THE VISUAL AND SPATIAL STRUCTURE IN MUGHAL URBAN DESIGN:

THE 16th CENTURY CITY OF FATEHPUR SIKRI, INDIA

by

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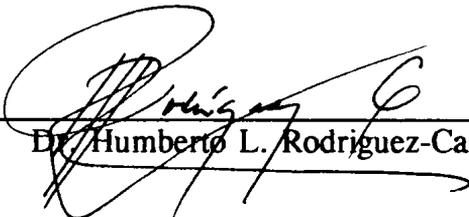
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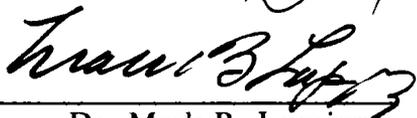
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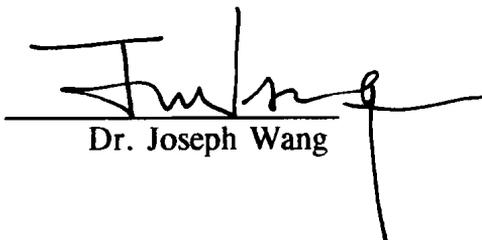
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(ABSTRACT)

Fatehpur Sikri is a world heritage monument. It was commissioned by the Mughal Emperor Akbar and was constructed in less than fifteen years (1569-1574). Fatehpur Sikri served as the capital of the Mughal empire for a very short time, from 1569 to 1585. At present, most of its buildings remain in excellent condition. It is a city frozen in time. This dissertation has examined the city of Fatehpur Sikri in the context of its history, design theory, rituals, settings and principles of spatial design.

The layout of the imperial complex of Fatehpur Sikri is unique in its spatial organization. It has no streets, but consists of a series of interlocking courtyards set to the cardinal points. The design of individual monuments is based on symmetry but in the layout of the complex, the rules of symmetry are broken and asymmetry is deliberately employed. The dissertation concludes that this unique layout may have been employed to provide flexibility in order to accommodate different buildings and spatial conceptions. It creates a rich and dramatic visual environment within the complex. The layout also reflects the themes of Din-i Ilahi, the religion founded by Akbar and which was a synthesis of Hinduism, Islam, Jainism, Zoroastrianism and Christianity.

The plan of Fatehpur Sikri is analyzed in the framework of the mandala, a Hindu concept of architectural spatial planning and town planning. The research concludes however, that the plan was not developed within this rigid framework. The dissertation also examines the layout of Fatehpur Sikri in terms of its social and court activities. It was

found that there is a strong connection between the layouts of the imperial complex of Fatehpur Sikri and the Mughal camp. The spatial structure of the Mughal camp plan was organized on the concepts of functional zoning based on public, semi-public and private space.

The dissertation proposes solutions to the functions of the Diwan-i-Khas, the Turkish Sultana, Birbal's palace and the royal bazaar. The functions of these buildings are in controversy among various architectural historians. The research establishes that the Diwan-i-Khas had a symbolic meaning. The interior arrangement of the building consists of four bridges connected to the circular platform on the richly carved column in the center. The central column symbolized the axis from which the emperor ruled; this axis was also a connection between the Emperor Akbar, God and the earth. The Turkish Sultana was used by the emperor as a special meeting place. Birbal's palace was the residence of one of Akbar's favorite queens. The building next to this was a royal bazaar where merchants came regularly to sell valuable items to the women of the harem.

The spatial structure was created through the use of the principles of asymmetry, multiple axes, enclosure, change in level, transparency, and the element of surprise. Human scale was achieved by emphasizing horizontal facades and lines. To create visual interest horizontal facades were punctuated by introducing monumental scale in the Panch Mahal, the Buland Darwaza and the Badshahi Darwaza. The buildings were also crowned by small pavilions which create a dramatic skyline. The visual image of Fatehpur Sikri is therefore reflected in its unique skyline as well as its landmarks: the Panch Mahal, the Buland Darwaza, Salim Chisti's Tomb, and the profusely carved central column of the Diwan-i-Khas. At present, very few visitors are introduced to the Rang Mahal, the Stone Cutters' Mosque, the caravanserai, the Hiran Minar and the Hathi Pol. The study recommends that a unified circulation system be developed to join together all these major monuments of Fatehpur Sikri in accordance with the historic era.

To Vishvakarma,
the architect of the Universe,
and his disciples,
the artisans and designers of India.

DEDICATION

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I wish to express my sincere appreciation and gratitude to my dissertation committee members without whom this stage would have not been possible. It was a pleasure working with them.

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necessary tools to analyze a problem in an interdisciplinary framework. He is the key person to my professional growth. His understanding, warmth and concern have always kept me on an even keel. I have turned to him many times for some very sound advice. After Guelph, I had the privilege to teach and work with him at the College of Architecture and Design at Kansas State University where he served as the dean. I will always be grateful to Professor Lapping for his help in the development of this dissertation.

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Most of my family live many miles away in India and in Trinidad but this did not deter them from providing the prayers and support to sustain me throughout this period. My brother, Charanjit also deserves special credit. He accompanied me to Fatehpur Sikri and Agra and made every effort to make my stay comfortable. Finally, I would like to thank my wife, Vashti for all her help and encouragement. She was supportive from the very beginning to this final stage and shared all my highs and lows with me. We had a number of lively conversations about the Mughals which helped to clarify some of the issues of the era. She also went through the entire manuscript and made very useful suggestions. My son, Amandeep became very interested in my work. He understood that his Dad was trying hard to accomplish an important mission and in his own way tried to help. My little girl, Simran always kept me cheerful and lively, even under stress. Both my children gave me the strength and determination to finish my work.

GLOSSARY

akbar	great
Akbar-Nama	biography of Akbar
Ain-i-Akbari	a book which provides Akbar's daily activities
Babur-Nama	Babur's autobiography
badgir	a wind catching tower
bagh	garden
badshah	emperor
Bhagavat Gita	a Hindu religious text
baradari	twelve doors
bazaar	market
chadar	inclined plane over which water runs in a Mughal garden
caravanserai	an inn for travellers and their beasts of burden. Usually a four-sided enclosure with fortified corners and one or two gates
charbagh	a garden divided into quadrants by water channels
char suq	an open square with shops all around and four gates: one on each side
Chisti	reference to the sixteenth century Sufi saint, Salim Chisti
chattri	a covered pavilion supported on pillars

comoditas	the category to study architecture established by Vitruvius, a Roman architect in the first century BC in terms of building functions
daftar khana	office
darshan	appearance
darwaza	gate or door
diwan	finance minister
Din-i ilahi	the religion conceived by Akbar which was a synthesis of Hinduism, Islam, Jainism, and Zoroastrianism
Diwan-i-Amm	Hall of Public Audience
Diwan-i-Khas	Hall of Private Audience
firdaws	garden or paradise
firmitas	this is the category to study architecture established by Vitruvius, a Roman architect in the first century BC in terms of materials and structural techniques
Ganges	a sacred river in India
gurgan	son-in-law
haj	the pilgrimage to Mecca recommended for all Muslims
hammam	a bath with hot and cold chambers modeled on ancient Roman baths called Roman baths
harem	the women's section of a palace; also known as the zenana
Hindustan	India
Ibadat Khana	house of worship where Akbar discussed religion
jalis	perforated screens

GLOSSARY

Jami masjid	a mosque
jharokha	a window or balcony from which an emperor displayed himself to his subjects or nobles
jihad	holy war
jiziya	tax on non muslims
Kabir	the fifteenth century saint who preached religious unity
karmuka	bow or semi circular shape
karmuka-khadga	a plan for laying out a town in a semi-circular form described in the Hindu architectural and town planning treatise of the Mansaras
kazi	minister of judicial affairs
kharkhanas	workshops
khutba	prayer legitimizing an Islamic sovereignty
Koran	sacred book of the Muslims
kuroh	milestone representing a distance of two miles
madrasa	a school for religious instruction
Mahabharata	a Hindu religious text
mahal	palace
maidaan	a multi purpose open space in a village or town
mandala	a Hindu concept of spatial layout
Mansaras	Hindu architectural text
manzil	building
mardana	masculine space: the world of men

mihrab	a prayer niche in the wall; it indicates the direction of Mecca
mir bakshi	army minister
nakhsha	architectural plan
naqqar khana	drum house also known as <u>naubat khana</u>. Drums were played to inform subjects of the emperor's presence in the Diwan-i-Amm. Drums were also played at the emperor's arrival at or departure from the palace
nawruz	Iranian New Year on March 21
pardakhsana	circumambulation
pavilion	ornamental building; its roof is supported on columns
qibla	the wall of a mosque which faces Mecca
Ramayana	Hindu religious text
Ram Charit Manas	another name for the Ramayana
saligrah	a birthday
salwar kameez	women's dress indigenous to northern India
sari	Hindu women's dress
serai	an inn
shikaras	the roofs of Hindu temples
silpa-sastra	a chapter of the <u>Mansaras</u>, a Hindu architectural treatise which deals with town planning principles
sufi	a mystic
taksal	mint
taswir	picture

ulema	the scholars or jurists of Islam who have authority over religious matters
Vedas	Hindu religious texts
venustas	the category to study architecture established by Vitruvius, a Roman architect in the first century BC in terms of aesthetics and symbolic expression
veranda	porch or balcony with a roof supported by pillars extending on the outside of a building
viharas	Buddhist monasteries
Vishnu	Hindu god: the preserver of the universe. Part of the Hindu trinity which includes Brahma, the creator and Mahadev, the regenerative aspect of God.
wazir	prime minister
Yumuna	a river in India. The Taj Mahal is located on its bank
zenana	feminine space: the world of women

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

LIST OF ILLUSTRATIONS AND THEIR SOURCES

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[1] This map is adapted from Welch's (1985) India: Art and Culture: 1300 - 1900 to show the region from which the Mughals came and its proximity to India.

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[2] This is a part of the total site plan of Humayun's Tomb.

ILLUSTRATIONS   xix

ILLUSTRATIONS

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[3] This drawing is adapted from Petruccioli's (1992) Fatehpur Sikri: La citta del sole e delle aque to show the present building layout.

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[4] This base drawing is adapted from Volwahsen's (1970) Living Architecture: Islamic Indian.

[5] This line drawing of the Mughal Camp is taken from Petruccioli's (1988) Fatehpur Sikri: La citta del sole e delle acque. The drawing is labelled to show the spatial functions of the era.

[6] The base drawing is taken from Volwahsen's (1970) Living Architecture: Islamic Indian. This has been adapted to show the spatial analysis in the terms of the Mughal encampment.

[7] This drawing is adapted from Volwahsen's (1970) Living Architecture: Islamic Indian to show the mandala in the form of the nine square grid.

ILLUSTRATIONS   xxii

---

[8] This base drawing is taken from Herdeg's (1990) Formal Structure in Indian Architecture. The movement patterns of Akbar's era are added to this.

ILLUSTRATIONS

ILLUSTRATIONS   xxix

ILLUSTRATIONS   xxx

_____

[9] This figure is adapted from Petruccioli's (1988) Fatehpur Sikri: La citta del sole e delle acque.

[10] This plan is adapted from Volwahsen's (1970) Living Architecture: Islamic Indian.

A NOTE ON ILLUSTRATIONS:

All the photographs in the dissertation were taken by the author unless credit is otherwise given at the caption.

1 - THE SIGNIFICANCE AND SCOPE OF THE STUDY

This research focuses on Fatehpur Sikri, a sixteenth century city, which has been identified as a world heritage monument. The city was commissioned by Akbar, the third ruler of the Mughal dynasty. This chapter discusses the main objectives and importance of the study and elaborates on the methodology employed. It also provides an overview of the entire research which is broken down into seven sections.

1.1. OBJECTIVE OF THE STUDY

This study analyzed the plan of the Fatehpur Sikri complex in its present state. The focus was not on individual buildings. There were four main objectives[1]; the first was to understand the visual and spatial structure of exterior spaces, that is, how the buildings are located on the site. This was viewed in context of the historical evolution of the complex. The second objective was to look at the layout of Fatehpur Sikri on the basis of the mandala[2] in Hindu architecture and town planning which is described in the Hindu text Mansaras Silpa-Sastra[3]. The third objective was to understand the relationship of

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[1] Michael Brand and Glen D. Lowry (1987) also pinpoint these areas to be very important and worth pursuing in future research of the complex. These conclusions came out of the International Symposium on Fatehpur Sikri which was held at Harvard University in October 1985.

[2] Cf. Chapter 5.

[3] Silpa-Sastra can be compared with the writings of Vitruvius. The main difference between them is that Silpa-Sastra emphasizes ritualistic significance whereas Vitruvius's writing stresses practicality. A complete translation of the Mansara Silpa-Sastra first appeared in the English language in 1933, and it comprises five volumes with an encyclopedia: Prasanna Kumar Acharya (1933), Architecture of the Mansaras. London:

one building to another in terms of its functions, such as court activities. The last objective was to understand the design and planning principles employed to create the exterior spaces of Fatehpur Sikri.

1.2. THE IMPORTANCE OF THIS STUDY

This research is unique because it analyzed the entire complex of Fatehpur Sikri in terms of buildings and open spaces. They were studied in terms of their physical and functional relationship to one another. A number of studies have been done on Fatehpur Sikri but they all focus on individual architectural monuments. Edmund W. Smith's work, The Mughal Architecture of Fatehpur Sikri is a comprehensive survey of the complex which was completed in the nineteenth-century. It provides documentation and vast information on the individual buildings of the complex (Smith, 1875-97).

Percy Brown has also done significant work in the field of Indian architecture. His two books on Indian architecture dealing with the Buddhist, Hindu, and Islamic periods are considered classic works and are used as standard texts in almost all architecture schools in India. Percy Brown's work deals with the architecture of the individual buildings in Fatehpur Sikri (Brown, 1962). There are recent studies by Ebba Koch (1991) and Catherine Asher (1992) on Mughal architecture which also deal with the individual monuments of the complex. Percy Brown (1962), Ebba Koch (1991), and Catherine Asher (1992) provide a comparative analysis of the style and ornamentation of the buildings in the complex to similar styles found in different regions of India. These studies, however, do not analyze the layout of the entire complex.

Rizvi and Flynn (1975) have also analyzed individual buildings but so far there has been no in-depth analysis of the relationship of one building to another or to the layout of the

Oxford University Press (Evenson, 1966, p. 101).

complex as a whole. The articles by Satish Davar and Attilio Petruccioli are among the few studies that examine the layout of the whole plan of Fatehpur Sikri. Darvar approaches the city's structure in terms of function. His results are hampered by his identifying clearly defined imperial palaces and baths or pleasure pavilions as kitchens. Petruccioli concluded that the layout was a response to the presence of the Jami Masjid which was built first, yet historical textual evidence indicates that the Jami Masjid was built after the complex. (Lowry, 1987, p. 26).

Hamby's (1968) Cities on Mughal India and Hurlimann's (1965) Delhi, Agra and Fatehpur Sikri also provide general information about these three Mughal cities. These books, however, do not deal with architectural history or spatial analysis. Hamby's book has no architectural plans, whereas Hurliman's book provides layout plans for the forts at Delhi and Agra and the Fatehpur Sikri complex. These, however, are not in-depth studies; they cater to tourists travelling to India to visit these historical places. Both of these books are well-illustrated with the help of color and black and white photographs.

Kulbushan Jain (1983) in his article "Fatehpur Sikri: some unanswered questions" raises a number of questions regarding the conception, execution and abandonment of Fatehpur Sikri. Jain argues that the Panch Mahal was conceived as a free standing structure before the building of Fatehpur Sikri. His remarks, however, are based on speculation and not on historical evidence. According to Fatehpur Sikri: Source Book, the imperial complex of Fatehpur Sikri was built in a relatively short time by one ruler (Lowry and Brand, 1985, p. 5). The Panch Mahal was part of the original design of the imperial complex.

The recent work on Fatehpur Sikri includes two books by Attilio Petruccioli. The first, Fathpur Sikri (1988) is an Italian edition while the second, Fatehpur (1992) is the English edition. In the Italian edition, Petruccioli discusses the complex only at the level of basic

architectural forms. He hardly goes into detail and does not have a separate discussion on many of the idioms and styles that are eclectically incorporated in Fatehpur Sikri (Ray, 1989). The merit of this book lies in its excellent drawings and black and white photographs. The English edition, Fatehpur Sikri, provides an architectural history of the complex with many beautiful color photographs.

Petruccioli (1992, p.12) suggests that "there existed two superimposed cities - the mardana and zenana - the world of men and women, whose path never cross". He further contends that the queens were able to walk along the lakefront. By examining the complex through the medium of Mughal and traditional Islamic culture, this is found to be highly unlikely. Islamic and Mughal women lived their lives in purdah, in strict seclusion from the men. The women of the harem would therefore not be permitted to walk to the lakefront since this would mean going to the vicinity of the caravanserai, which was a public place.

Petruccioli also identifies Birbal's palace as the Ibadat Khana or the House of Worship where Akbar held his religious discussions. This building is located within the harem section of the complex. It is therefore questionable that the emperor would invite male scholars into this private zone.

In contrast, this study of Fatehpur Sikri is important because at present very little work has been done in the areas of spatial structure and analysis of the Mughal complexes. This study will familiarize architects, urban designers and art historians both in India and in the west with spatial order and design concepts as applied to Mughal architecture. It is a contribution to architectural history and theory and provides an understanding and appreciation of Mughal history, aesthetics and tradition. This study also provides valuable input into the areas of preservation and restoration of Mughal architecture. The research methodology developed in this research will serve as an analytical model for the

study of other Mughal complexes in the areas of spatial design and architecture.

1.3. RESEARCH METHODOLOGY

Fatehpur Sikri is the result of a unique history and social and political forces of the time. As a result, it was important to examine Fatehpur Sikri through the historical, social and political context of Mughal time and culture. The research raised questions such as 1) why the physical structure of Fatehpur Sikri emerged in a particular fashion; 2) why the spatial structure of this complex is different from other Mughal complexes. The plan of the spatial organization of Fatehpur Sikri was not accidental. It was based on the themes of Din-i ilahi, a religion started by Akbar. His objective was to unite the people of his empire. This is revealed in the architecture and spatial organization of Fatehpur Sikri which reflects the religions and architecture of his empire. Therefore the layout of Fatehpur Sikri was examined in the context of historical, social and cultural issues.

Fatehpur Sikri in its present state was examined at three levels: the regional scale, the local scale and the site scale. On the regional scale, Fatehpur Sikri was analyzed in relation to Agra and Ajmer, the home of the famous Sufi saint Khwaja Muin ad-Din Chisti (d. 1236). The study, in the local context looked at the relationship of the complex to the surrounding environment. This provided information about the spatial connections between the complex and the city. At this level, the complex was looked at as a whole in terms of its function and spatial structure. In order to examine the function of the buildings, it was important to understand the culture and court activities of the time. This is because the use of space is strongly related to culture and it changes with new life styles. The functional use of the complex could not be studied on the basis of the rational and scientific approach of the western world. Five hundred years ago the buildings of Fatehpur Sikri may have been designed on the basis of flexibility and they may have been used in more than one way.

Fatehpur Sikri was also investigated in terms of the spatial concepts of the Mughal camp as well as in terms of its population, social stratification and political structure. The buildings of Fatehpur Sikri have a variety of forms and ornamentation which have been imported from other parts of India. Therefore they were examined in the larger framework of Mughal, Islamic, Hindu and Buddhist architecture of India.

In similar fashion, The New Jerusalem by Kutcher (1975) and Making Townscape by Tugnutt and Robertson (1987) emphasized the need to study a site at three levels: the regional context, the local context and finally the site specific. The function of the complex was studied and established on the basis of Akbar's court life. To study the function of the buildings and the exterior spaces in terms of court activities and social life, Brand and Lowry's (1985) Fatehpur Sikri: A Source Book was used as one of the bases. This book draws information from various historical documents regarding a description of the structures and social activities of Fatehpur Sikri. Mughal miniature paintings were also examined because they provide valuable information about court activities and daily rituals.

The earliest methodology to study architecture in the West was developed by Vitruvius. He established three categories: firmitas, utilitas and venustas. Firmitas stresses the use of materials and structural techniques whereas utilitas stresses the function of buildings and venustas emphasizes the use of aesthetic and symbolic expression of design (Kruft, 1994, p. 24). The methodology developed for this study falls under the categories of utilitas and venustas.

Major interest in studying architecture and urbanism started in the late nineteenth century in Germany. Heinrich Wolfflin's work in the late nineteenth and early twentieth century is considered a classic work in the study of art and architecture. His methodology is based primarily on the analysis of paintings. He almost ignores history and uses no

architectural plans or sections for studying architecture. His approach utilizes lines and planes, and he looks at the elevations of buildings in terms of vertical planes from one static point, the center. This analysis of vertical planes is conducted in terms of five principles of polarities: Linear versus Painterly; Plane versus Recession; Closed Form versus Open Form; Multiplicity versus Unity; and Absolute Clarity versus Relative Clarity. These principles were derived from comparing and contrasting Renaissance with Baroque architecture[4] (Wolfflin, 1932).

A painting has two dimensions but it may imply three dimensional characteristics as well as movement. A sculpture, on the other hand, has three dimensions. Man always acts as an outsider while observing a painting or a sculpture and is physically detached from them. In contrast, man is a part of the physical environment in architecture; he enters and apprehends by moving within it (Zevi, 1993, p. 22).

Paul Frankl was a student of Wolfflin but he was very critical of his approach. Frankl realized that Wolfflin's approach to the study of architectural history from a single point was static. It was like a photographer looking at the building from the most favorable point. Frankl advocates movement as an important ingredient in the study of architectural and urban forms[5]. He establishes four categories for architectural and urban space analysis: spatial composition (void); treatment of mass and void (body); treatment of light, color and optical effects (visions); and the relationship of design to

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[4] Heinrich Wolfflin published <u>Renaissance and Baroque</u> in 1888. It was first translated from German into English in 1961. He also wrote <u>Principles of Art History</u> in 1915; this was translated into English in 1932. The methodology employed in both books is based on analyzing building facades in isolation but its main drawback is that it does not employ studying buildings in their context.

[5] In the words of Bruno Zevi (1993, p. 58): "Each photograph is like a single phrase taken out of the context of a symphony or of a poem, a single gesture of an intricate ballet, where essential value must be sought in the movement and totality of the work."

1. THE SIGNIFICANCE AND SCOPE OF THE STUDY   7

social functions (purpose). Frankl was also the first to make a meaningful connection between architecture and social and cultural issues. These aspects were ignored by Wolfflin. In contrast to Wolfflin, Frankl uses architectural plans in his analysis[6] (Frankl, 1968).

In this research, it was also important to study the iconography and iconology of the art and architectural forms of Fatehpur Sikri. The pioneering work in this area is done by Erwin Panofsky. He cautions that many times iconography and iconology have more than one meaning attached to them. Therefore it is important to see them through the medium of culture and history of a particular area (Panofsky, 1955). Therefore the iconography and iconology of Fatehpur Sikri were analyzed in the context of Akbar's era, because meaning changes with time and also culture.

