand de status van *Axis Mundi*, dwz. een kosmisch centrum van het *tīmūridische* rijk. Het rijk krijgt daarop de status van het meest vooraanstaande islamitische rijk van de 15de eeuw met Samarqand als hoofdstad, omringd door dorpen met

namen van vroegere glorieuze islamitische hoofdsteden zoals Damascus, Bagdad, Caïro en Sultaniya.

De laat 14de-eeuwse vernieuwing waarbij het voornaamste heiligdom van de moskee langs de belangrijkste lengteas van vier-*ṭwān* moskeeën en madrasa's werd geplaatst, kan men ook verklaren als poging om het gehele gebouw te draaien naar voorbeeld van de oriëntatie van de Ka'ba. De *qibla* in het zuidwesten is daarmee 'het dichtst bij' Mekka en loopt dwars op de desbetreffende muur van de Ka'ba.

Het belangrijkste oogmerk van dit proefschrift is aantonen dat het vier-*ṭwān* schema werd gebruikt om politieke agenda's en vorstelijke ambities te representeren. De hiërofanische essentie is aangewend om een verbinding te leggen met het glorieuze, vorstelijke verleden door het beeld van het paradijs op te roepen via een vier-*ṭwān* bouwwerk. De vorst bevestigt zijn alomvattende goddelijke macht als opdrachtgever voor de bouw van een religieus gebouw gebaseerd op een paradijselijk schema, gesitueerd in het centrum van een orthogonale vorstelijke hoofdstad, dat op zijn beurt de totaliteit van de macrokosmische wereld op een microkosmische schaal representeert.

Curriculum Vitae

Elena Paskaleva was born on 2 June 1975 in Ruse, Bulgaria. In 1994 she completed her secondary education at the English Language School “Geo Milev” in Ruse. Until 1998 she studied Architecture at the University of Architecture, Civil Engineering and Geodesy in Sofia, Bulgaria. Between 1998 and 2002 she continued her studies in Architecture at the Bauhaus University Weimar and in Art History at the Friedrich-Schiller University Jena, Germany. During that period, Elena Paskaleva worked as a scientific student assistant at Knoten Weimar, the International Transfer Centre for Environmental Technologies at the Bauhaus University Weimar. For the academic year 2001 - 2002 Elena Paskaleva won a DAAD Socrates Scholarship at Manchester Metropolitan University, United Kingdom. In 2004 she obtained her MA degree (cum laude) in Comparative World Architecture Studies from Leiden University. Her master thesis focussed on the parallels between the four-*īwān* plan and the *čahār-bahr* garden. Between 2004 and 2007 Elena Paskaleva worked as a scientific collaborator at the Department of Civil Engineering at the Bauhaus University Weimar, Germany and as an deputy programme manager at the International Department of the Netherlands Institute for City Innovation Studies (NICIS) in The Hague. Since 2005 she has been conducting PhD research at Leiden University. Invited by the Uzbek Embassy to Brussels, in 2006 Elena Paskaleva was a guest lecturer at the University of Architecture in Tashkent and carried research work in the cities of Khīva, Samarqand and Bukhārā in Uzbekistan. The current PhD dissertation is based on these research results.