To study architecture and urbanism, the movement patterns of Akbar's period were identified. On this basis, a path was selected through the whole complex and visual analysis was conducted at the site of Fatehpur Sikri. As a point of comparison, visual analysis was also carried out at the Agra Fort and the Delhi Red Fort. Information on the visual journey was gathered with notes, photographs and videotape. Buildings were observed from a number of points in space. This was done to include the factor of movement into the study.

The importance of movement has been stressed by Gordon Cullen (1961) and Edmund Bacon (1976). Cullen's work emphasizes the importance of spatial sequences in

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[6] Le Corbusier also emphasized the importance of an architectural plan in studying and creating architecture. In his words, the plan is the generator of architecture. The whole structure rises from its base and follows a rule that is inscribed on the ground. Where there is no plan, there is no greatness of intention and expression, no rhythm, no volume, no coherence (Guiton, 1981, p. 38).

1. THE SIGNIFICANCE AND SCOPE OF THE STUDY   8

experiencing the sensation of spaces. According to him, as the observer moves through the townscape[7], the buildings and the objects alter in relation to their parts and also in relation to the rest of the visual environment. This results in the transformation of movement[8] from the static visual environment into a dynamic one (Cullen, 1961).

From the site information, design principles were analyzed. There were two objectives of the visual analysis. The first was to capture the image and visual experience of Fatehpur Sikri. The second objective was to make the spatial structure and design principles understandable to environmental designers and planners.

In brief, spatial structure in the study was carried out in the context of the historical evolution of Fatehpur Sikri along with the spatial concepts of mandala which provides rules for the laying out of buildings and towns. Fatehpur Sikri was also examined through the social and political climate of Akbar's time as well as through the medium of Din-i illahi since these conditions provided a stage for its creation. The complex was compared with other Mughal complexes: the Agra Fort and the Delhi Red Fort. The first was commissioned by the Emperor Akbar whereas the second was done by his grandson, Shah Jahan. The spatial structure of the Delhi Red Fort was examined in the light of Shah Jahan's personality. Finally, a visual analysis was carried out for the explanation of the principles of spatial structure and design.

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[7] Gordon Cullen (1961) in The Concise Townscape coined the term "townscape" which is described as a visual composition of buildings and open spaces. He uses sketches, drawings and photographs to capture the sensation of movement through townscapes.

[8] Le Corbusier also emphasized the importance of movement in creating and studying architecture. In Corbusier's words, "architecture can be seen only by a walking man ... so much so that when it comes to the test, buildings can be classified as alive or dead according to whether the rule of movement has been applied or not" (Guiton, 1981, p. 38).

The research employed architectural drawings, photographs and miniature paintings as tools. The studies done in the past by a number of scholars including Frankl (1968), Zevi (1957), Zucker (1959), Bacon (1976), and Kutcher (1975), have established architectural drawings and photographs as viable analytical tools for analyzing architecture and exterior spaces. This study employed the drawings prepared by Volwahsen (1970) and Petruccioli (1988). In addition, the site visits provided information on the principles of spatial structure and site planning as applied to Fatehpur Sikri.

1.4. THE PLAN OF THE STUDY

The first chapter states the objectives, importance and methodology of the research. The second chapter provides a historical background of the Mughals as well as the social and political forces of the Mughal time. The third chapter provides a context for Mughal architecture and spatial conceptions. It makes connections between the Mughal architectural and spatial forms with the pre-Mughal forms in India.

Chapter four traces the historical evolution of Fatehpur Sikri and examines the city in the regional, national and local context of the Mughal time. Chapter five analyzes the form and function of Fatehpur Sikri and investigates the function of various buildings and courtyards in terms of the social activities of the Mughal times. It also examines Fatehpur Sikri in the framework of mandala, a Hindu concept of spatial organization in architecture and town planning. Finally, the chapter compares the architecture and urban design of Akbar and Shah Jahan.

Chapter six is based on a site visit to Fatehpur Sikri as well as the Mughal complexes of the Delhi Red Fort and the Agra Fort. The objective was to understand the design and planning principles employed in the creation of the exterior spaces. Information at the sites was gathered with photographs, video film and notes. The seventh chapter

summaries the research and discusses the research findings. It also makes recommendations for future studies. The chapter finally looks at the lessons which can be drawn from this study.

1.5. SUMMARY

This chapter defined the objectives of the research and also dealt with the importance and relevance of it. The study is important because very little work has been done in the area of spatial analysis of not only Fatehpur Sikri but also of the Mughal complexes of Agra and Delhi. It analyzed the layout of the Fatehpur Sikri complex in its present state unlike most of the work done in the past which focussed on individual monuments.

The chapter also details the research methodology employed. Fatehpur Sikri was examined in the context of historical, social and political forces. This provided the setting stage for the evolution of Fatehpur Sikri. It looked at its spatial structure in a historical context as well as in the frame work of the existing design theory of Akbar's time. The study also examined the buildings and the exterior courtyards in terms of the social life and court activities of the time. Iconography and iconology were examined in the context of Mughal time. Finally the principles of spatial conceptions were studied by site visits. The information at the site was collected in the form of photographs, video, sketches and notes. Western methodologies to study architecture and urban form were tailored and modified for this research.

This study will be a contribution to architectural history and theory and will provide an understanding and appreciation of Mughal history, aesthetics and tradition. The study also provides valuable input into the areas of preservation and restoration of Fatehpur Sikri. The research methodology developed in this research can also be used as an analytical model for the study of other Mughal complexes in the areas of spatial design and architecture.

1. THE SIGNIFICANCE AND SCOPE OF THE STUDY

2 - INTRODUCTION: A BACKGROUND STUDY
OF THE MUGHALS

The objectives of this chapter are fourfold. It first looks at the historical background of the Mughals in an attempt to answer questions such as who they were and where they came from. Second, it examines Din-i ilahi, the religion founded by Akbar and investigates his personality and his religious policies towards his subjects. The third objective is to explore the administrative and political structure of Akbar's period of rule. Finally, this chapter looks at the impact of the Mughals on Indian society.

2.1. THE MUGHAL HISTORY

India, at the end of fourteenth century was penetrated by Mughal[1] armies from Samarkand[2], Central Asia (cf. Figure 2-1). Under the leadership of Timur[3], they

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[1] The word Mughal means " Mongol " in the Persian language (Koch, 1991). It refers to the central Asian dynasty of Turkish descent which began with Babur and which ruled a large area of India from 1526 to 1857 (Westcoat, 1989). Their courts were highly cultured and in the seventeenth century, the Europeans gave them the title "The Great Mughals" since they were richer than the aristocrats of London or Amsterdam. The first six great Mughals, father to son ruled India for six generations (Gascoigne, 1971).

[2] Samarkand is located in the southern republic of Uzbekistan which was formerly a part of the Soviet Union. Uzbekistan is due north of Afghanistan.

[3] Timur who was known to the West as Tamerlane (derived from Timur the lame) came from a tribe called the Barlas Turks. It is believed that the Barlas Turks were originally Mongols who had adopted Turki as their language (Gascoigne, 1971, p.15). In 1380, Timur invaded Persia and in 1390, he occupied Moscow. He led the bloody

Ferghana

Bukhara
Samarkand

Tabriz

Herat
Kabul

Kandahar

Shiraz

KASHMIR
Srinagar
Jammu
Chamba
Basohli PAHARI REGION
Kangra
Lahore Guler
PUNJAB

Indus R.

Delhi
Bikaner
RAJASTHAN Fatehpur-
Sikri
MARWAR Amber Agra
Jodhpur Jaipur
Kishangarh Gwalior Lucknow
MEWAR Bundi Banaras
Udaipur Kotah
Raghugarh
MALWA

Ganges R.

Jumna R. Chunar

BIHAR
Dacca
BENGAL
Calcutta

GUJARAT

INDIA

Burhanpur

GULF
OF
CAMBAY
Ahmadnagar
Bombay DECCAN
Godivari

ORISSA

BAY
OF
BENGAL

ARABIAN
SEA

Bijapur Golconda
Kistna R. Hyderabad

ANDHRA

GOA
Vijayanagar

KARNATAKA

Madras

Mi. 0 100 200 300
Km. 0 100 300
200

MALABAR COAST

KERALA
Calicut
Ootacamund
TAMIL
NADU

SRI
LANKA

INDIAN
OCEAN

Figure 2-1: The world of the Mughals

2. INTRODUCTION

13

conquered Delhi and its surrounding areas, breaking up the empire of the Turkish sultans. The Mughals then had to withdraw from India because their armies were required to crush rebellions in Western Asia. After 1414, Delhi was governed by the Sayyids[4], who were put on the throne by Timur. In 1450, power was transferred from them to the Afghan rulers of the Lodhi dynasty (Volwahsen, 1970, p. 7).

Babur, the founder of the Mughal dynasty in India, was of Mongol and Turkish ancestry; he was the descendent, on his mother's side, of Genghis Khan and on his father's side, of Timur[5]. Both of these men, in the fourteenth century, conquered territories which were part of the Persian empire and at one point, Timur ruled the whole of Persia. Being a nomadic people, the Mongols did not develop a strong sedentary civilization and culture. Instead they adopted the culture of the countries they captured and were greatly influenced by Persian culture. To make his capital, Samarkand, the most impressive city in the world, Timur took with him a large number of master builders, architects, artists, poets and garden designers from Persia (Jellicoe, 1976, p. 109). He also brought stone masons from India (Moynihan, 1979, p. 75).

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[3] Timur who was known to the West as Tamerlane (derived from Timur the lame) came from a tribe called the Barlas Turks. It is believed that the Barlas Turks were originally Mongols who had adopted Turki as their language (Gascoigne, 1971, p.15). In 1380, Timur invaded Persia and in 1390, he occupied Moscow. He led the bloody conquest of Delhi in 1398 then moved across Armenia, and in 1402 defeated the Ottoman Turks. His troops were said to "move like locusts over a green field" (Moynihan, 1979, pp. 71-72).

[4] From 1206 to 1526, India was dominated by a series of independent sultanates which centered around Delhi. These comprised of a number of successive dynasties: "Slave", Khalji, Tughluq, Sayyid, and Lodhi (Michell, 1987).

[5] Babur was much more proud of his connection with Timur whom he considered a Turk. In Babur's time, the name Mongol was synonymous to barbarian. Timur, on the other hand, was proud of his title Gurgan or son-in-law to the Mongol royal family, which he acquired by marrying a princess descended from Genghis Khan (Gascoigne, 1971, p. 15).

2. INTRODUCTION

Babur, the first Mughal emperor, was born in 1483. He became ruler of the tiny kingdom of Ferghana (cf. Figure 2-1) at the age of eleven. Babur spoke and wrote Turki which remained the private language of the Mughal royal family in India (Gascoigne, 1971, p. 15). His early years were embroiled in battles to retain Ferghana and to capture Samarkand. Although he was initially successful in this venture, he eventually lost both and was therefore forced to turn his eyes southward to Kabul in Afghanistan and to India (Jellicoe, 1976, p. 110).

It was on his way to Kabul in 1503 that Babur heard for the first time the story of Timur's invasion of India. He then decided to follow in the footsteps of his great ancestor and repeat this invasion (Srivastava, 1964a, p. 318). In 1504, Babur conquered Kabul and stayed there up to 1526 when he used it as a springboard from which to invade India. Babur[6] writes, "As it was always in my heart to possess Hindustan, and as these several countries had been once held by the Turks, I picture them as my own, and was resolved to get them into my hands, whether peacefully or by force." Babur also sent an ambassador to Delhi "to demand that the countries, which from the old had belonged to the Turks, should be given up to [him]." But the ambassador was detained on the way and Babur never got a reply (Srivastava, 1964a, p. 318).

Babur finally penetrated into India in 1526 from Afghanistan. At that time India was governed by Ibrahim Lodhi, an Afghan ruler of the Lodhi dynasty. He was defeated by Babur at the battle of Panipat in India. Babur became the first ruler of the Mughal

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[6] Babur was gifted with unusual observation. While travelling through northern India he took notes of not only the physical characteristics of the country in terms of topography, climate, flora and fauna, but of the social, economic and cultural conditions of the people. All of this is described beautifully in his autobiography Babur-Nama. This book was originally written by Babur in his mother tongue, Turki. It is written in a simple, readable and graceful style. It was first translated into English by Annette Beveridge in 1922.

2. INTRODUCTION

dynasty in India but he only ruled for four years. At his death he was succeeded by his eldest son Humayun who ruled from 1530 to 1540 and 1555 to 1556. During the tenth year of his reign, Humayun was defeated by Sher Shah Sur[7], an Afghan descendent from Bengal. To save his life, Humayun had to flee his territory. He wandered aimlessly through the country and during this period, he met and married a Persian woman. During their exile in 1542, they found hospitality at the small fort of the Rajput chief of Umarkot situated in Western Sind. It was at this fort where Akbar was born on November 23, 1542. Humayun, with the help of some loyal Rajputs, tried to retake the Indian throne. When this failed, he fled to Persia where he was well received by Shah Tahmasp, the Safavid ruler (1524-76). Shah Tahmasp offered to help him regain his throne by providing him with twelve thousand horsemen. In 1555, Humayun reclaimed the throne of India but in the following year, was killed in an accident[8]. Upon his death his fourteen year old son Akbar[9] was enthroned (Wellesz, 1952, pp. 1-2).

2.2. AKBAR AND HIS RELIGIOUS POLICIES

Akbar's full name was Jalalad-Din Muhammad Akbar and he ruled from 1556 to 1605. Since he was only fourteen years old when his father died, Akbar's reign began under the guardianship of his Persian general, Bairam Khan. At the age of eighteen, however, Akbar himself took charge of state affairs. Bairam Khan rebelled against him but was subsequently pardoned and sent to Mecca for pilgrimage (Volwahsen, 1970, p. 8;

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[7] Sher Shah Sur's former name was Sher Khan. When he became ruler he proclaimed himself with the title of Sultan Sher Shah Sur (Lane-Poole, 1917, p. 229).

[8] His widow, Haji Begum commissioned a unique mausoleum known as Humayun's Tomb (cf. chapter 3 for Mughal architecture).

[9] Akbar expanded the empire (cf. Figure 2-2). When he became ruler, the empire was confined to Punjab and the plains of Ganges and Yumuna. He conquered and added Rajasthan, Gujarat, Malwa, Bihar and Orissa and within forty years the sultanates of both northern and central India were welded together into an empire (Volwahsen, 1970, p. 10).

‾ ‾ ‾ ‾ Akbar's empire in year of his accession

\\\\\\\\\\\Mughul Empire during reign of Akbar (1556–1605)
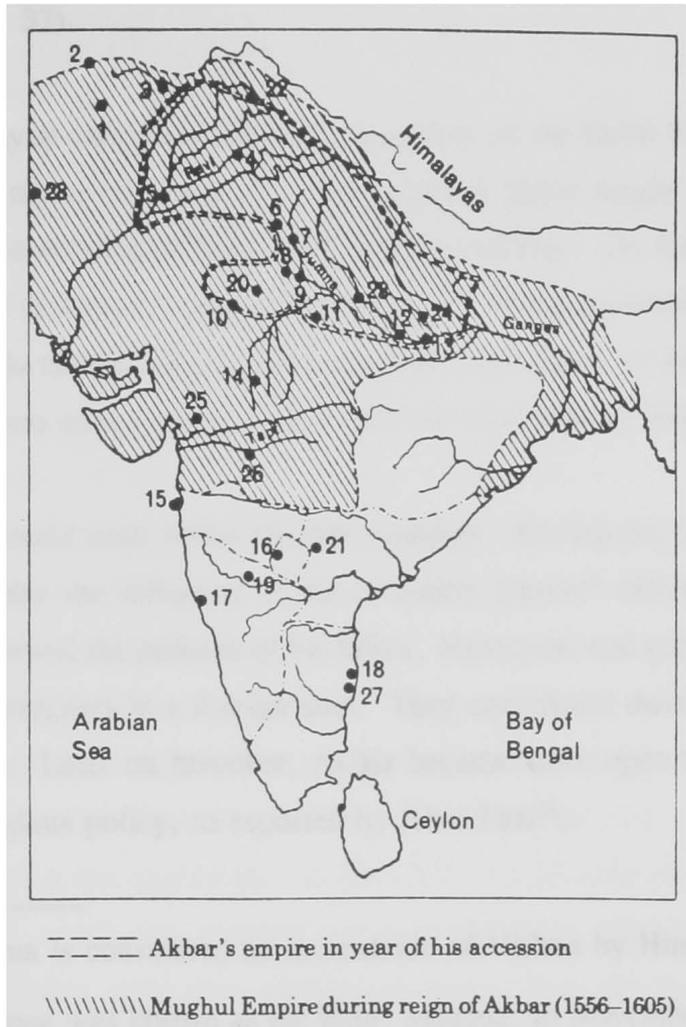
1 Ghazni	10 Ajmer	20 Jaipur
2 Kabul	11 Gwalior	21 Hyderabad
3 Peshawar	12 Allahbad	22 Srinagar
4 Lahore	13 Benares	23 Kanauj
5 Multan	14 Ujjain	24 Jaunpur
6 Panipat	15 Bombay	25 Champanir
7 Delhi	16 Gulbarga	26 Burhanpur
(Shahjahanabad)	17 Goa	27 Mahaballipuram
8 Fathepur Sikri	18 Madras	28 Kandahar
9 Agra (Akharabad)	19 Bijapur	

Figure 2-2: Akbar's empire

2. INTRODUCTION

17

Carroll, 1972, p. 37).

Babur and Humayun continued the religious policy of the Delhi Sultans. They had no tolerance for the native religions. The battles which Babur fought with the Hindu kings of Rajasthan were considered holy wars, against infidels. He made non-Muslims pay stamp duties and destroyed many Hindu temples. His commanding officer, Mir Baqi destroyed a Hindu temple which commemorated Lord Rama's[10] birth place at Ayodhya and a mosque[11] was subsequently built on its site (Srivastava, 1964, p. 47).

This policy continued until Akbar became emperor. During the first years of his reign he, too, was under the influence of the orthodox Ulema[12] (Srivastava, 1964, p. 47). He naturally followed the policies of his father, Humayun, and grandfather, Babur, who ruled India as foreigners in a foreign land. They considered themselves superior to the conquered races. Later on however, Akbar became more open to other religions and changed his religious policy, as reported by Abul Fazl[13]:

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[10] Lord Rama is considered an incarnation of Vishnu by Hindus.

[11] This mosque was known as the Babri Mosque. In November 1990, the first riots at the Mosque occurred leaving hundreds of people dead and wounded. It was damaged by Hindu mobs on December 6, 1992. As a result, riots spread into many parts of not only India, but also Bangladesh and Pakistan where many Hindu temples were attacked in retaliation.

[12] These are the learned scholars of Islam who are devoted to Koranic studies. The protection of the Muslim religion and law has two aspects: the propagation of religious knowledge and its enforcement as a law within the state. The first aspect deals with producing the Ulema (the learned). The second aspect deals with the appointment of one scholar (Shaikh-ul-Islam) who is well versed in learning and piety and who acts as an advisor to the king (Srivastava, 1964, p. 2).

[13] Abul Fazl was commissioned by Akbar to write his biography. As a result, Abul Fazl wrote _Akbar-Nama_ and _Ain-i-Akbari_ which have been translated into English. The

Formerly I persecuted men into conformity with my faith and deemed it Islam. As I grew older in knowledge, I was overwhelmed with shame. We, by fear and force, compelled many believers in the Brahman religion to adopt the faith of our ancestors. Now that the light of truth has taken possession of our soul, it has become clear that in this distressful place of contrarieties where darkness of comprehension and conceit are heaped up fold by fold, a single step cannot be taken without the torch of proof, and that creed is profitable which is adopted with the approval of wisdom (Wellesz, 1952, pp. 4-5).

It is important to remember that Akbar married a Hindu Rajput princess, Miriam az-Zamani, the daughter of the ruler of Amber. She was the mother of Akbar's successor to the throne, the future Emperor Jahangir. The Mughal empire later emerged as a unified state in which non-Muslim subjects could expect the same rights and privileges as those who followed Islam (Wellesz, 1952, p. 6). Hindu ladies in the palace, for example, were allowed to perform their religious activities. In the year 1562, Akbar changed the former policy of first enslaving prisoners of war and then forcefully converting them to Islam (Srivastava, 1964, p. 47). A year later, in 1563, he exempted Hindus from paying the pilgrimage tax on visits to their holy places and, in 1564, he abolished jiziya[14] which was another tax collected from Hindus (Brand and Lowry, 1985, p. 6). Hindus were also allowed to repair their old temples and build new temples. These acts ended the discrimination against them. They were also appointed as ministers, commanders and governors of provinces. The people for the key positions were chosen only on the basis of merit, irrespective of race, creed and caste (Srivastava, 1964, p. 48).

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first is a biography of Akbar while the second provides guidelines for daily activities as well as detailed descriptions of Akbar as a symbol of God. These works add up to the most complete account that any one man has ever compiled of the affairs of one particular court (Gascoigne, 1971, p. 99).

[14] During Mughal rule, all non-muslims had to pay a head tax called jiziya.

2. INTRODUCTION

The emperor also established an Ibadat Khana, "House of Worship," in order to study and understand Islam. Islamic scholars belonging to the various schools of thought were invited to hold discussions on Islamic religion and law. Akbar was repelled by the conflict between the two Islamic sects[15], the Sunnis and the Shias, represented at his court (Srivastava, 1964 p. 48). He also came into conflict with the Ulemas when they conveyed to him that the number of his wives exceeded the number allowed according to Koranic law (Wellesz, 1952, p. 12). Akbar had about three hundred wives[16] and the actual number of women in his harem was close to five thousand (Gascoigne, 1971, p. 85).

When Akbar discovered that the scholars did not agree with one another, he opened the Ibadat Khana to the religions of his subjects at that time: Hinduism, Zoroastrianism, Jainism and Christianity[17]. He found that there was a value to all religions and began treating each one as a different path leading to the same goal (Srivastava, 1964, p. 48). In June 1589, Akbar replaced the regular leader of the Great Mosque at Fatehpur Sikri and read the Khutba (Friday sermon) himself. Shortly after this, he was presented with

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[15] Muslims in India belong to either the Sunni or the Shia sect. Both of these sects believe in the basic tenets of Islam: the prophethood of Mohammed, and the Koran being the holy book revealed to the Prophet. They differ however in their belief of the succession of the Prophet. The Sunnis consider the first four orthodox caliphs to be the lawful successors of the Prophet whereas the Shias only accept Ali, the fourth caliph and the Prophet's cousin and son-in-law, as the sole successor (Ansari, 1993, p. 343).

[16] The Koran limits the number to four. There are two types of marriages in Islam: the nikah and the muta. The first must be conducted with another Muslim and it is based on the intention of marrying for life. The muta marriage, in contrast, can be with women of other religions and it involves no ceremony (Gascoigne, 1971, p. 85).

[17] John B. Noss'(1980) Man's Religions provides introductions to Hinduism, Zoroastrianism, and Christianity. The book also provides suggestions for further reading at the end of every chapter. An introduction to Jainism can be found in Geoffrey Parrinder's World Religion. pp. 24-49.

2. INTRODUCTION

a document drafted by Shaikh Mubark, the father of Abul Fazl, and signed by all the leading religious authorities of the time. It gave Akbar the authority to be the supreme interpreter of Koranic law and to provide any interpretation of the law which, in his opinion, was beneficial to the state (Wellesz, 1952, p. 14; Srivastava, 1964, p. 6).

During Akbar's time, sacred Hindu texts were translated into the Persian language. These were the Ramayana, the Mahabharata, the Vedas and the Bhagavat Gita (Yousuf, 1962, p. 115). Akbar also adopted some of the Hindu, Zoroastrian, and Jain modes of worship (Srivastava, 1964, p. 48). The teachings of Zoroastrianism impressed him so much that he prostrated himself in prayer before the sun and the fire, and ordered the assembled court to rise in the evening in honor of the lighting of the candles. He was sometimes seen with the Hindu mark painted on his forehead and sometimes was seen wearing Christian emblems (Hurlimann, 1964, p. 115). One of the Jesuit fathers at his court declared that Akbar had expressed a wish to visit Goa secretly, on the pretext of making a pilgrimage to Mecca, and while there, had himself baptized. Akbar also started observing the religious festivals of Hinduism, Zoroastrianism, Jainism and Christianity[18] as well as those belonging to Islam. He gave up eating beef and prohibited cow slaughter in order to please the Hindus (Srivastava, 1964, p. 48). The

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[18] Akbar was fascinated with Christianity. There were two Jesuit priests at his court, an Italian, Rudolfo Aquaviva and a Spaniard, Antonio Monserrate. They were very anxious to "convert the heathen ruler to their faith or die in blessed martyrdom in the attempt." Akbar greeted them with overwhelming reverence. They were also allowed into his private chamber in which he hung an enormous crucifix. He also publicly kissed a copy of the Bible and wore a miniature cross around his neck. He regularly met the priests for religious discussions and endowed them with imperial favors and gifts. They, however, waited in vain for the emperor to convert to Christianity. It was many years later when the priests realized that his delaying to convert was an indication of refusal (Carroll, 1972, pp. 40-41).

Sikh[19] Gurus were also given an audience with the emperor and found him to be an attentive listener (Carroll, 1972, p. 40).

Father Monserrate who lived at the imperial court for number of years, describes Akbar:

> He was well versed in the laws of many religious communities, to the study of which he dedicated himself with particular care. Although he could neither read nor write, he enjoyed discussions with men of learning, and of these there were at his court always a dozen or more, who debated in his presence the most diverse problems. He listened to their discussions, secretly hoping to be able to overcome his lack of education (Volwahsen, 1970, p. 8).

In 1582, Akbar put an end to his custom of sending large sums of money to Mecca and Medina for distribution to the poor; in 1580, he gave up his annual pilgrimage to Khwaja Muin-ud-din Chisti at Ajmer; in 1582, he rejected the Muslim system of dating events from the Hegira, or flight of the Prophet from Mecca to Medina, and replaced it with a new chronology beginning with his own accession (Gascoigne, 1971, p. 117). Finally, Akbar announced his breaking away from Islam, the religion of his forefathers to form his own doctrine of Din-i ilahi (Hurlimann, 1964). He declared:

> For an empire ruled by one head it was a bad thing to have the members divided among themselves and with variance with another. ....We ought, therefore, to bring them all into one, but in such a fashion that they should be both "one" and "all;" with the great advantage of not losing what is good in any one religion, while gaining whatever better in another. In that way, honor would be rendered to God, peace would be given to peoples, and security to the empire (Hurlimann, 1964, p. 117).

According to Ain-i-Akbari, Akbar regarded royalty as a "light emanating from God, a

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[19] The following books provide a good account on the Sikh religion: M.A. MacAuliffe (1909). The Sikh Religion: Its Gurus, Scared Writings, and Anthems. 6 vols; John Clark Archer (1971). The Sikhs in relation to Hindus, Moslems, Christians and Ahmadiyyas: A Study in Comparative Religion; Owen W. Cole (1978). Sikhs: Their Religious Beliefs and Practices; and Kushwant Singh (1966). History of Sikhs.

ray from the sun, the illuminator of the universe, the argument of the book of perfection, the receptacle of all virtues." This view is also prevalent throughout the Mughal dynasty. Abul Fazl also describes the king as: "the shadow of God," the one who "receives light directly from Him." The king "fears Him alone, and trusts Him alone" and he regards God as "the doer and he only the medium." On earth, the king is the "supreme in his sphere" and his powers are "absolute and indivisible"(Ansari, 1962, p. 182).

The tenets of Din-i ilahi were simple. Prayer was said three times a day. All meat was avoided at the table. The principles of reincarnation and Karma were accepted. A soft voice and gentle words were recommended for conducting daily communication; and forgiveness, tolerance, and kindness towards all living creatures were stressed. Ten virtues were to be followed and ten vices were shunned. The sun was worshiped as the body of the divine, and unification with God was the ultimate goal. The priesthood was abolished. Akbar was the "holy magnifying glass through which the rays of the Sun were focused onto humanity." Akbar was, in essence, a God on earth. "Allah Hu Akbar" was stamped on coins and since "akbar" means "great", the phrase could be read as "God is great" or "Akbar is God" (Carroll, 1972 p. 41). Akbar's subjects were expected to greet one another with the phrase "Allah Hu Akbar," with the response to this being, "Jalla Jalaluh", which literally means "Glorious is his Glory", but which could be also considered a reference to Jalalad-Din, Akbar's first name (Lane-Poole, 1917, p. 278; Wellesz, 1952, p. 20).

Akbar also declared that Hindus who had been forced to become Muslim could return to their ancestral religion. Akbar's Din-i ilahi was the synthesis of various teachings from different religions which had made an impression on his mind (Wellesz, 1952, p. 19). Din-i ilahi was no doubt a secular concept in governing the empire. Akbar never

forced Din-i ilahi on his subjects[20]. He was an exceptional person in the sixteenth century, a time when there was religious conflict between Hindus and Muslims. Din-i ilahi was a utopian concept which did not mature beyond Akbar's reign. It was not based on any kind of philosophical or theological definition and did not contain any coherent ethical system. Its main aim was "to establish a common form of worship for the members of his court, acceptable to all, since it combined elements of all their different creeds." He dreamt of bringing together a united India, but his hope was never fulfilled (Wellesz, 1952, p. 23). Both Hindus and Muslims resisted adopting Din-i ilahi since this meant renouncing their own beliefs and accepting Akbar as God. Since Akbar showed no sign of divinity from childhood, possessed no supernatural power and, in the early part of his reign, massacred a large number of people[21], Hindus could not accept him as divine. In Islam, it is forbidden to pay homage to man, and so Muslims refused to treat Akbar as God. As a result, when Akbar expired, his "church" died with him; it was not taken seriously by Hindus or Muslims and religious differences became more pronounced[22].

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[20] The religious beliefs of Akbar are very similar to those of Mahatma Gandhi. According to Gandhi, "all faiths constitute a revelation of Truth but all are imperfect and liable to error." These words might have been spoken by Akbar, and like Gandhi, he might have said: "I am a Christian, and a Hindu, and a Muslim, and a Jew." These two men differed, however, in the outward expression they gave to their personal conviction. Gandhi believed that we must be "keenly alive to the defects of our own faith, yet not leave it on that account, but try to overcome those defects". Gandhi was a true follower of ancient Hindu doctrine which demanded tolerance; he did not want to destroy but to purify, and to give a deeper meaning to an established religion. In contrast, Akbar wanted to create a new religion (Wellesz, 1952, p. 22).

[21] Before Akbar developed an interest in religion, he once had 30,000 enemy peasants and mercenaries slain for no reason (Volwahsen, 1970, p. 9).

[22] The next Emperor Jahangir was Akbar's son. He was hostile toward Sikhs. He ordered the Sikh Guru Arjun Dev to be put to death (cf. Kushwant Singh, 1966. History of Sikhs). He also expelled Jains from imperial territories. Jahangir's son, Shah Jahan, re-imposed the pilgrim tax on Hindus. He imposed restrictions on building new temples

Akbar may have had political reasons for espousing Din-i ilahi. He recognized that to have stable rule in India, the emperor must have the consensus of all religious groups. Akbar was also the son of a Sunni father and a Shia mother. As was noted above, he was born in Hindustan under the protection of a Hindu Rajput ruler. Further, the teachings of his tutor, Mir Abdul Latif, were based on religious tolerance (Gascoigne, 1971, p. 82).

The Mughal emperors who succeeded Akbar were intolerant to non-Muslims. The last emperor of the dynasty, Aurangzeb, who was Akbar's great grandson performed some of the worst atrocities against his non-Muslim subjects, particularly Hindus and Sikhs. Bamber Gascoigne in his book The Great Moghuls makes an interesting comparison between Akbar and Aurangzeb:

> To most Hindus Akbar is one of the greatest of the Muslim emperors of India and Aurangzeb one of the worst; to many Muslims the opposite is the case. To an outsider there can be little doubt that Akbar's way was the right one. One needs perhaps to share Aurangzeb's own strong faith to approve of his policies and even then it would be hard to admire his character. Akbar disrupted the Muslim

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and repairing old ones. He demolished many Hindu temples and also reversed the policy of his father and grand father which permitted non-muslims to convert people into their religion. The last mughal emperor, Aurangzeb, was very intolerant and hostile to non-muslims. In 1669, he issued an order to demolish all Hindu schools and Hindu temples. He also ordered the Sikh Guru Teg Bahadur to become Muslim. When the Guru refused, he was captured and beheaded (cf. Kushwant Singh, 1966. History of Sikhs). Aurangzeb forbade the public celebration of Hindu festivals. According to Srivastava (1964, pp. 51-52), Hindus were not allowed to openly and publicly celebrate the festivals of Holi and Diwali. They were also prohibited from cremating their dead on the banks of the Yumuna River and also from carrying arms in public. Hindus were also ordered to pay twice the excise duty required of Muslims. For detailed accounts of Mughal rule in India, consult: Vincent Smith, 1967. The Oxford History of India and the Cambridge History of India, vol.iv. The Mughal Period by Lt. Colonel Sir Wolseley Haig and Sir Richard Burn (1963).

2. INTRODUCTION

community by recognizing that India is not an Islamic country; Aurangzeb disrupted India by behaving as though it were (Gascoigne, 1971, p. 227).

Aurangzeb's prime ambition was to convert the whole of India to Islam. This was one of the major causes of the destruction of the Mughal empire in India. This religious bigotry finally led to the partition[23] of modern India.

2.3. ADMINISTRATIVE AND POLITICAL STRUCTURE

Before the Mughal invasion of India, the Delhi sultans considered themselves, in theory, as subjects of the caliph but in reality they were very independent[24]. The Mughal rulers took the title of badshah or emperor, and they did not recognize any caliph outside India (Srivastava, 1964, p. 9).

The first four Mughal emperor had four ministers: the prime minister (wazir), the finance minister (diwan), the army minister (mir bakhshi), and the minister of ecclesiastical and judicial affairs (kazi). Throughout the period 1206-1803, the administration was military in character (Srivastava, 1964, p. 10). Everyone in Akbar's service, even the painters at Fatehpur Sikri had a military rank. This rank was expressed in terms of the number of mounted troops the officer was expected to assemble for parades (Gascoigne, 1971, p. 105). There were basically two major functions of the administration. These were to keep internal peace and to defend the country from foreign invasions. For this purpose, military bases were maintained in various parts of the country. The second

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[23] After Mughal rule, India became a British colony. It won its independence from Britain on 15th August 1947. At the time of its independence, the country was partitioned and Pakistan was created on the basis of religion.

[24] According to Islamic theory of sovereignty, there can only be one Muslim king for all Muslims wherever they might be living. This ruler was given the title of caliph. In 1517, the Sultan of Turkey first took the title of caliph (Srivastava, 1964, pp. 8-9).

function of the administration was for the collection of revenues (Srivastava, 1964, p. 10).

Akbar's government was centralized and he divided his empire into townships and provinces. Local and provincial officials worked under the supervision of the central government. All political appointments were decided by the emperor. Land was reclassified and graded on the basis of fertility, and a reasonable tariff system was levied. Peasants were reimbursed for damage done to their lands by military incursions, and taxes on basic food stuffs were abolished (Carroll, 1972, p. 37).

Akbar expanded his empire through conquest, treaty, and by accepting women into his harem (Gascoigne, 1971, p. 82). He believed that "a monarch should be ever intent on conquest, otherwise his neighbors rise in arms against him....The army should be exercised in warfare lest from want of training they become indulgent" (Wellesz, 1952, p. 7). The ruler of Bikaner offered a niece and the ruler of Jaisalmer presented his daughter to the royal harem (Gascoigne, 1971, p. 83).

2.4. IMPACT OF MUGHALS ON HINDU SOCIETY

The advent of the Mughals had a tremendous impact on Indian society in terms of religious thought. The conflict between Hindus and Muslims resulted in new thoughts and religions. Religious reformers, such as Guru Nanak[25], the founder of Sikhism, and Kabir[26], the founder of the Kabir Panth, preached the gospel of unity and friendliness. They emphasized that Hinduism and Islam were two different pathways leading to the

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[25] Refer to footnote 19 for references to the Sikh religion.

[26] Kabir's (1974) Kabir (15th Century) and Kabir's (1977) The Kabir book: forty-four of ecstatic poems of Kabir / versions by Robert Bly provide good description on the subject.

same goal. They preached that Ram and Rahim, Krishna and Karim, Ishwar and Allah were different names of the same God. Guru Nanak and Kabir both advocated against priestly ritualism and the formalities of both religions; they emphasized devotion and true piety. They further stressed the equality of castes and proclaimed that birth was not a barrier to religious salvation (Srivastava, 1964, p. 257). There was also an influence of Sufi[27] saints on Hindus living in Northern India. During Akbar's era there was a close contact between upper class Hindus and Sufis (Srivastava, 1964, p. 258).

The Muslim rulers wanted to spread Islam all over India. To protect their religion and culture, Hindus became more rigid and orthodox in their outlook and practice. Hindu scholars and reformers prescribed rigid rules for the people. Early marriages were brought in, but they were discouraged during Akbar's reign. In addition strict purdah (veil) was enforced (Srivastava, 1964, pp. 257-58).

In terms of Indian language and literature, Akbar was the first Mughal emperor to encourage Sanskrit[28]. He encouraged Sanskrit poets and scholars at his court and not only did he listen to the Sanskrit verses but also discussed with the scholars Hindu philosophy and religion. Abul Fazl provides a list of Sanskrit scholars who were placed in prominent positions. Mahesh Thakur of Darbhanga wrote a history of Akbar's reign

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[27] Conversely, Sufi saints in India were influenced by the Hindu ways of looking at God. For example, "the conception of loving God and the relations between God and soul as one of the beloved and the lover are peculiar to Hinduism and they were adopted by Sufis in India." In Islam, the relationship between God and man is that between a master and a servant (Srivastava, 1964, p. 76). The Sikh holy book, Sri Guru Granth Sahib includes the poetry of Baba Farid (Farid-ud-din Ganj-i-Shakar) who was a Sufi saint and who is also considered to be the first Punjabi poet.

[28] The first two Mughal emperors, Babur and Humayun took no interest in the local Indian languages of Sanskrit and Hindi (Srivastava, 1964, p. 131).

2. INTRODUCTION

in Sanskrit[29]. The reign of Akbar is considered the golden age for Hindi literature. During this era, Tulsidas produced his well-known work, the <u>Ram Charit Manas</u> which is popularly known as the <u>Ramayana</u>[30] (Srivastava, 1964, pp. 132-33).

The Mughals had a major impact on local architecture and out of this synthesis of Persian, Timurid and Indian forms, Mughal architecture developed[31]. During the reign of the Mughals, this type of architecture was confined to imperial buildings which were palaces, forts, mosques and tombs. After the Mughal period, it was extended into residential architecture including the royal palaces[32] of Rajasthan. It is also continued in Sikh temple architecture[33]. In addition to architecture, the Mughals also introduced a new concept of formal gardens known as Mughal gardens[34] in India.

Akbar took a keen interest in art and made significant contributions to the creation of the Mughal school of painting. During his reign, a new style of miniature[35] painting

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[29] This manuscript is preserved in India Office Library, London (Srivastava, 1964, p. 131)

[30] The epic is divided into seven books, describing the life of Rama who is revered by Hindus as an incarnation of God (Srivastava, 1981, p. 133).

[31] Cf. chapter 3 for Mughal architecture.

[32] For detailed information on the palatial architecture of Rajasthan, cf. G. Tillotson's, (1989) <u>The Rajput Palaces</u>.

[33] Very little research has been done in the area of Sikh architecture. P.S. Arshi's (1986). <u>Sikh Architecture in Punjab</u> provides information about Sikh architecture but it is limited to Punjab only.

[34] Cf. chapter 3 for Mughal Gardens.

[35] There are number of books on the subject. Some of the well known ones include the following: Milo Cleveland Beach's (1987) <u>The New Cambridge History of India</u>

developed. He established a state atelier where he employed about a hundred artists, the majority of whom were Hindu. They worked under the direction of two Persian artists who had been brought to India by Humayun (Craven, 1987, p. 202). Miniature paintings were used to illustrate books, such as Akbar-Nama and Ain-i-Akbari so that Akbar could enjoy them. It must be remembered that Akbar was unable to read or write. These paintings depict diverse activities, such as, Akbar involved in religious discussions, in battles, and also riding elephants (cf. Figures 2-3 to 2-5). This style of miniature painting was adopted by artists in various parts of India to illustrate Hindu mythology as well as the court and social activities (cf. Figures 2-6 to 2-8) of Hindu rulers. Akbar's patronage of art is described by Abul Fazl in Ain-i-Akbari:

> Drawing the likeness of anything is called taswir (picture). Since it is an excellent source, both of study and entertainment, His Majesty, from the time he came to an awareness of things (i.e. his childhood), has taken a deep interest in painting and sought its spread and development. Consequently this magical art has gained in beauty. A very large number of painters has been set to work. Each week the several darogahs and bitikchis submit before the king the work done by each artist, and His Majesty gives a reward and increases the monthly salaries according to the excellence displayed (Fazl, 1977, p. 182).

In addition to the factors described above, the Mughals also had an impact on the food, dress and language of Northern India. For example, upper class Hindus who were in contact with Muslim officials adopted non-vegetarian dishes as a part of their daily diet and North Indian women started wearing the salwar kameez in addition to their native dress, the sari. Persian also became the court language and many Persian words were adapted into Indian languages, such as Hindi, Punjabi and Rajasthani (Srivastava, 1964, p. 258). There was also an emergence of Urdu which is basically a synthesis between Persian and Indian languages.

(Mughal and Rajput Painting), Brand and Lowry's (1985) Akbar's India: Art from the Mughal City of Victory, Daniel J. Ehnbom's (1985) Indian Miniature: The Ehrenfeld Collection, and The Indian Heritage: Court Life and Arts under Mughal Rule.

2. INTRODUCTION

Figure 2-3:
Akbar presiding over discussions in the Ibadat Khana,
"Hall of Worship" (1604)

On the left are the two Jesuit priests, the Italian,
Rudolfo Aquaviva and the Spaniard, Antonio Monserrate.

2. INTRODUCTION
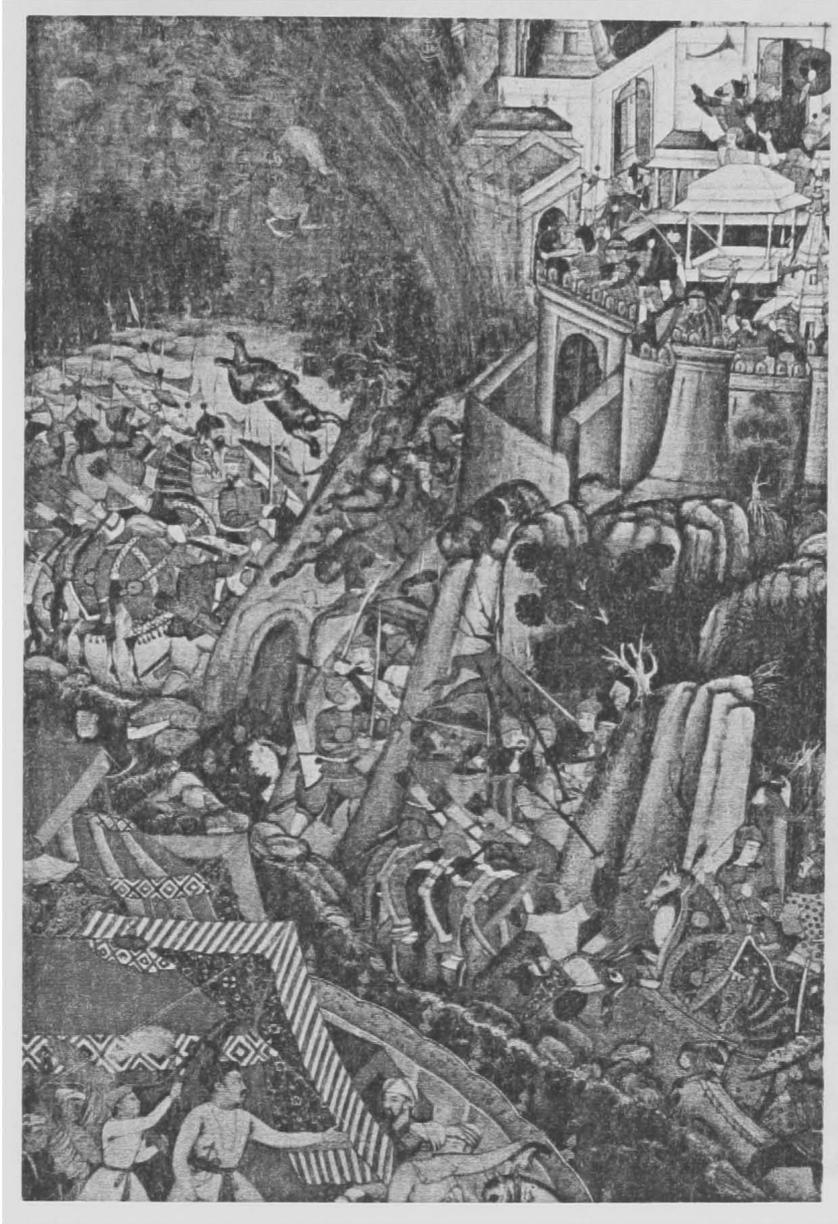
Figure 2-4: Akbar in the battlefield (16th century)

Akbar participating in the attack at the Fort
of Chittorgarh in Rajasthan, India.

2. INTRODUCTION

Figure 2-5:

Akbar riding a demented elephant over the bridge
of boats at Agra (16th century)

2. INTRODUCTION
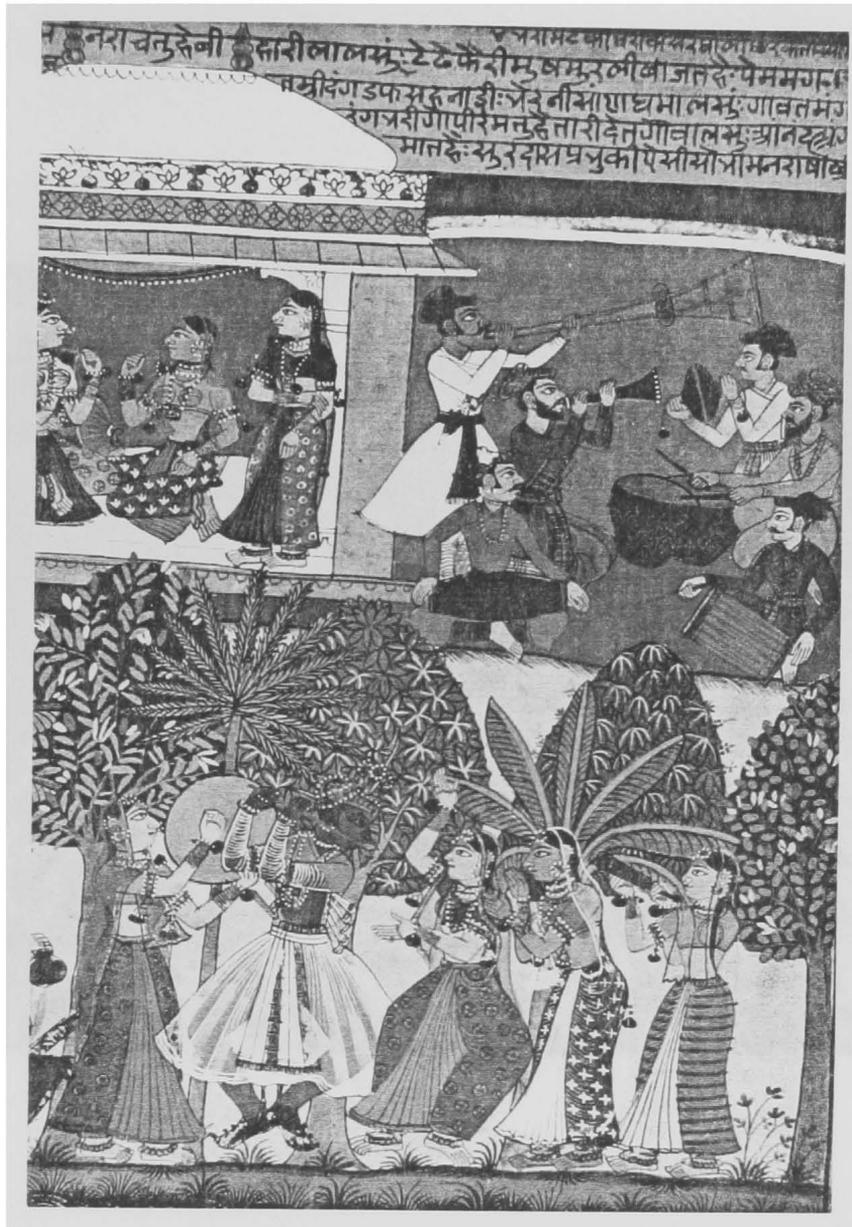
Figure 2-6: The Krishna Lila (17th Century)

In the lower half of the painting, Krishna is playing a flute. He is surrounded by his female companions who are engaged in a dance. In the upper right hand corner, musicians are playing their instruments. The painting depicts a moment of joy and celebration.

2. INTRODUCTION
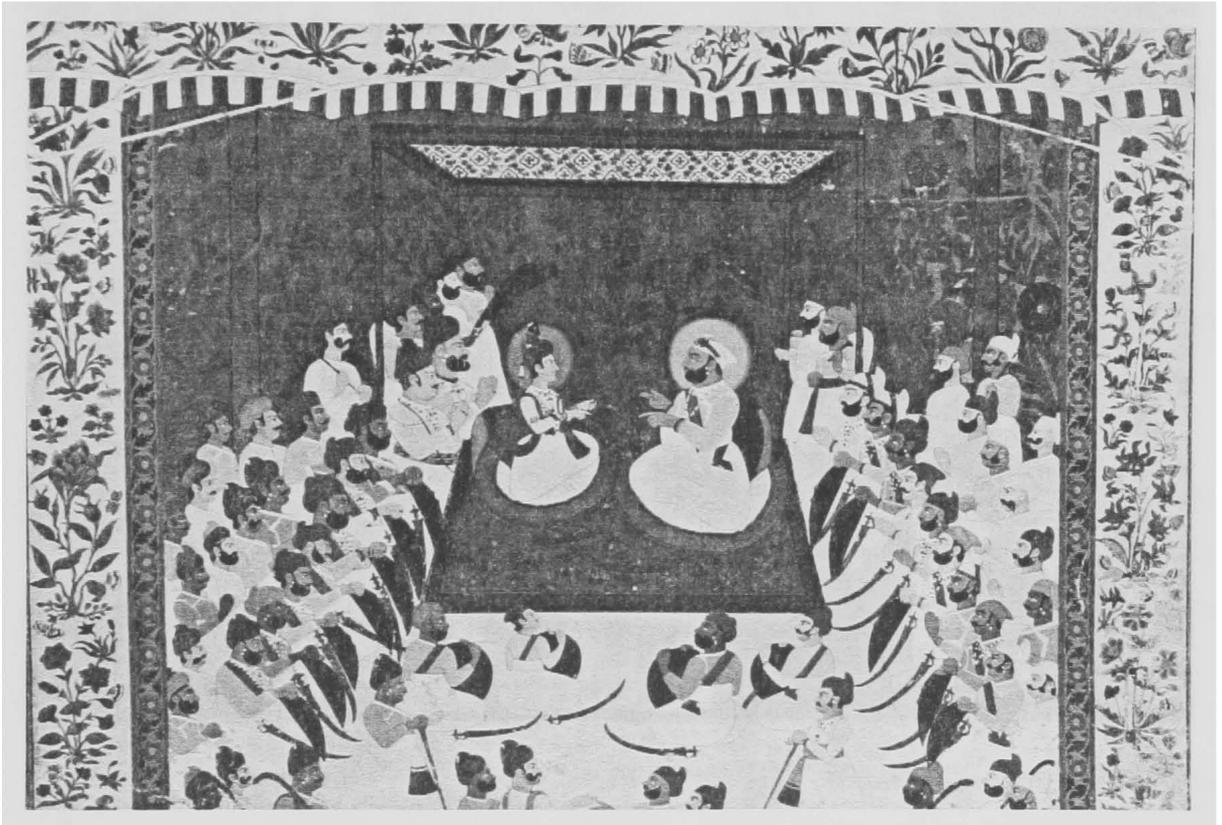
Figure 2-7:

A meeting between two Rajasthani rulers .

The two rulers are sitting face-to-face on a carpet under a canopy within a tented enclosure while their entourages are arranged around them.

2. INTRODUCTION
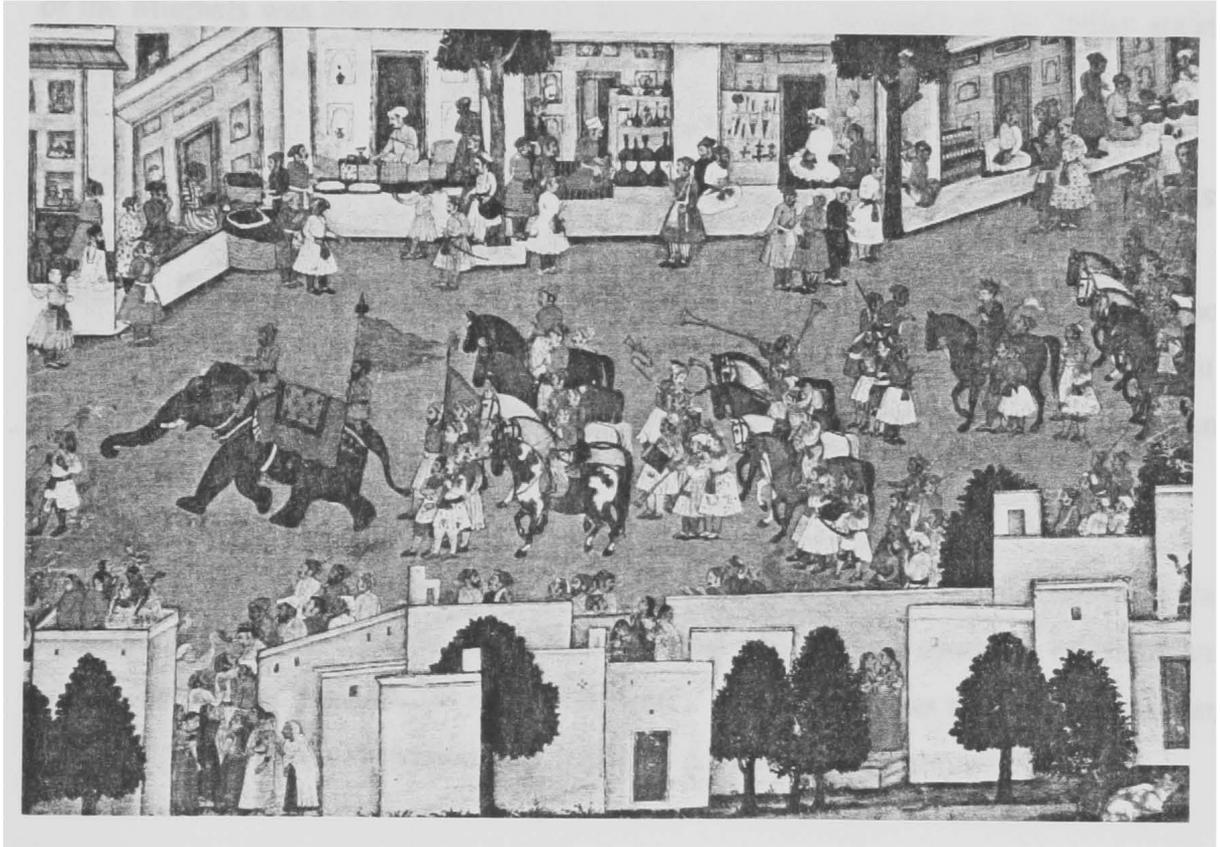
Figure 2-8:
A royal wedding procession (1680).

The bridegroom, mounted on a horse is shown on the right side of the miniature. He is accompanied by foot soldiers, an elephant, noblemen, and musicians. The procession is passing through a bazaar.

2.5. SUMMARY

This chapter addressed the defined four objectives. It looked at the historical background of the Mughals and Akbar's religious beliefs. The political and administrative structure of the Mughals was also described and the impact of the Mughals on the Indian society at that time was examined.

In 1526, Babur, the first Mughal emperor and the founder of the Mughal dynasty penetrated India from Afghanistan and defeated the Lodhi ruler in battle at Panipat in Punjab. Babur ruled for five years and after his death, was succeeded by his son Humayun. Akbar, the third ruler who commissioned Fatehpur Sikri, was Humayun's son. He was followed by three more emperors in this dynasty: Jahangir, Shah Jahan and Aurangzeb.

Unlike his father and grandfather, Akbar had great tolerance for the native Indian religions. He started his own religion, Din-i ilahi which was a synthesis of Hinduism, Islam, Jainism, Zoroastrianism and Christianity. His purpose was to bring unity among his subjects. His administration was based on a military structure.

The Mughals had a tremendous impact on Indian society. There was an evolution of new religions, such as Kabir Panth and Sikhism, which attempted to bring Hindus and Muslims together. Besides new religious thoughts, a new type of architecture and new concepts of formal garden design emerged. In art, fine miniature paintings made an impact on Rajasthani miniatures depicting Hindu mythology. In addition, existing Indian languages were enriched by the introduction of Persian words.

3 - MUGHAL LANDSCAPE: ITS ARCHITECTURAL AND SPATIAL ORGANIZATION

This chapter discusses Mughal architecture and its evolution. There are four objectives: to understand the architecture of the period in which the Mughals arrived in India; to look at the development of Mughal architecture; to introduce two other Mughal complexes at Agra and Delhi; and lastly, to examine the development of Mughal gardens.

3.1. BACKGROUND INFORMATION

Mughal architecture is a part of Islamic architecture which flourished in Northern India between the thirteenth and the early nineteenth century. Islamic architecture in India can be broadly divided into two phases: the pre-Mughal period, from 1206 to 1526; and the Mughal period, from 1526 to 1803.

The pre-Mughal period includes the imperial buildings in Delhi. There were also provincial styles which developed in different parts of India as a result of Muslim conquests. These styles resulted from a synthesis between the local architectural traditions and Islamic architecture. In the pre-Mughal period, Hindu and Jain temples were demolished and the materials were used to build mosques. Hindu temples were built without mortar and it was easy to dismantle them with each element intact. In a number of instances, the top portions of Hindu and Jain temples were torn down and replaced by domes and minarets. The Kutab mosque (1206-1210) in Delhi, for example, was built on the site of one of the largest Hindu temples. Most of its columns, shafts and capitals were original parts of Hindu and Jain temples (Volwahsen, 1970, pp. 39-41).

The only problem with the building material recovered from the temples was that it was profusely carved with sculptures of Hindu gods and goddesses. As figurative art is not acceptable in Islam, the Hindu or Jain religious sculptures were plastered over. Mosques were built on the same plinth as Hindu temples. Muslim rulers laid down the function of their buildings and gave their approval of the designs which were executed by native Hindu craftsmen.

On the south-east side of the courtyard of the Kutab Mosque, there is a tall minaret known as the Kutab Minar, which was originally 238 feet high (cf. Figure 3-1). According to some historians, the Kutab Minar may have been built as a minaret of the Kutab Mosque and its original function was for the call to prayer. This explanation, however, is not acceptable since the muezzin's call would not have been heard from the top of the structure. According to Volwahsen (1970, p. 16), the Kutab Minar "symbolized the axis of the world - especially of the Islamic world which he [the emperor of India] sought to rule from Delhi". It was erected as a victory tower and bears an inscription which reads: "to cast a long shadow of God over the conquered city of the Hindus" (Craven, 1985, p. 195). It was thus considered by the Muslims rulers to be the symbol of their victory over infidels. The Kutab Minar is a very striking, well-preserved monument of pre-Mughal architecture in India.

In the Kutab Mosque as well as in other buildings of this period, pointed arches were built using traditional Hindu corbelling techniques. These arches were purely decorative and were not part of the structural system. In this mosque complex, spatial order was created with the help of a series of courtyards which were themselves turned into sacred areas[1] (cf. Figure 3-2).

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[1] The courtyard was also important in the cities of the Indus valley civilization. Rooms were arranged around the courtyard which was open to the sky and used as a multipurpose space for a number of activities, from washing and cooking to sleeping in
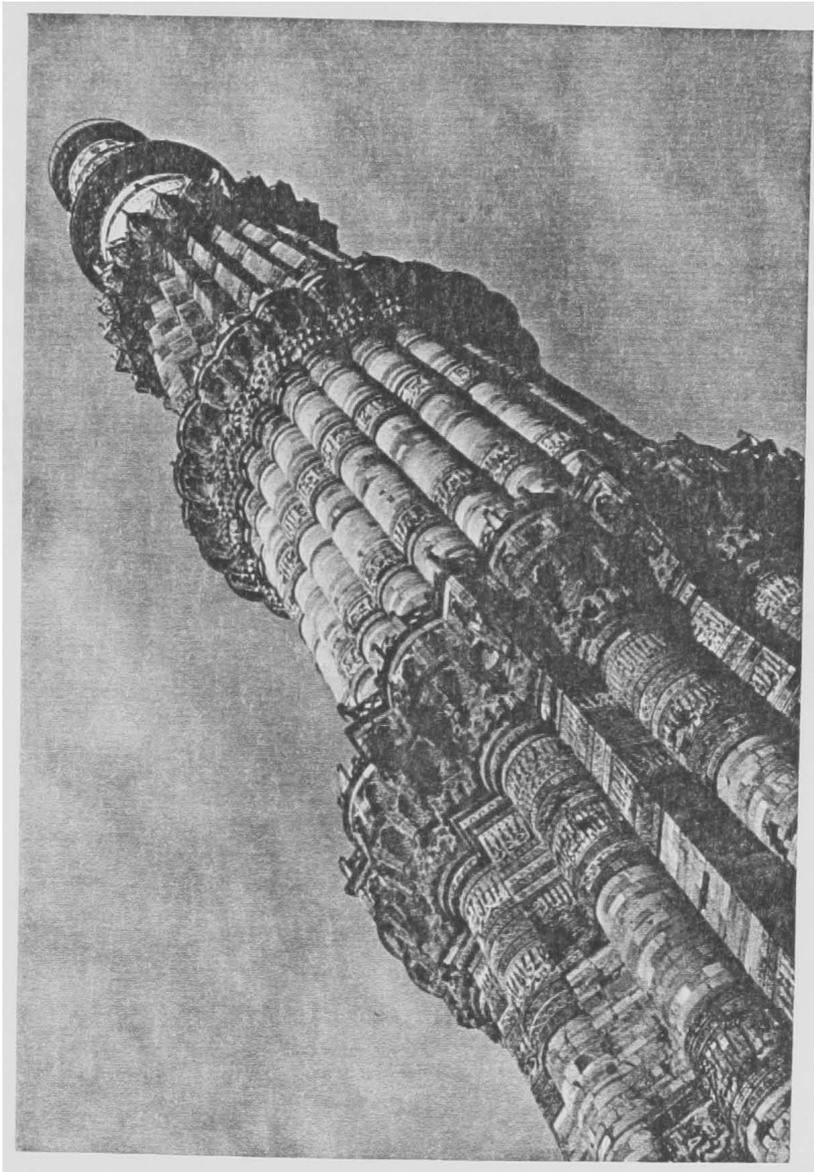
3. MUGHAL LANDSCAPE

Figure 3-1: Kutab Minar at Delhi, India (1200).

The Kutab Minar originally rose to the height of 238 feet.
It may have been created as a victory tower.

3. MUGHAL LANDSCAPE
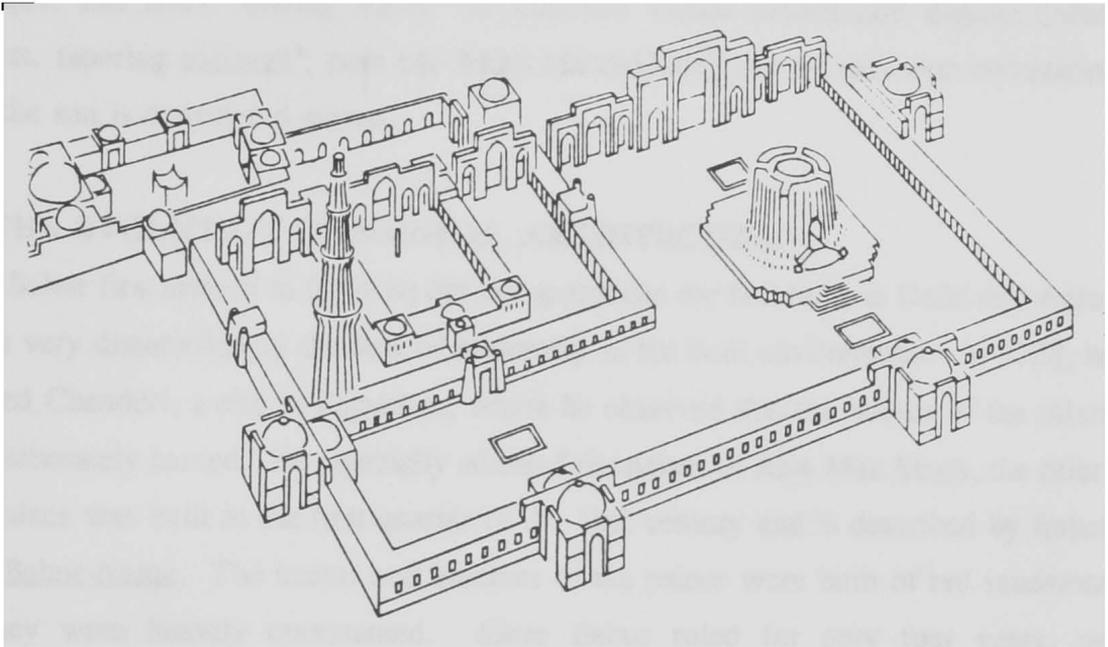
Figure 3-2:

Kutab Mosque complex at Delhi, India (1206-1210).

The view shows the arrangement of various courtyards.
Courtyards are sacred places in Indian
religious architecture.

3. MUGHAL LANDSCAPE

The imperial architecture of Delhi consists of a number of tombs, such as those of Ghiyas al-Din Tuglak (1320-5) and Bara Gumad (1494). The first of these, the tomb of Ghiyas al-Din Tuglak (cf. Figure 3-3), is a miniature citadel of an irregular shape which is encircled by a crenellated sloping wall with a massive bastion. The second, the tomb of Bara Gumad (cf. Figure 3-4), is a massive building crowned by a dome which has a band of lotus petal ornamentation at its base. The dome is raised on an octagonal drum. The main characteristics of the tombs are a low dome, an arch using a trabeated technique, and thick, sloping walls. In contrast, Hindu architecture depicts corbel brackets, tapering shikaras[2], post and beam construction, and an east-west orientation since the sun is considered sacred.

3.2. THE EVOLUTION OF MUGHAL ARCHITECTURE

When Babur first arrived in India he did not appreciate the buildings in Delhi and Agra; he was very dissatisfied by the lack of symmetry in the built environment. In 1528, he captured Chanderi, a city in Rajasthan, where he observed that the houses of the rulers were elaborately carved. He especially admired the palace of Raja Man Singh, the ruler. This palace was built in the first quarter of the 16th century and is described by Babur in his Babur-Nama. The beams and brackets of the palace were built of red sandstone and they were heavily ornamented. Since Babur ruled for only four years, no architecturally significant building was built during his period (Gascoigne, 1971, p. 36).

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the hot summer.

In the rock-cut architecture of the 2nd century BC, Buddhist monasteries also contained a courtyard which was used for intellectual as well as daily activity. The courtyard is also an important part of Hindu and Sikh temples. It is used for religious rituals as well as for social activities.

[2] Shikaras are the roofs of Hindu temples. In northern India, they taper upwards to great height to symbolize the mountains which are the abode of the gods in Hindu mythology.

3. MUGHAL LANDSCAPE
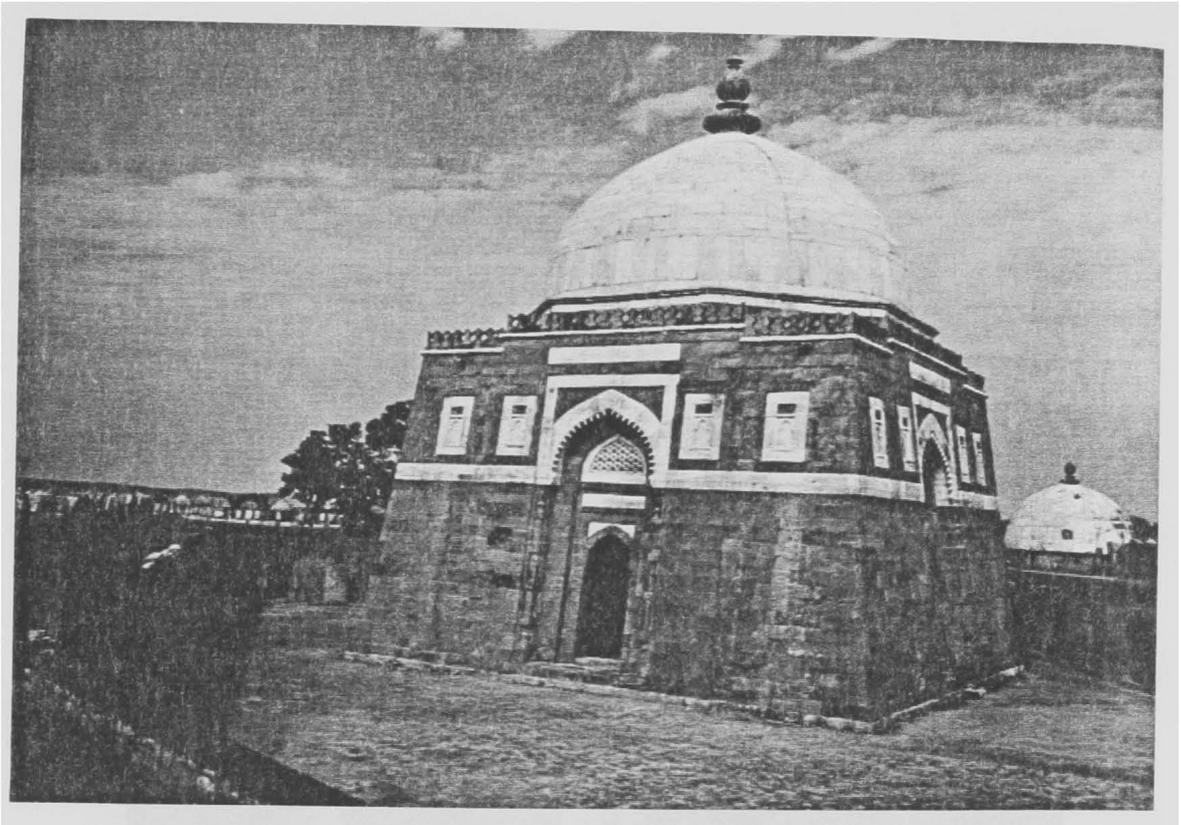
Figure 3-3:

Tomb of Ghiyas al-Din Tuglak (1320-25).

The tomb of Ghiyas al-Din Tuglak is a massive structure built of red sandstone. White marble is used as an underlying effect to emphasize the details. The arches are for decoration only, structurally they have no purpose.

3. MUGHAL LANDSCAPE
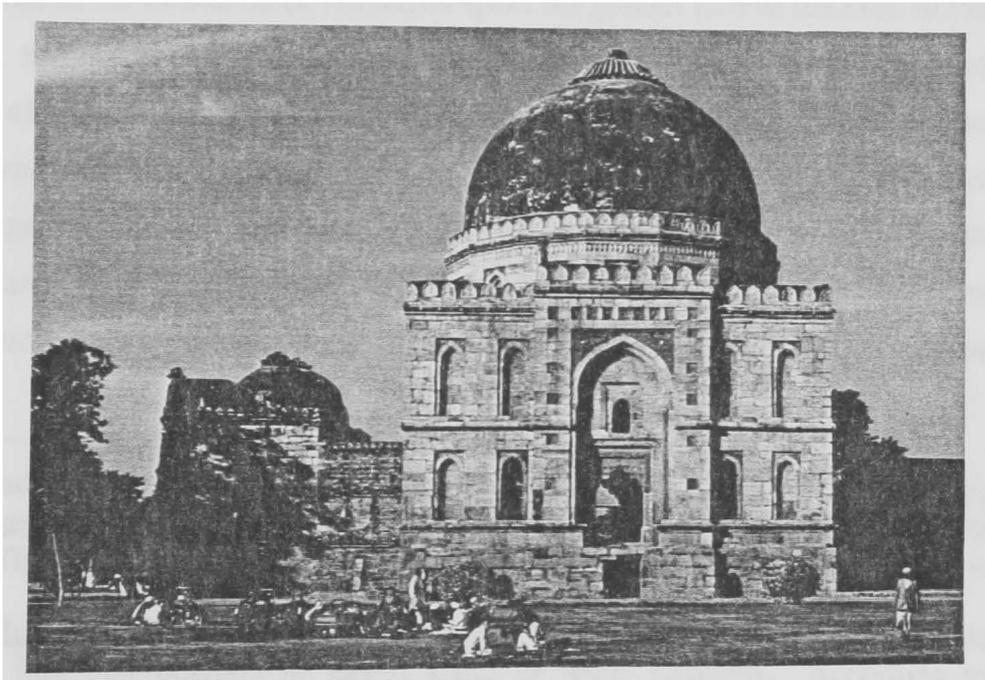
Figure 3-4:
Tomb of Bara Gumad (1494).

The tomb of Bara Gumad was built during the reign of Ibrahim Lodhi who lost his empire to Babur, the founder of the Mughal dynasty in India. It is not known for whom this tomb was built. On the left side of the tomb there is a mosque.

3. MUGHAL LANDSCAPE

When the second Emperor Humayun died, his widow Haji Begum commissioned a unique mausoleum to be built according to Persian architectural traditions (Volwahsen, 1970, p. 51). This mausoleum is known as Humayun's Tomb (cf. Figures 3-5 and 3-6), and it is considered by architectural historians to be the first Mughal monument and the first garden tomb of the Mughal period. It took 13 years to complete; it was started around 1560 and finished in 1573. Humayun's Tomb was designed by the Persian architect Mirak Mirza Ghiyas. Percy Brown describes it as a synthesis of Indian and Persian traditions (Brown, 1962, p. 97), while Ebba Koch believes that it reflects a fusion of Timurid ideas with local traditions[3] (Koch, 1991, p. 14). There is probably more truth to the former since Humayun spent the greater part of his exile in Persia. His widow, too, was of Persian descent so Persian culture very likely had a significant impact on them both. In addition, Timurid culture grew out of Persian culture. The tomb was placed in the center of a charbagh[4] according to the Persian traditions of formal garden layout. It should be noted that charbagh concepts were introduced into Samarkand from Persia during Timur's reign and then brought to India by Babur. Humayun's Tomb provided a precedent for the Taj Mahal[5] and can be compared with

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[3] Vadim E. Gippenreiter and Robin Magowan (1989). Fabled Cities of Central Asia: Samarkand, Bukhara, Khiva provides good illustrations and a general description of the cities. The book, however, does not contain any architectural plans of the cities.

[4] Charbagh literally means four gardens. In Mughal architecture, a square plan is divided into four quarters by paved walks or water channels. According to Roland Rainer, this same fourfold division of the square with every caste being assigned its own quarter, is also found in early Indian city plans. Even the village plan of the Aryans, in the 2nd millennium BC, is based on two axes crossing at right angles, with the council tree standing at the center of the intersection. This symbol of the central pole of the universe is also found in Buddhist architecture as a ceremonial umbrella (Rainer, 1972, p. 97).

[5] Romance of Taj Mahal by Pratapaditya Pal, Janice Leoshko, Joseph M. Dyke and Stephen Market, establishes a full account of the context for understanding the unique fame of this magnificent Mughal monument.

3. MUGHAL LANDSCAPE
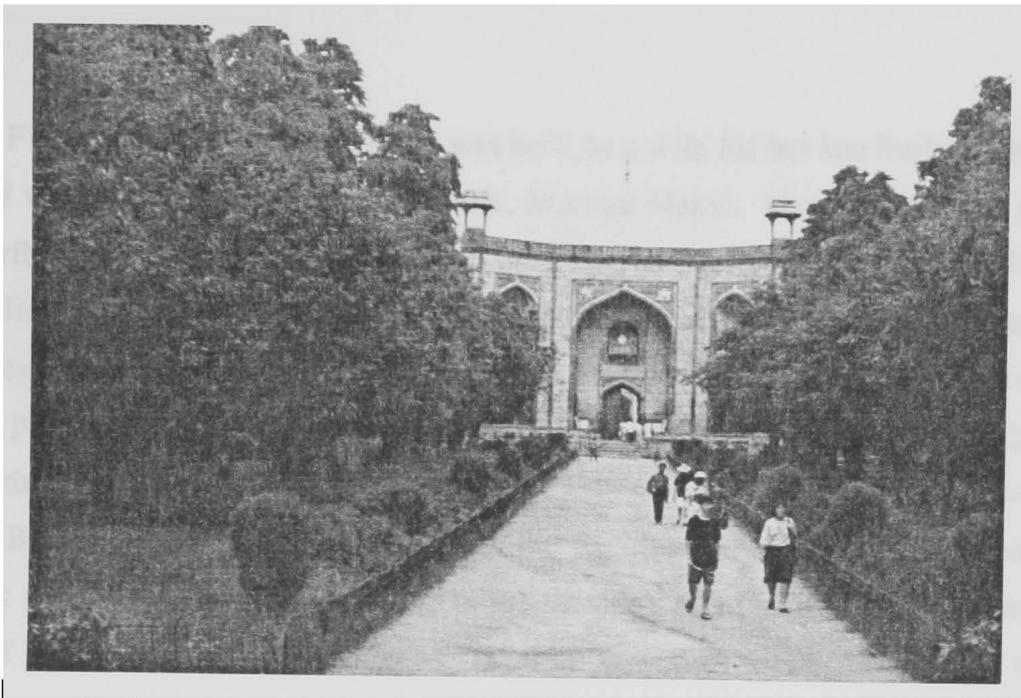
Figure 3-5:
Humayun's Tomb at Delhi, India: front entrance (1560-73)
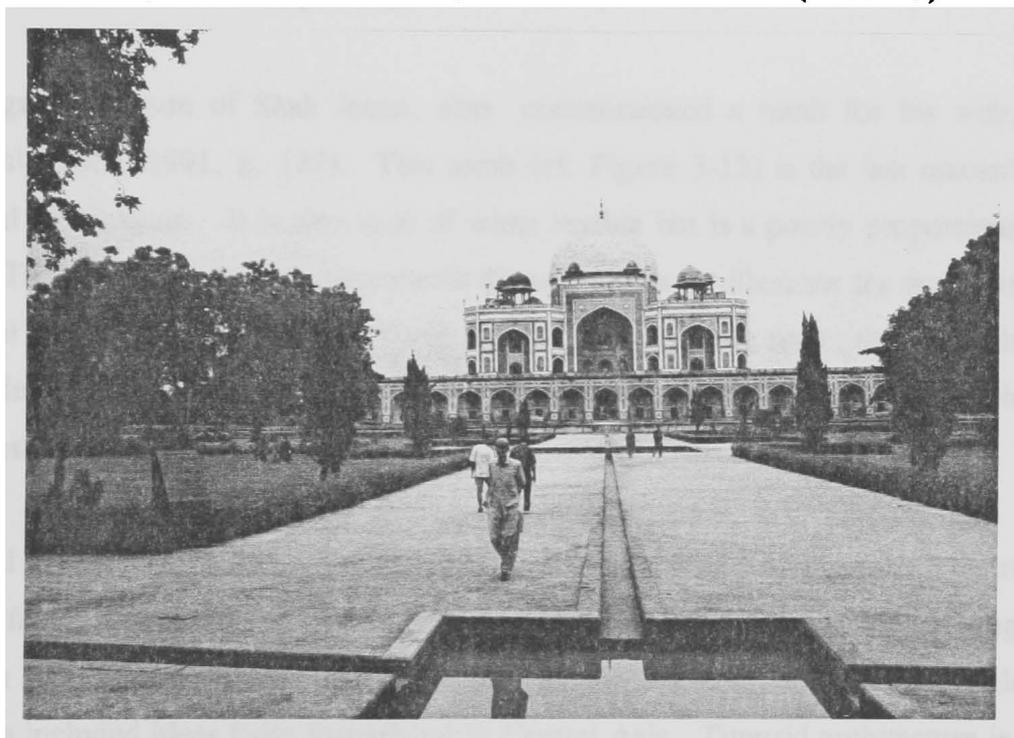
Figure 3-6: Humayun's Tomb at Delhi (1560-73), India
Humayun's Tomb is considered the first monument of
Mughal architecture.

3. MUGHAL LANDSCAPE

it (cf. Figure 3-9 and 3-10). The first was built by a wife for her late husband while the second was built by a husband for his wife, Mumtaz Mahal. Humayun's Tomb is made primarily of red sandstone with white marble being used to emphasize details. It is also masculine and bold in character. In contrast, the Taj Mahal is built of white marble, is feminine, delicate and light (cf. Figures 3-7 and 3-8). Both these monuments are set on a high platform in a charbagh. Humayun's Tomb is placed in the center of its charbagh while the Taj Mahal is placed on one end (cf. Figures 3-11 and 3-12). In the words of Percy Brown (1962, p. 118), the beauty of the Taj Mahal is not only the result of using perfect proportions, but it is also due to the selection of an appropriate material. The type of marble used in its construction "takes on incredibly subtle variations of tint and tone, according to the changes in the light, thus picturing the passing color of the movement" (Brown, 1962, p. 118).

Aurangzeb, the son of Shah Jahan, also commissioned a tomb for his wife, Rabia Daurani (Koch, 1991, p. 127). This tomb (cf. Figure 3-13) is the last mausoleum of Mughal architecture. It is also built of white marble but is a poorly proportioned copy of the Taj Mahal. The three monuments discussed thus far illustrate the development of Mughal architecture: Humayun's Tomb signifies its beginning stage; the Taj Mahal is an example of Mughal architecture at its height, while the mausoleum of Aurangzeb's wife presides over its decline.

Mughal architecture developed as a result of the synthesis of Persian, Timurid, and Indian forms. According to Ebba Koch, it is not appropriate to consider the Mughals as Persian since they were direct descendants of Timur and their architectural development in India included ideas from Samarkand in Central Asia. Timurid architecture is deeply recognized for its perfect symmetry in both elevations (cf. Figures 3-14 and 3-15) and plans. This is reflected much more in Mughal architecture than in Persian architecture (Koch, 1991, p. 14).

3. MUGHAL LANDSCAPE

Figure 3-7:
Taj Mahal at Agra, India: rear entrance gate (1632-54)
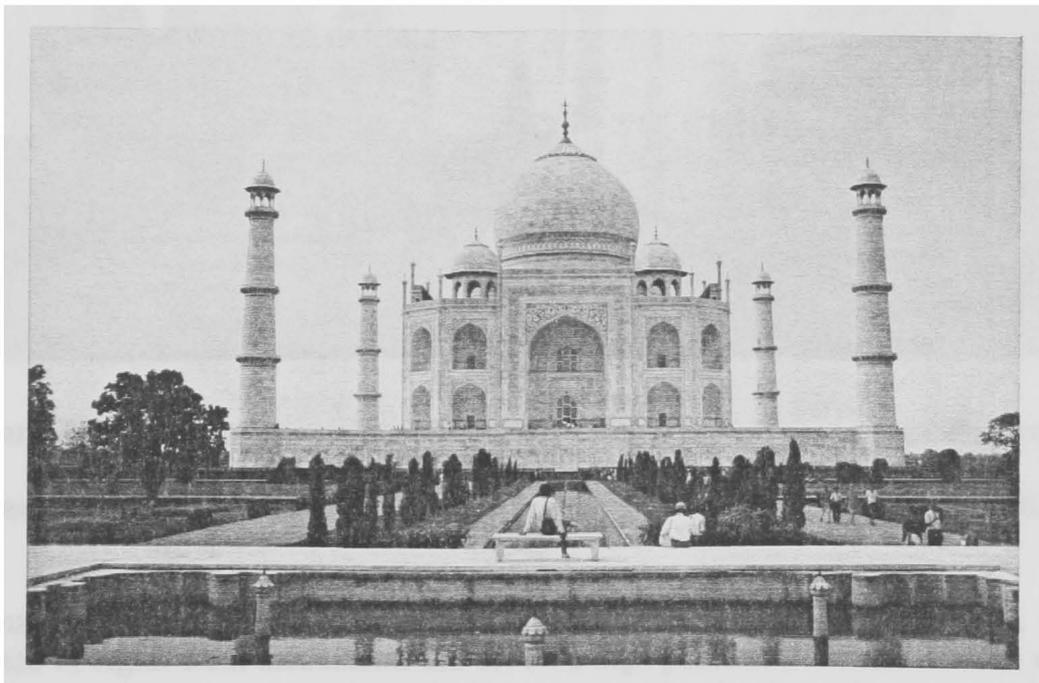
Figure 3-8: Taj Mahal at Agra (1632-54)

The minarets at the four corners create a sense of enclosure. The tomb was designed to fit in a virtual cube. The minarets also define the edges of the cube.

3. MUGHAL LANDSCAPE
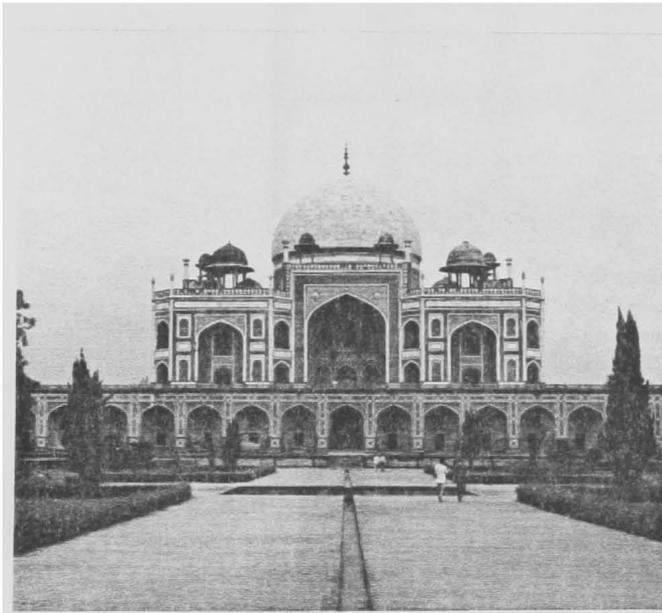
Figure 3-9:

Humayun's Tomb (1560-73)
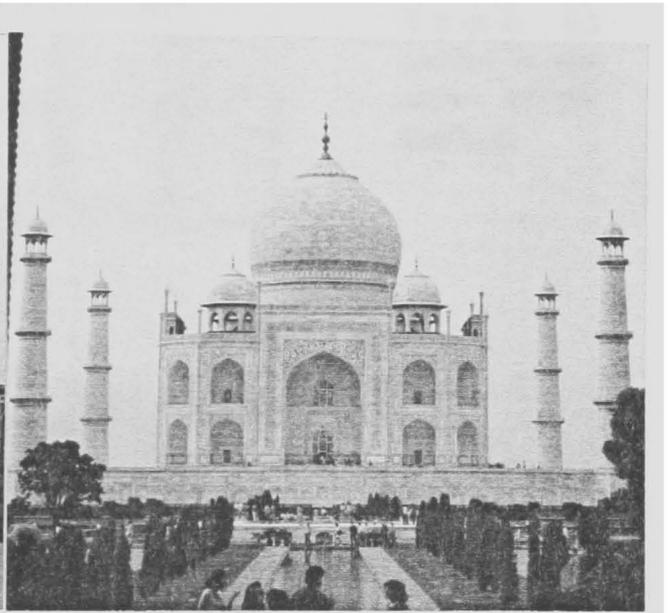
Figure 3-10:

Taj Mahal (1632-54)

Humayun's Tomb (Fig. 3-9) is located in Delhi whereas the Taj Mahal (Fig. 3-10) is located in Agra. Both monuments are set on a high platform. The first is built with red sandstone and white marble is used to emphasize the details while the second is built entirely of white marble. The main difference between these two monuments is that the Taj Mahal has minarets whereas Humayun's Tomb does not.

3. MUGHAL LANDSCAPE

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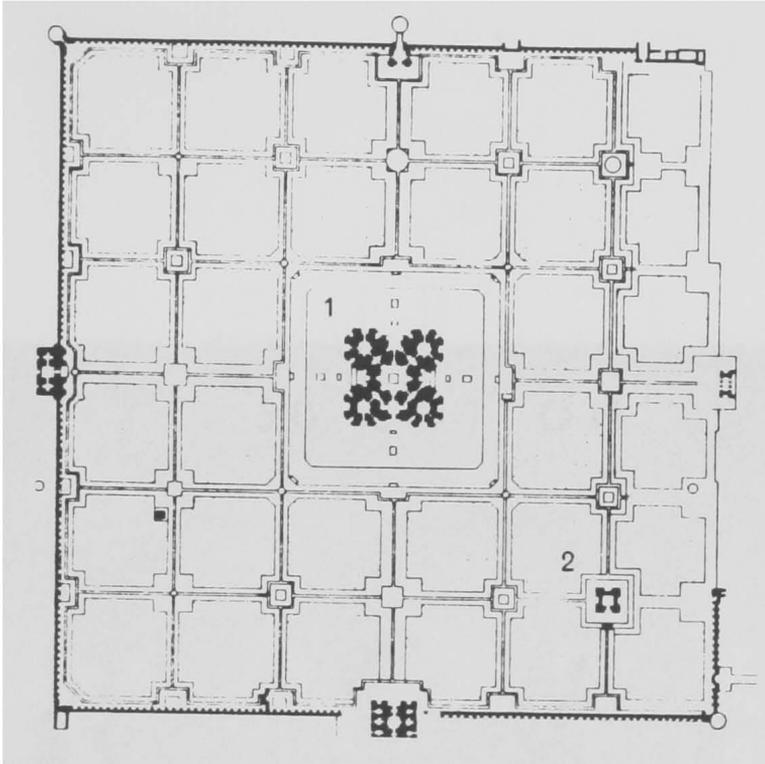
Figure 3-11:

Humayun's Tomb is located in the center of the charbagh.
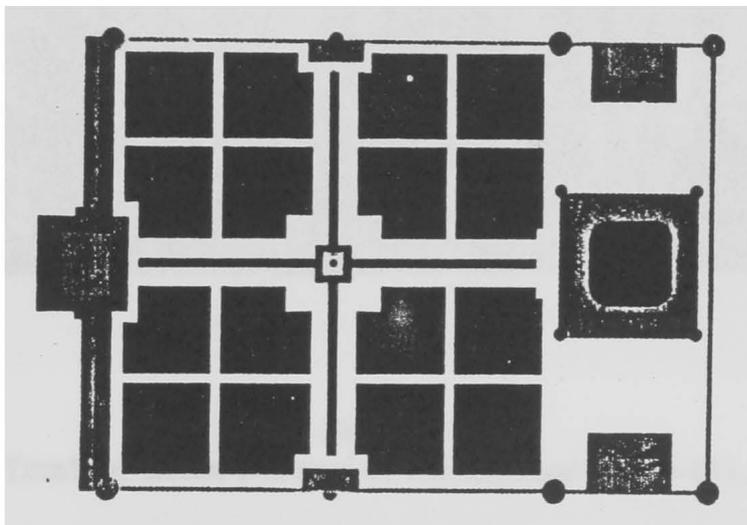
Figure 3-12:

The Taj Mahal is located at the side of the charbagh.

Site plans of Humayun's Tomb and the Taj Mahal.

3. MUGHAL LANDSCAPE
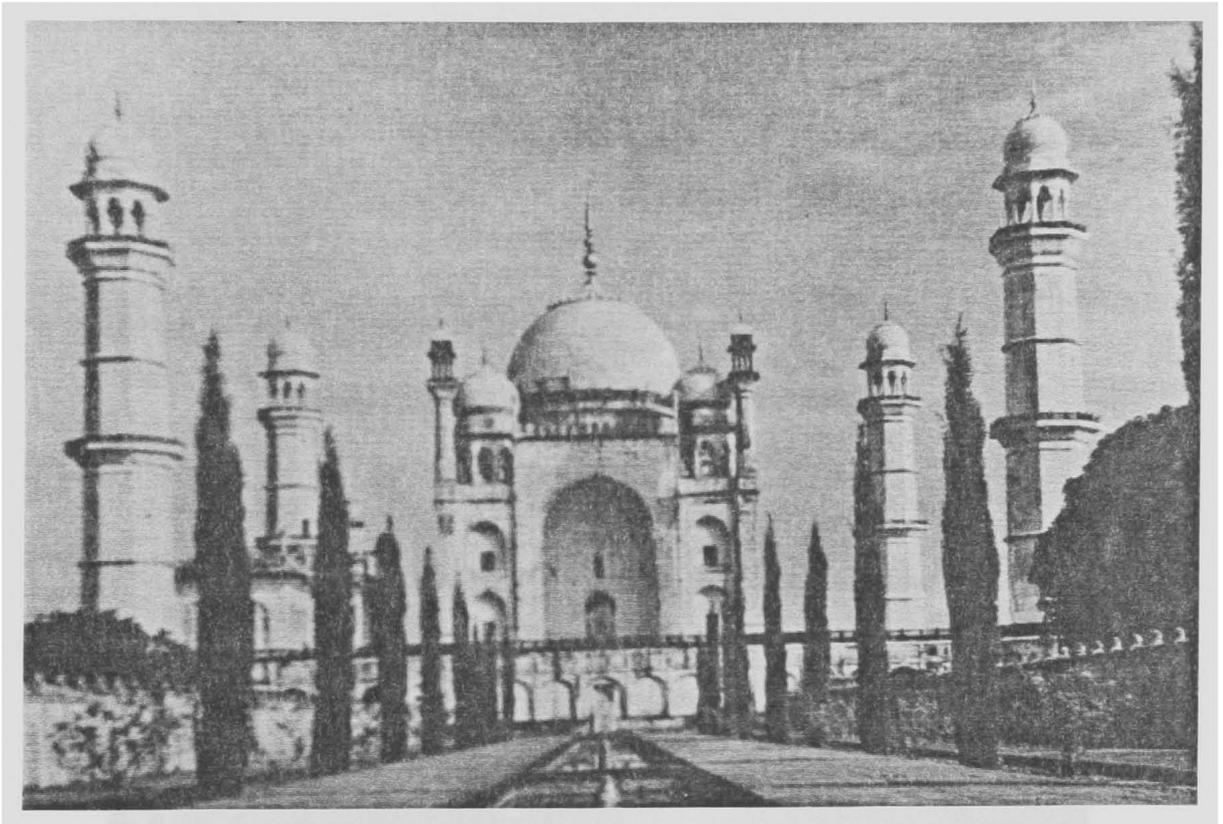
Figure 3-13:
Tomb of Rabia Daurani at Aurangabad (1660-61), India.

This is the tomb of Aurangzeb's wife which is a poor copy of the Taj Mahal. This tomb lacks the elegant proportions of the original and shows the decline of the perfection achieved during the period of Aurangzeb's father, Shah Jahan.

3. MUGHAL LANDSCAPE
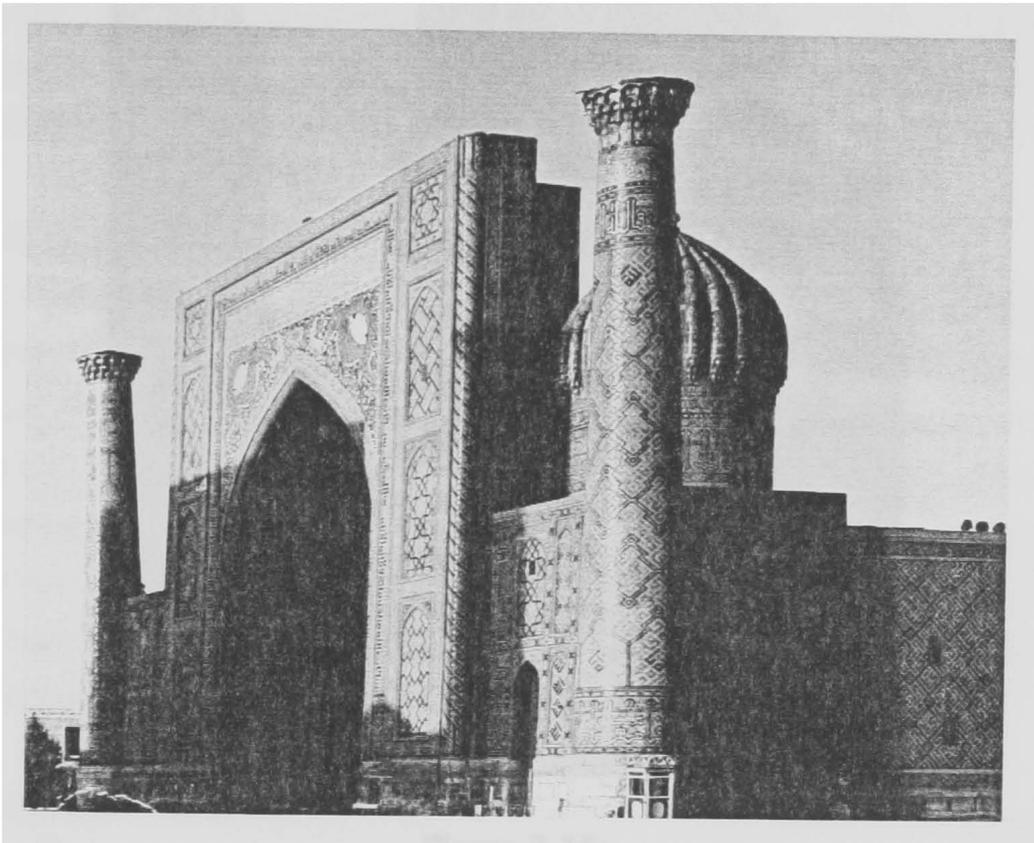
Figure 3-14:
Timurid architecture at Samarkand, Central Asia.

In 1417 Timurlane's grandson, Ulugh Beg ordered the construction of a madrasa (school) and other structures. There is strong symmetry in this building which is characteristic of Timurid architecture.

3. MUGHAL LANDSCAPE
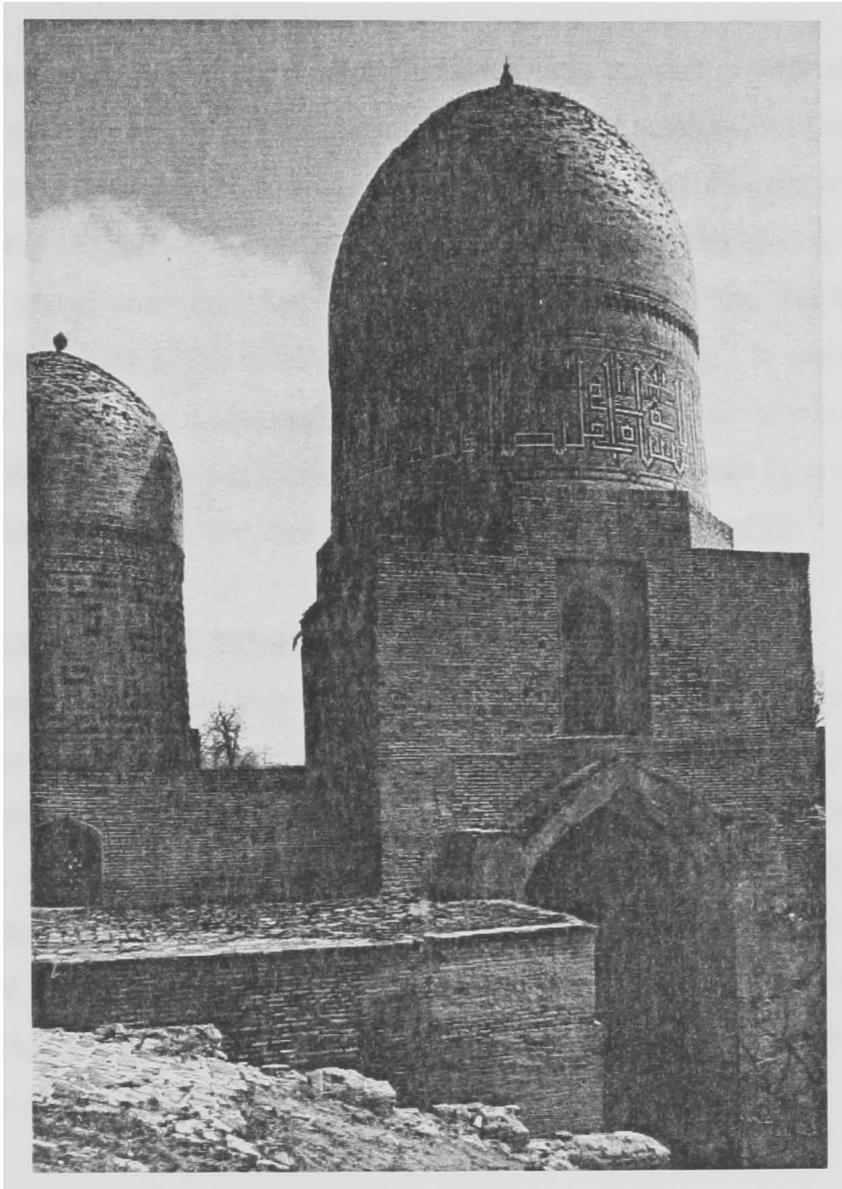
Figure 3-15:

Timurid architecture at Samarkand, Central Asia.

The double-cupola tomb built in the first quarter of the fifteenth century consists of a large square chamber attached to the smaller one. Each has a dome with a high drum upon which there are stylized Koranic inscriptions (Gippenreiter and Magowan, 1989, p. 39).

3. MUGHAL LANDSCAPE

The Mughals placed special importance on the physical context in their architecture and landscape architecture; this includes the location of their buildings and formal gardens. They did not think of architecture as buildings alone but they thought of it in terms of the relationship between buildings and their landscape and exterior spaces. Buildings and the exterior spaces were therefore designed together as one[6]. The Taj Mahal's beauty and exceptional grace is the result of its grand romantic setting. It stands on the bank of the River Yumuna in a charbagh. In Mughal architecture, the skyline also plays an important role. It creates a powerful visual drama which is broken by a series of turret-like pavilions provided at the roof level; these are known as chattris.

3.3. AKBAR AND HIS TOMB

Akbar's tomb is located at Sikandra, approximately 10 miles north-west of Agra. He approved the design of his own tomb (cf. Figure 3-16 to 3-22) which was built after his death by Jahangir. Like Humayun's Tomb, it is also located in the center of a nine square grid. It is enclosed by high walls and has a gate on each of its four sides; three of these gates are false and have been created to convey the impression of symmetry. The covered and the open space around the tomb provides an opportunity to go around it and experience the garden surrounding it. The charbagh is created through the use of paved paths and water channels.

Akbar's tomb is of a low truncated pyramidical form. Fergusson argues that it is a direct imitation of Buddhist Viharas. He also believes that it is incomplete (Fergusson, 1891,

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[6] Nowadays, many buildings are designed as art forms or as figures with very little emphasis being given to the context or space around them. In many instances, the spaces around the buildings are dealt with afterwards and a cosmetic approach is used to beautify them with materials such as trees, sculptures, fountains and floor textures. The resulting buildings float in the negative space around them.
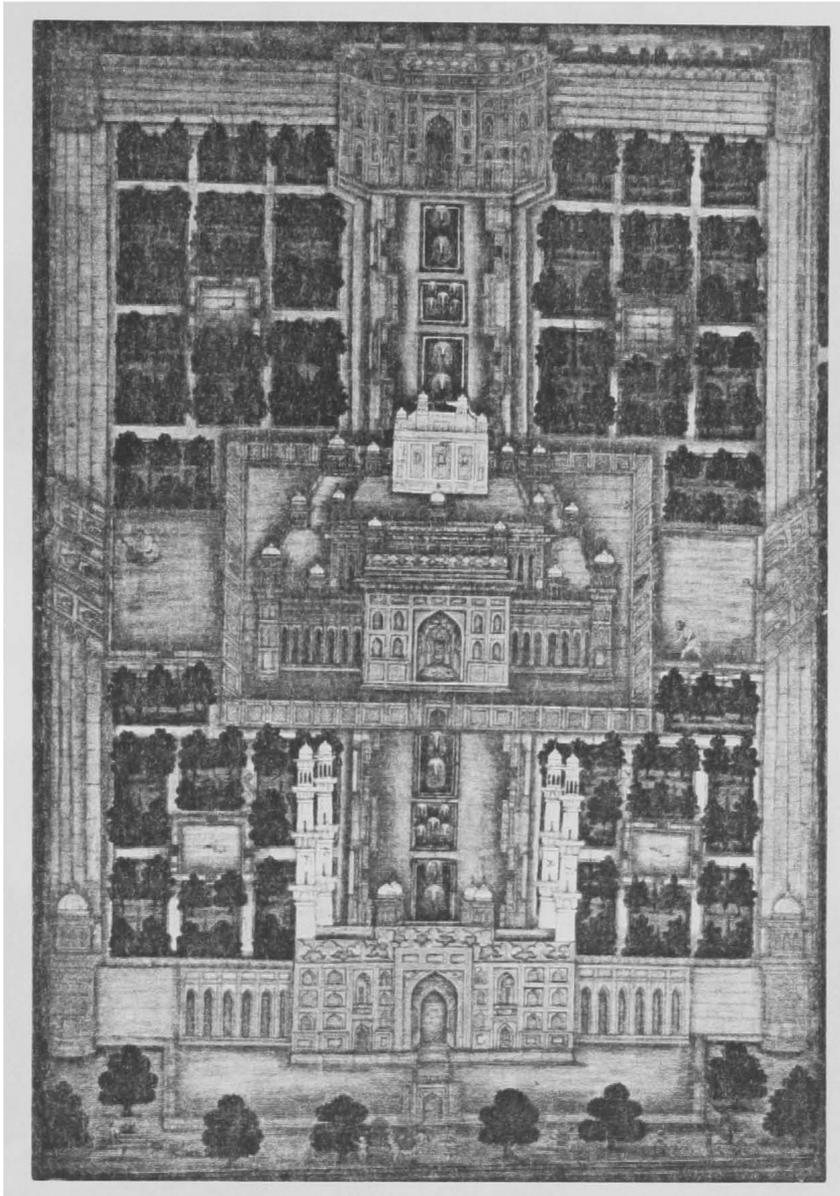
Figure 3-16:
Akbar's Tomb at Agra (1613), India.

This early 19th-century painting of Akbar's Tomb shows the concept of the charbagh. The walled-in garden has been divided into four quarters with paved platforms. The tomb is located in the center of the charbagh. Akbar's Tomb uses a monumental scale with the courtyards, gardens, water channels, fountains and trees. Careful examination of the painting also shows gardeners performing various tasks in the garden.

3. MUGHAL LANDSCAPE
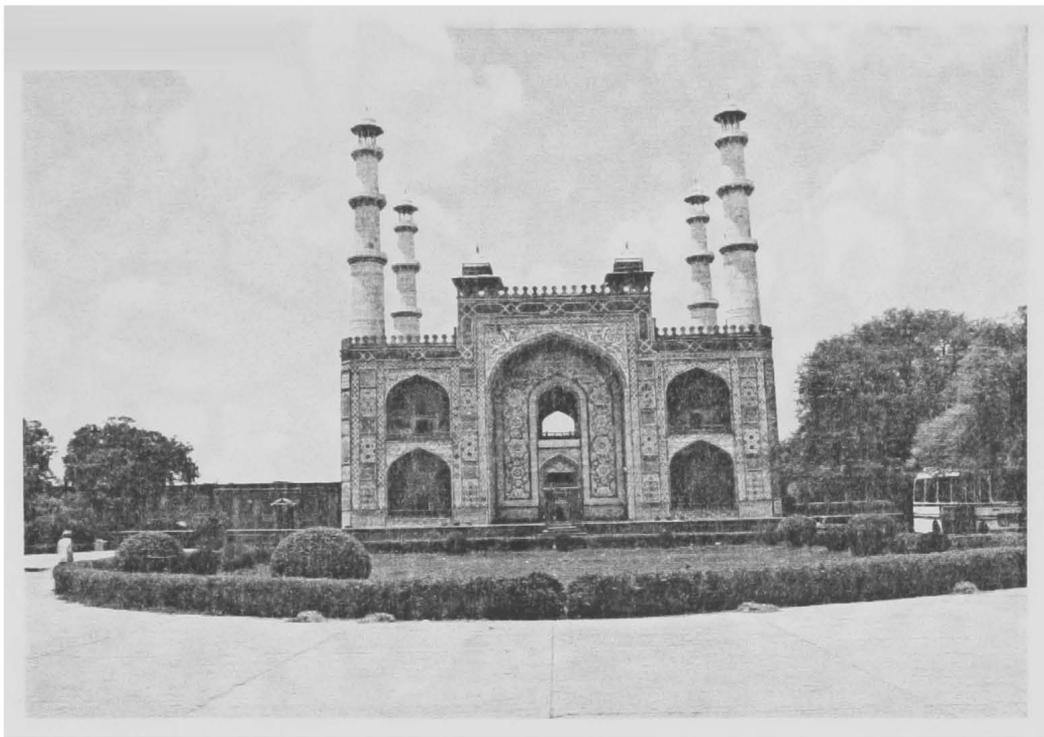
Figure 3-17:

Akbar's Tomb at Agra (1613), India: main entrance.
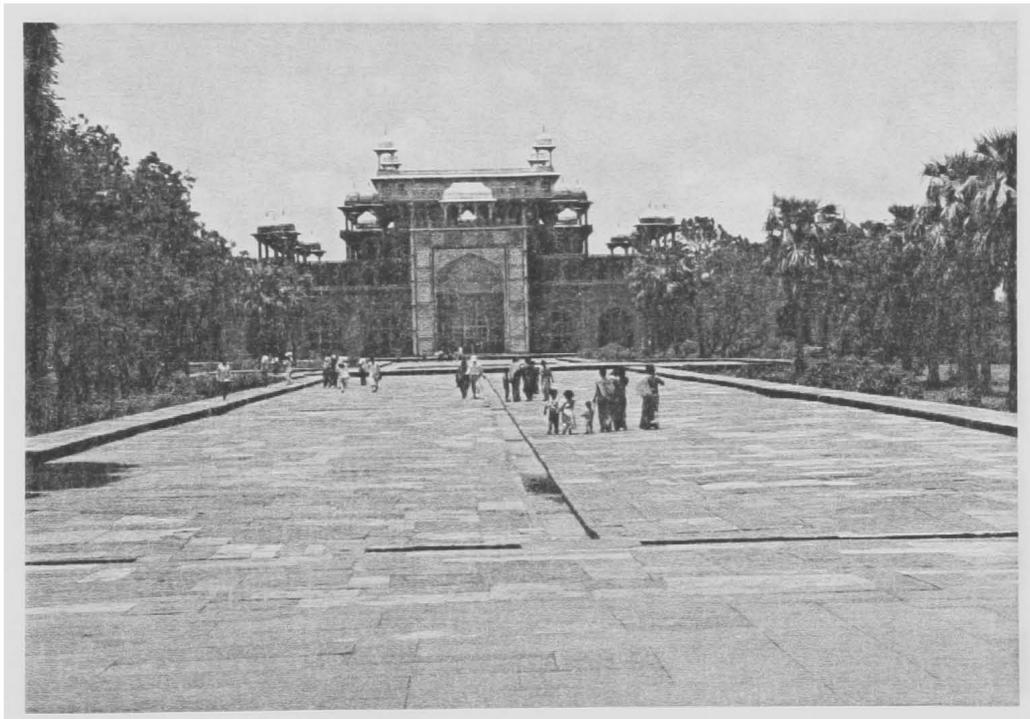
Figure 3-18:

Akbar's Tomb at Agra (1613), India

3. MUGHAL LANDSCAPE
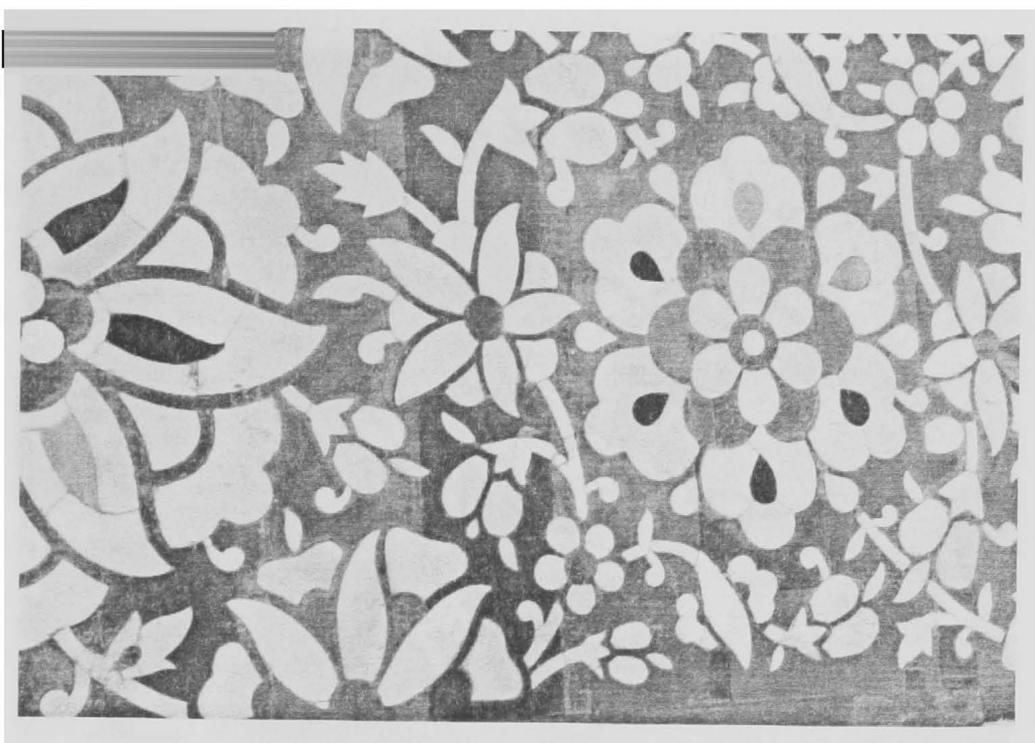
Figure 3-19:
Akbar's Tomb (1613) at Agra, India: Hindu decorative motifs
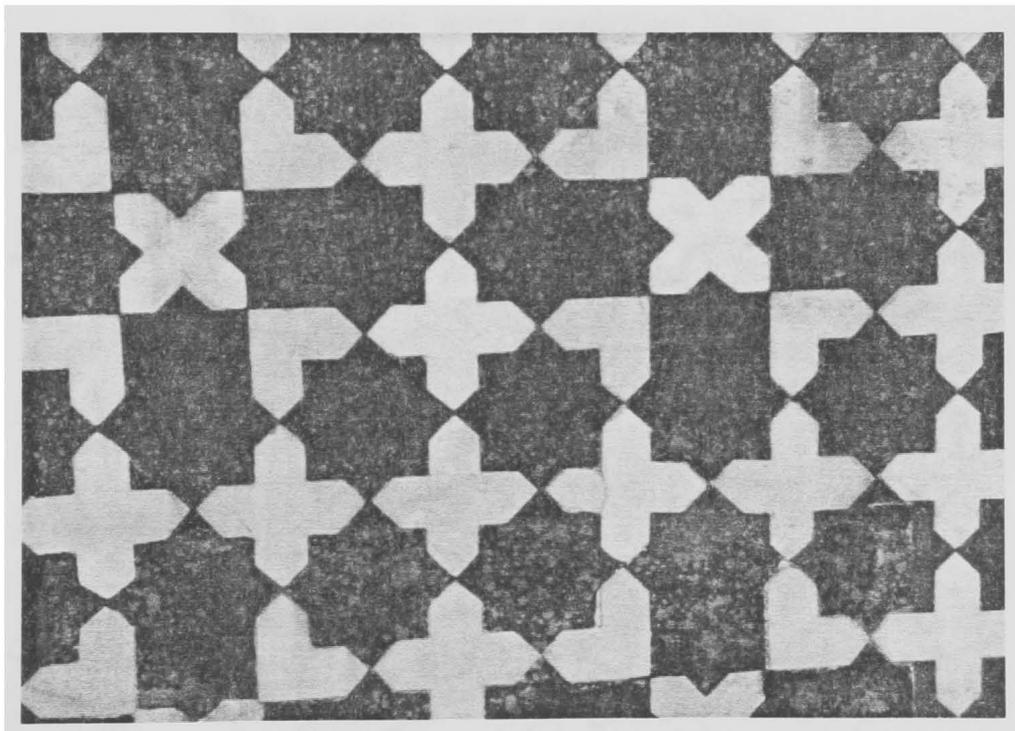
Figure 3-20:
Akbar's Tomb (1613) at Agra, India: cross symbol

3. MUGHAL LANDSCAPE
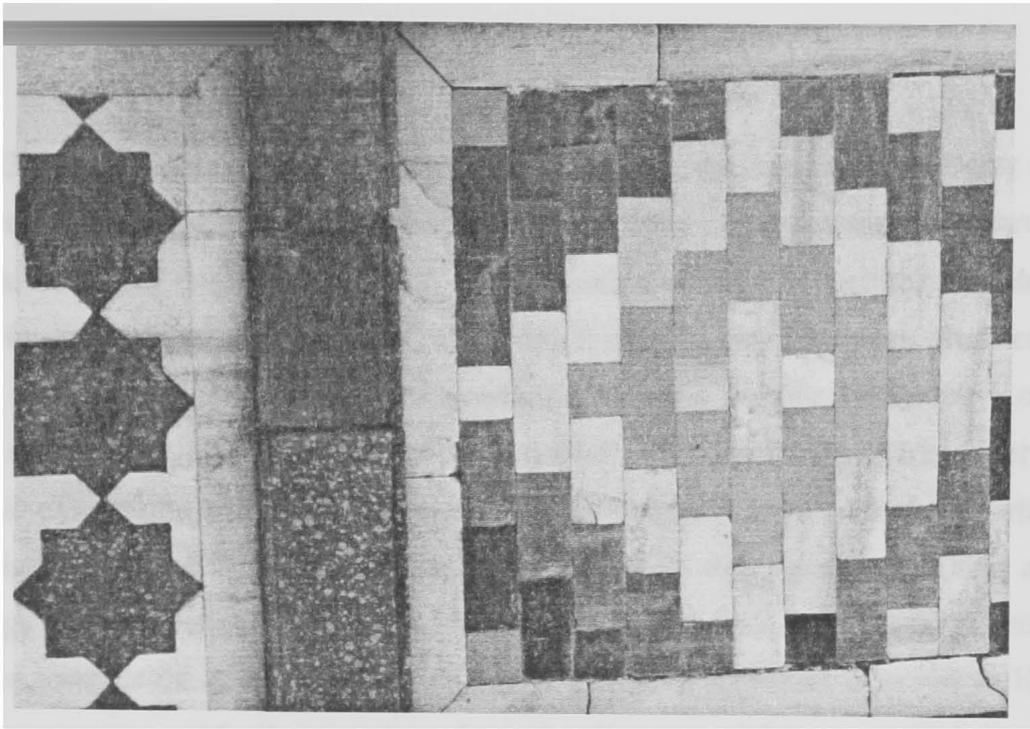
Figure 3-21:
Akbar's Tomb (1613) at Agra, India: geometric pattern

The geometric pattern symbolizes Islam.
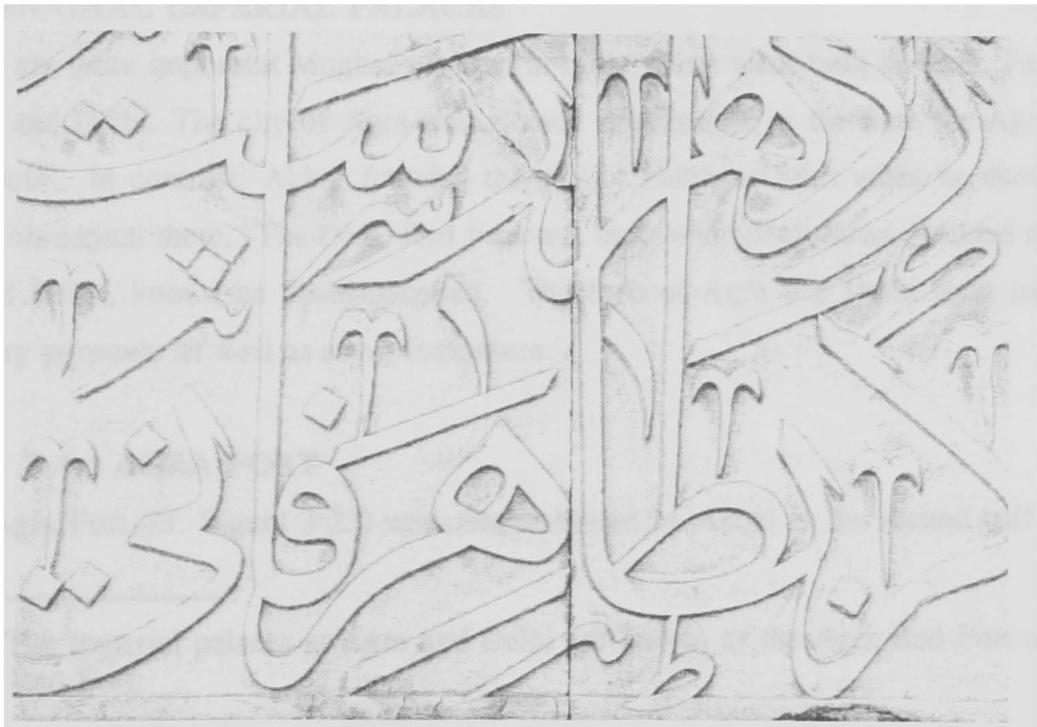
Figure 3-22:
Akbar's Tomb (1613) at Agra, India: Koranic calligraphy

3. MUGHAL LANDSCAPE

pp. 583-85) and contends that the upper story must have included a dome; Percy Brown however, maintains that the monument is complete and that a dome was not a part of the original design (Brown, 1962, p. 103). This tomb is a blend of architectural elements from Hindu, Buddhist and Islamic architecture. It uses various decorative ornamentation on its entrance gate such as, formal geometric patterns, koranic calligraphy, organic forms representing plant life, and the cross symbol. The formal geometric patterns and Koranic calligraphy symbolize Islam, the organic forms represent Hinduism while the cross is a symbol of Christianity. The structure reflects the character of Akbar and the theology of Din-i ilahi (cf. Figures 3-19 to 3-22). In his tomb, Akbar is laid to rest with his face towards the east and the rising sun; the easterly direction is sacred to Hindus. This is contrary to Muslim practice where the direction of Mecca (which is west in India) is considered sacred.

3.4. MUGHAL IMPERIAL PALACES

There are three important Mughal palaces[7] in India; these were built at Agra, Fatehpur Sikri[8] and Delhi. The city of Agra was already in existence at the time the Agra Fort was built. In contrast, Akbar founded the city of Fatehpur Sikri when he decided to move his capital there. The Delhi Red Fort was built when Shah Jahan founded the city of Old Delhi, known as Shahjahanabad. The forts at Agra and Delhi were used for military purposes as well as royal residences.

3.4a. AGRA FORT

The Agra Fort (cf. Figure 3-23) was commissioned by Akbar in the second half of the

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[7] The imperial palaces at Agra and Delhi are known as the Agra Red Fort and the Delhi Red Fort.

[8] Fatehpur Sikri will be discussed in the following chapters. In addition, the plans of both the Agra Fort and the Delhi Red Fort will be discussed in relation to Fatehpur Sikri.
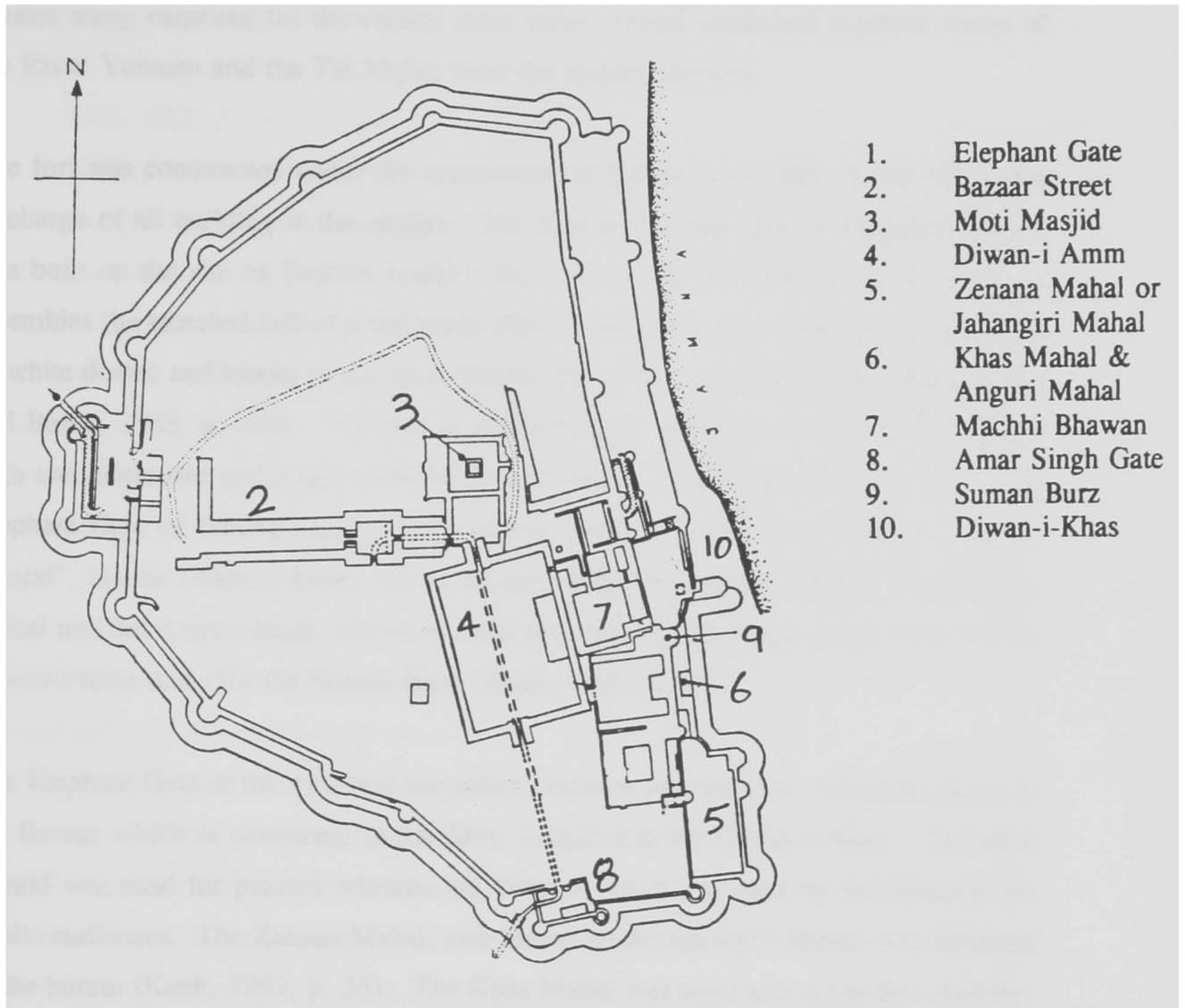
Figure 3-23: Plan of the Agra Fort (1564-70), India.

The Agra Fort was commissioned by Akbar before he decided to build Fatehpur Sikri.

1. Elephant Gate
2. Bazaar Street
3. Moti Masjid
4. Diwan-i Amm
5. Zenana Mahal or Jahangiri Mahal
6. Khas Mahal & Anguri Mahal
7. Machhi Bhawan
8. Amar Singh Gate
9. Suman Burz
10. Diwan-i-Khas

3. MUGHAL LANDSCAPE

sixteenth century (1564 to 1570). Later on, many buildings were replaced by Shah Jahan. At a number of places in this complex a change in level is provided. This creates many surprises for the visitor: open views, closed vistas and dramatic views of the River Yumuna and the Taj Mahal from the eastern terraces.

The fort was constructed under the supervision of Kasim Khan who, at that time, was in charge of all building in the empire. The plan of the Agra Fort is irregular since it was built on the site of Ibrahim Lodhi's fort. From the distance, across the river, it resembles the stranded hull of a red battle ship; its somber mass is relieved by the group of white domes and kiosks of the Moti Masjid rising like a armored turrets above (Haig and Burns, 1963, p. 536). The fort is encircled by a battlemented wall about 70 feet high and about one and a half miles in circumference. Its major elements are: (1) the Elephant Gate or "Hathi Gate," (2) the Bazaar Street, (3) the Pearl Mosque or "Moti Masjid", (4) the Diwan-i-Amm, (5) the Zenana Mahal or Jahangiri Mahal, (6) the Khas Mahal and the Anguri Bagh, (7) the Machhi Bhawan, (8) the Amar Singh Gate, (9) the Diwan-i-Khas and (10) the Suman Burg (Koch, 1991, p. 53).

The Elephant Gate in the west was the public entrance into the city. It led the public to the Bazaar which is connected to the Moti Masjid and the Diwan-i-Amm. The Moti Masjid was used for prayers whereas the Diwan-i-Amm was used by the Emperor for public audiences. The Zenana Mahal, also known as the Jahangiri Mahal, was allocated to the harem (Koch, 1991, p. 55). The Khas Mahal was used as a royal bed chamber. The Anguri Bagh in reality was a garden carpet spread at the feet of the emperor when he sat in the Khas Mahal. The Machhi Bhawan was a garden which held a fish tank, flower beds, fountains and water channels. This was virtually destroyed in an eighteenth century internal conflict and all that remains of it today is a rectangle of grass overlooking the River Yumuna (Lehrman, 1980, pp. 146-49). Close to the Machhi Bhawan is the Diwan-i-Khas where the emperor conducted special meetings. South of

3. MUGHAL LANDSCAPE

this is the Suman Burg, a pavilion which provides a beautiful view of the Taj Mahal and the River Yumuna. At present, tourists use the Amar Singh Gate while the Delhi Gate is reserved for the army.

3.4b. DELHI RED FORT

The Delhi Red Fort was built by Shah Jahan in the first half of the 17th century (cf. Figures 3-24 and 3-25). The complex is enclosed by crenellated walls of red sandstone on three sides with the fourth side facing the River Yumuna. The fort is surrounded by a moat. The main buildings of the Red Fort are: (1) the Lahori Darwaza (with covered Bazaar), (2) the Delhi Darwaza, (3) the Naqqar Khana, (4) the Diwan-i-Amm, (5) the Rang Mahal, (6) the Moti Mahal, (7) the Aramgarh (8) the Diwan-i-Khas, (9) the Hammam, (10) the Shah Burz, (11) the Sawan, (12) the Bhadon, (13) the Moti Masjid, (14) the Salimgarh, and (15) the Zafar Mahal (Koch, 1991, pp. 110-114).

During Shah Jahan's reign, the principal entrance was the Lahori Darwaza which faced Chandni Chowk, a wide street, nearly a mile long, with a row of shady trees on either side and with a deep marble-lined water channel running through its center. Fancy shops of uniform design selling sweets and jewels as well as coffee houses also lined the sides. The British, in 1860, chopped down the trees, repaved the streets and filled in the water channel (Kostof, 1992, p. 225). The Delhi Darwaza was a secondary gateway into the city. The Naqqar Khana (Drum House) was a music hall whereas the Diwan-i-Amm was used for public audiences.

The Rang Mahal housed the harem. The Moti Mahal was a palace used for entertainment; it was where the singing and dances took place. At present, the Moti Mahal is being used as the fort museum. The Aramgarh was the building utilized as the emperor's rest place. The Diwan-i-Khas was also meant for special audiences, and one of the walls has an inscription in Persian which reads: "If there is a paradise on earth,
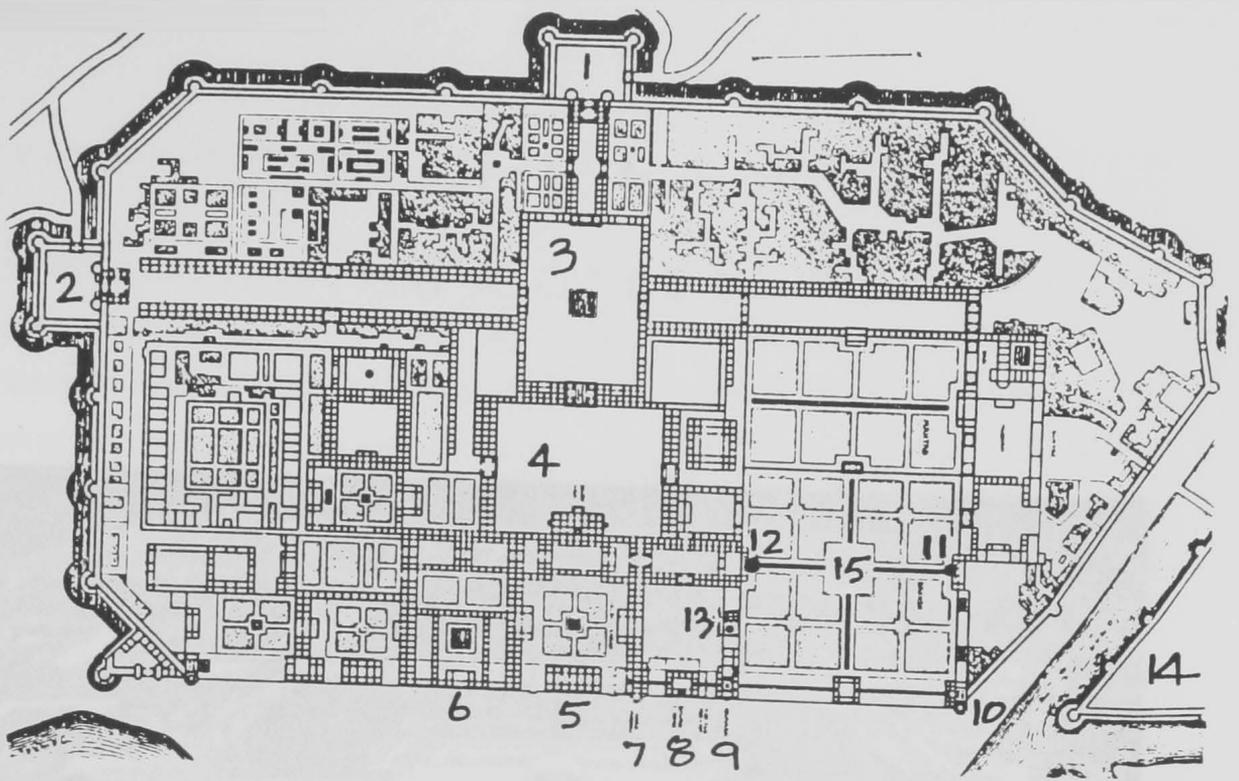
I.	Lahori Darwaza	8.	Diwan-i Khas
		9.	Hammam
2.	Delhi Darwaza	10.	Shah Burz
		11.	Sawan
3.	Naqqar Khana	12.	Bhadon
4.	Diwan-i Amm	13.	Moti Mosque
5.	Rang Mahal	14.	Salimgarh
6.	Moti Mahal		
7.	Aramgarh		

Figure 3-24: Plan of the Delhi Red Fort (1639-48), India.

The Delhi Fort was built by Shah Jahan. The fort was originally planned as a great water palace. Water was drawn from the Yumuna river to the Shah Burz in the north-east corner of the fort, from where the water was distributed to various buildings. Water was not only used to create visual drama, but also to cool the buildings.

3. MUGHAL LANDSCAPE
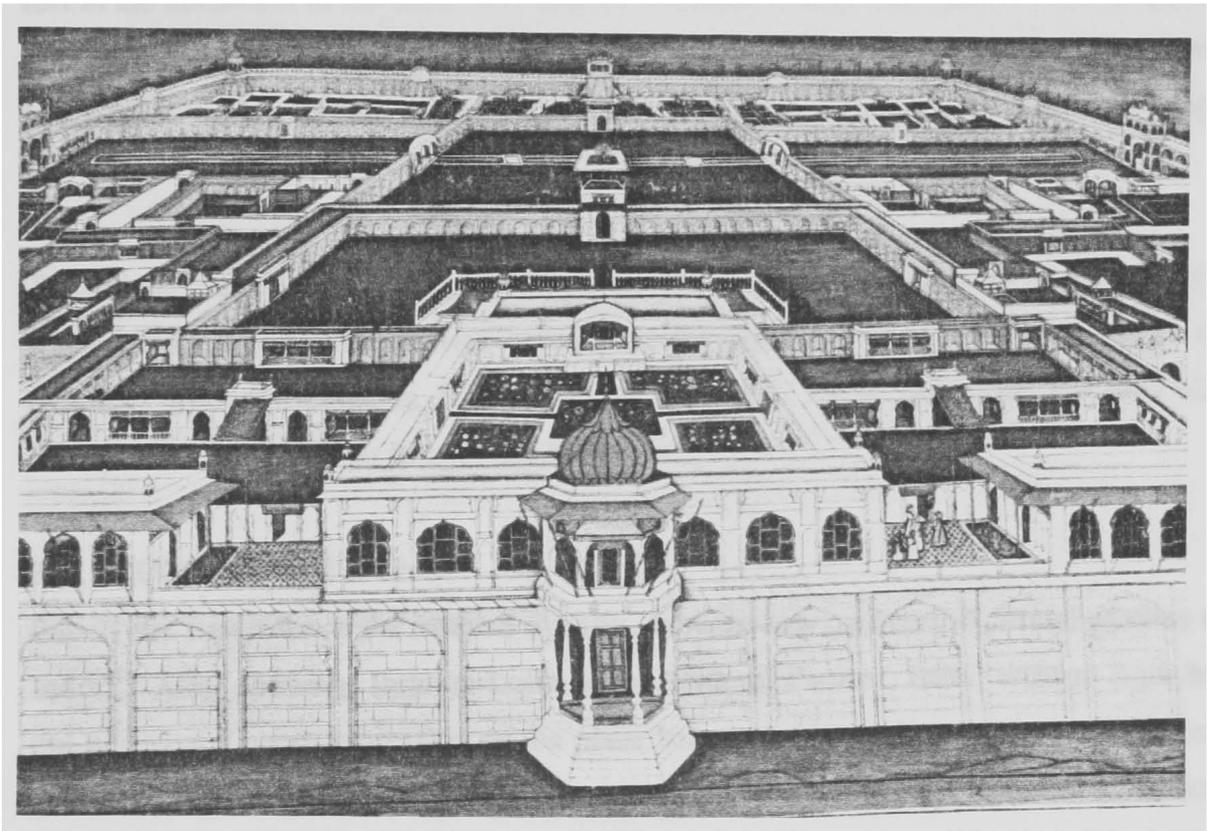
Figure 3-25: Painting of the Delhi Red Fort (1860), India.

3. MUGHAL LANDSCAPE

it is this, it is this, it is this".

The Hammam was a bath and the Shah Burz was a pavilion overlooking the river at the northeast corner of the fort. The Sawan and the Bhadon were two garden pavilions, whereas the Moti Masjid was a mosque. In addition, the Salimgarh was a detached small fort in the northwest of the main fort. Lastly, the Zafar Mahal was added by the Emperor Bahadur Shah, the grandson of Shahjahan. This is constructed in the middle of the pool. It is a pavilion built of red sandstone (cf. Koch, 1991, pp. 110-14; Lehrmann, 1980, pp. 139-186).

The unique characteristics of the Red Fort are that it contained a number of gardens and water channels. The water was brought to the courtyards and into the interiors of buildings through fountains, waterfalls and cascades. This was done not only for aesthetic reasons but also to cool the buildings.

3.5. MUGHAL GARDENS

Babur, the first ruler of the Mughal dynasty, brought new concepts of formal gardens to India[10]. After defeating Ibrahim Lodhi in the battle of Panipat, Babur went to Agra but did not have a good impression of the place because of its high summer temperatures. He was a keen observer and he made a number of observations about the physical environment of India. He sums up his remarks and his conception of the Indian landscape in his biography, Babur-Nama:

> One of the great defects of Hindustan[11] being its lack of running water, it kept coming to my mind that waters should be made to flow by means of wheels

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[10] Babur was familiar with the gardens of Samarkand which were created according to the concepts of charbagh laid down by his Timurid ancestors.

[11] Hindustan refers to India.

erected wherever I might settle down, also that grounds should be laid out in an orderly and symmetrical way. With this object in view, we crossed the Jun-water[12] to look at the garden-grounds a few days after entering Agra. Those grounds were so ...ugly and displeasing...that the idea of making a charbagh in them passed from my mind... as there [was] no other land near Agra, that same ground was taken in hand a few days later.

The beginning was made with a large well from which water [was drawn out] ... Then in that charmless and disorderly Hind[13], plots of gardens were laid out with order and symmetry, with suitable borders and parterres in every corner and in every border rose and narcissus in perfect arrangement ..... The people of Hind who had never seen grounds planned so symmetrically and thus laid out, called the side of the Jun, where [our] residences were, Kabul[14] (Babur 1977, pp. 531-32).

Babur's words in the above passage projects his image as a landscape architect as well as an engineer. He was familiar with the Central Asian cities of Samarkand and Herat which were renowned for their gardens in the fifteenth century. According to Elizabeth Moynihan, Samarkand was known as a city of gardens and its gardens were so dense that the city appeared to be a mass of trees when viewed from the top (Moynihan, 1979, p. 76).

Formal gardens were built during the Mughal rule[15]. In Islam, paradise is described as

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[12] This is a reference to the River Yumuna.

[13] This refers to India.

[14] This is a reference to the city of Kabul in Afghanistan where Babur had lived before his conquest of India.

[15] The literature devoted to Mughal Gardens can be found in the following sources: Andreas Volwahsen (1970). "The Mughal Gardens". In Living Architecture: Islamic Indian. pp. 90-96; Elizabeth B. Moynihan (1979). Paradise as a Garden in Persian and Mughal India; Susan Jellicoe (1976). "The Development of Mughal Garden". In Islamic Garden. pp.107-29; Norah Titley and Frances Wood (1991). "India". In Oriental Gardens. pp. 45-69; James Dickie (1985). Mughal Garden: Gateway to Paradise". In

a beautiful garden so the creation of a garden by the Mughals was an attempt to create paradise on earth. The Persian word firdaws has two meanings: garden and paradise. Persian poets have made innumerable comparisons between the earthly and the heavenly paradise as described by the Koran (Wilber, 1962, p. 39).

Mughal gardens were also imperial gardens and their designs were based on geometric order. They were created for basically two reasons: as memorable burial places and as pleasure gardens for the royal family. Tomb gardens were created in the form of charbagh[16]. A square or rectangle was divided into four quarters with paths and or water channels. In the tomb gardens, the building was either placed in the center of the charbagh as in Humayun's Tomb (cf. Figure 3-11) or at the side of it. The Taj Mahal is located at the side of its charbagh (cf. Figure 3-12). The first garden laid out in the form of charbagh was the Bagh-i-Wafa or Garden of Fidelity in Kabul (cf. Figure 3-26); this was created by Babur.

The Mughal pleasure garden was based on the design of the Persian carpet. A carpet is literally a representation of a Mughal garden (cf. Figure 3-27 to 3-29). It is a "two dimensional artifact emblematic of the three dimensional reality" (Herdeg, 1989, p. 49).

Muqarnas. pp. 128-36. Constance M. Villers Stuart (1913). Gardens of the Great Mughals; Sylvia Sheila Haywood and Susan Jellicoe (1972). The Gardens of Mughal India; Marg : A Magazine of the Arts. vol. 26. Dec. 1972 issue; Lehrman, Jonas (1980). Earthly Paradise. pp. 139-86; Wilber, Donald (1962). "Timurid Gardens: From Timurlane to Babur". In Persian Gardens. pp. 53-78.

[16] Charbagh symbolizes the four elements of water, fire, air and earth which were considered sacred for a long time. Charbagh is based on the Hindu concept of mandala which is a square plan divided into nine equal squares where the middle square is the most important according to the spatial hierarchy. This two dimensional square plan was adapted to garden design and was transformed into a cube in Mughal and Islamic architecture.

Figure 3-26: Babur supervises the construction of the Bagh-i- Wafa (Garden of Fidelity) at Kabul, Afghanistan.

Babur constructed many gardens during his career of conquest and travels. He records in his memoirs that in 1508-9, the Bagh-i Wafa was laid out in the form of underline charbagh. It was built "on a rising ground, facing south......There oranges, citrons and pomegranates grow in abundance.......[In 1523/4] I had plantains brought and planted there; they did well. The year before I had sugar cane planted there; it also did well...The garden lies high, has running water close at hand and a mild winter climate" (Babur, 1977, p. 208).

3. MUGHAL LANDSCAPE
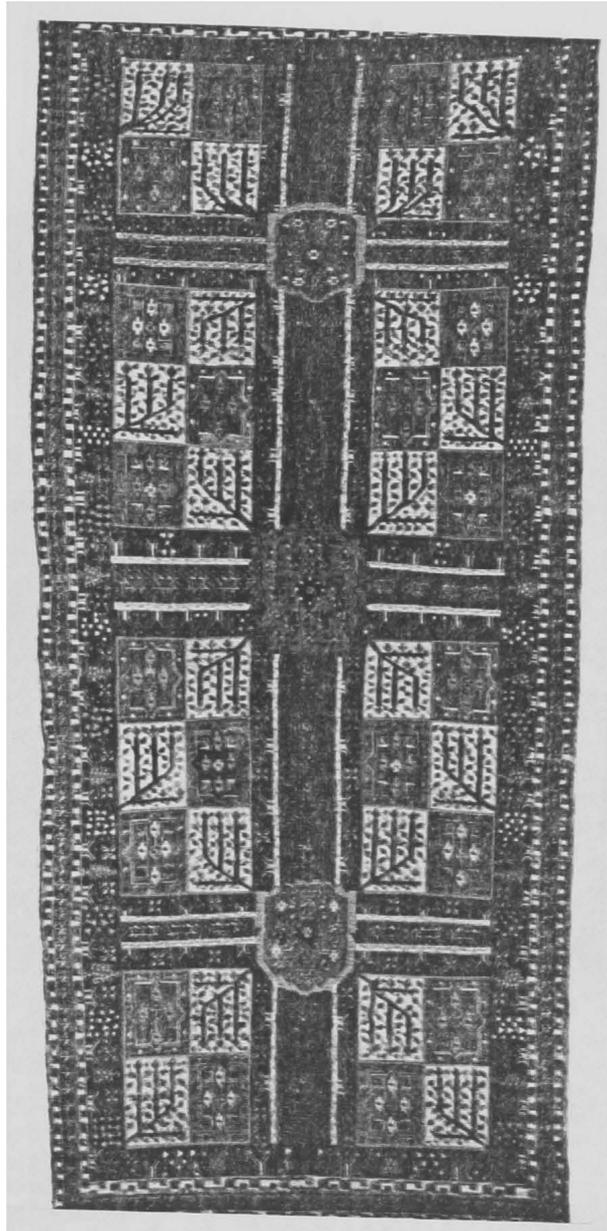
Figure 3-27: A garden design woven into a Persian carpet of the eighteenth century.

The carpet is divided into eight sections by four axes. The sections represent flower beds while the axes may either be paths or water channels or both. In Mughal gardens, this form is commonly used: the top portion may symbolize a higher or lower level terrace and the bottom portion, a lower or higher level.

3. MUGHAL LANDSCAPE
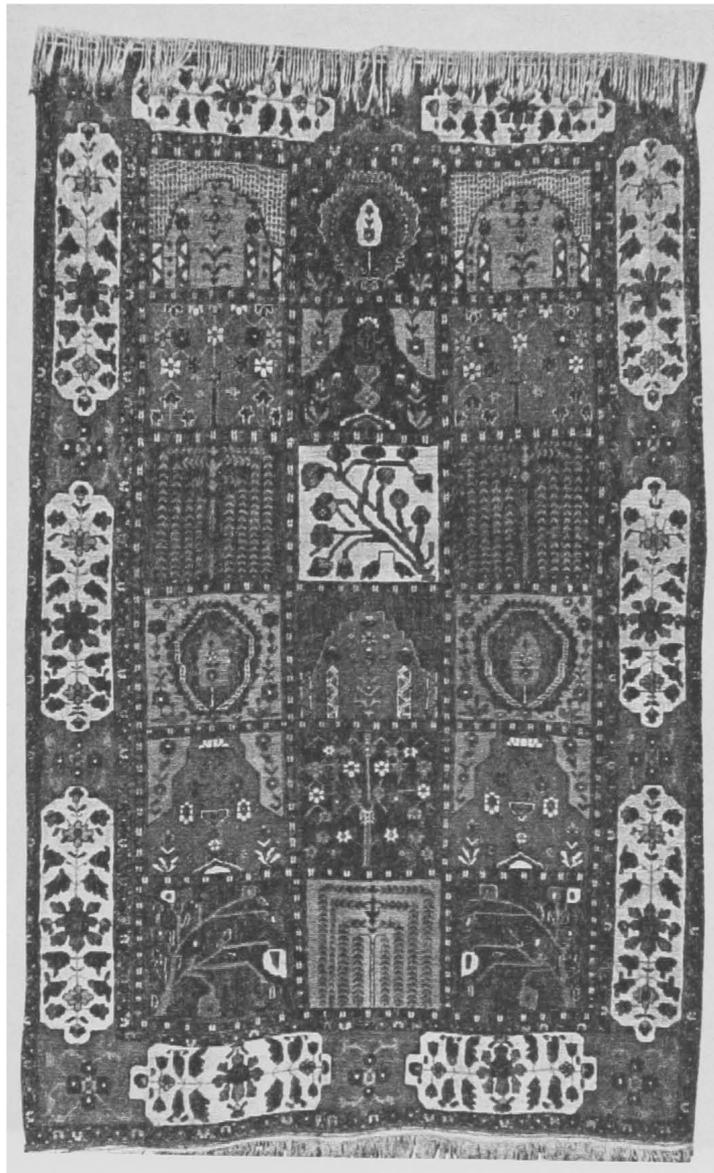
Figure 3-28: Garden design on a carpet

3. MUGHAL LANDSCAPE
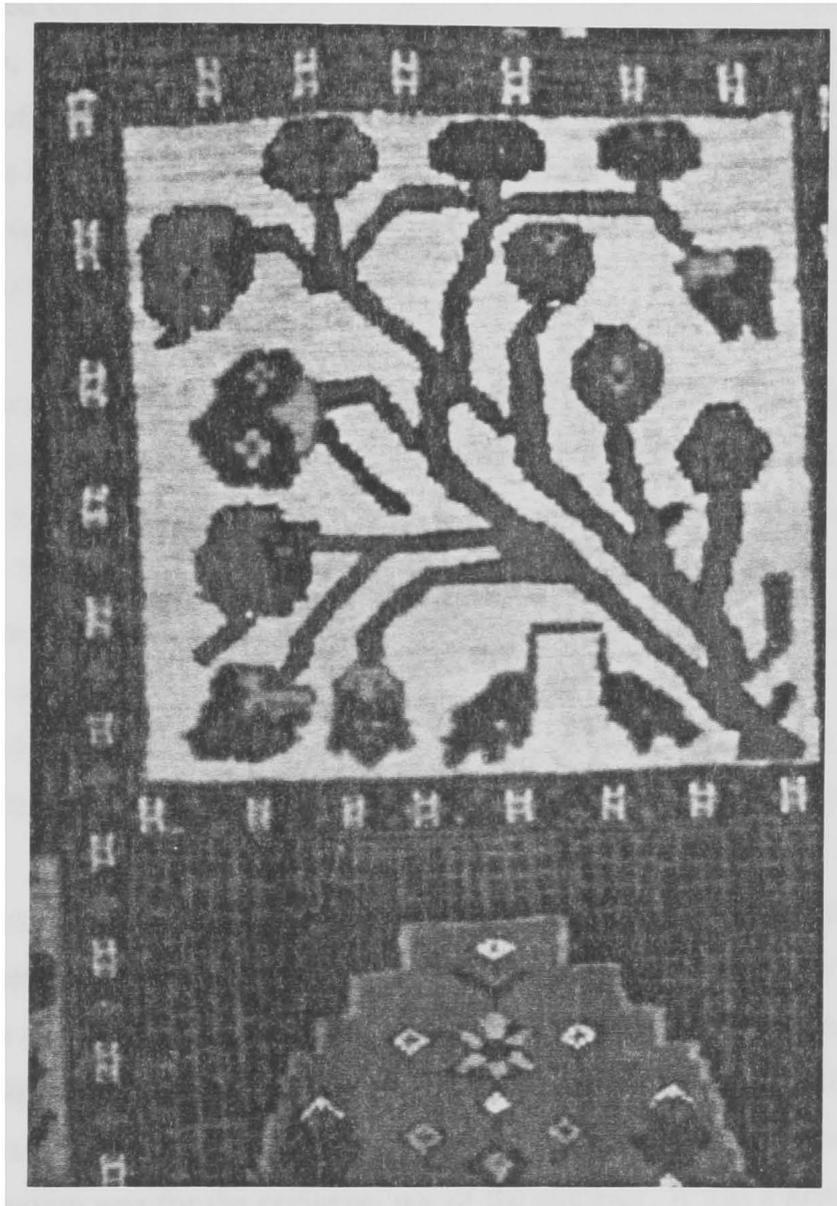
Figure 3-29: Garden design on a carpet: detail

Mughal gardens are seen at their best from the top, that is from the upper level in the case of the tomb garden and the top terrace in the case of the pleasure garden. They were designed on two principles 1) visually: to resemble a floral carpet when viewed from the top, 2) sensually: as a place of shade, relaxation and intimacy. To create the impression of a floral carpet, dense vegetation was provided (Dickie, 1985, p. 129). According to Susan Jellicoe, pavement height above the flower beds varied according to the type of plants which were intended to be grown there: some beds were quite shallow and some were quite deep (Jellicoe, 1976, p. 111).

Mughal pleasure gardens were created by dividing a sloping site into eight level terraces with running water in the form of channels, basins, tanks and waterfalls. According to Annemarie Schimmel, eight divisions signify paradise and may also signify absolute perfection. "The idea of eight gardens may have developed out of the doubling of the two times two gardens (two charbaghs) mentioned in Sura 55" of the Koran . It passes the number seven which symbolizes hell in Islam (Schimmel, 1976, p. 21). The main pavilions, which were also octagonal in some cases, were placed either on the top or on the bottom terrace to provide an uninterrupted view of the foliage and the waterfall.

The spatial order of the Mughal pleasure garden was based on public space, semi-public space and secluded space. In the pleasure garden, the public was only allowed on the first section closest to the entrance. This area was similar to the Diwan-i-Amm where ordinary subjects were allowed. Section two was strictly reserved for the emperor and his courtiers. This was similar to the Diwan-i-Khas which was the semi-public space. The third section was for the exclusive use of the emperor. It was a private space which also acted as a transition space between the semi-public and the harem areas. Section four was reserved for only the women of the harem. These sections were separated either by a level change or vegetation. Finally, the high walls which surround the Mughal garden add to a sense of seclusion and privacy.

3. MUGHAL LANDSCAPE

Deviations were sometimes made from the rule of having eight terraces. For example, in the case of the Nishat Bagh or the "Garden of Delight" in Kashmir, twelve terraces were created on the basis of the twelve signs of the Zodiac (cf. Figures 3-30 & 3-31). This garden is approached by boat and is entered from below. A central water channel about twelve feet wide connects the terraces on the different levels[17].

Water is an important design element in Mughal gardens. Babur observed the lack of it in India, this he described in his autobiography, Babur-Nama (Babur 1977, pp. 531-32). Water has rich symbolism in Islam; it represents the source of life and in a harsh landscape refreshes both body and spirit. Water, a symbol of purity, is used for ablution, and is found in tanks in the courtyards of the mosques. Water in these tanks always reaches the brim since paradise is said to overflow with water. This requires an overflow channel, which in turn forms part of the overall design. Symbolically, a cube or rectangle reflects stability or earthly paradise, and the placement of a rectangular pool on the central axis of the garden or courtyard logically followed (Lehrman, 1980 p. 36).

Water is also employed as an element of continuity throughout the length of a garden, it leads the eye to the tomb or the pavilion. The long, straight channel of water in Mughal gardens symbolizes infinity. In design, it provides a sense of direction and link between indoors and outdoors. It also provides movement and brings life and constant interest to the environment. Water is exploited very creatively in Mughal gardens; it offers the qualities of tranquility and depth, coolness and moisture. It moves through the gardens in many ways: it falls from one terrace to another over an inclined plane (chadar) in the form of a sheet of threads; the water surface breaks, becomes aerated and

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[17] At present there is a two story modern pavilion placed at the lower level whose roof intrudes into every view. The original pavilion may have been only one story high. A modern road cuts off the bottom terrace of the garden, thus changing the original design.
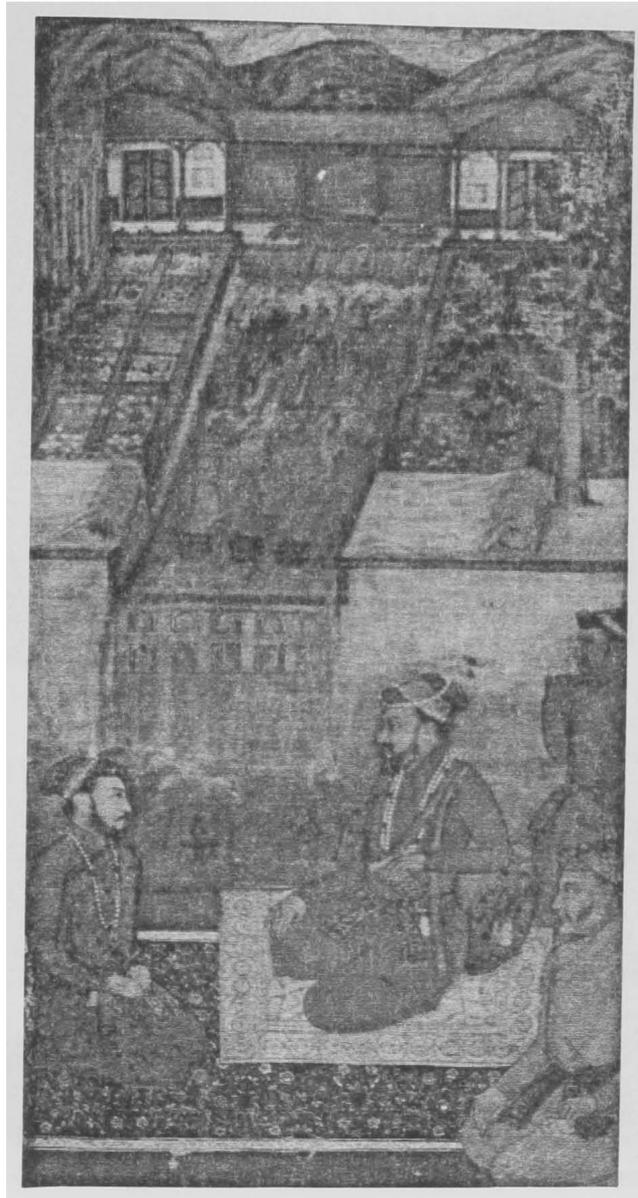
Figure 3-30: Nishat Bagh at Srinagar, India.

This miniature, produced in 1663, shows a royal retreat in the Nishat Bagh. It depicts a water cascade bordered by flower gardens.

3. MUGHAL LANDSCAPE
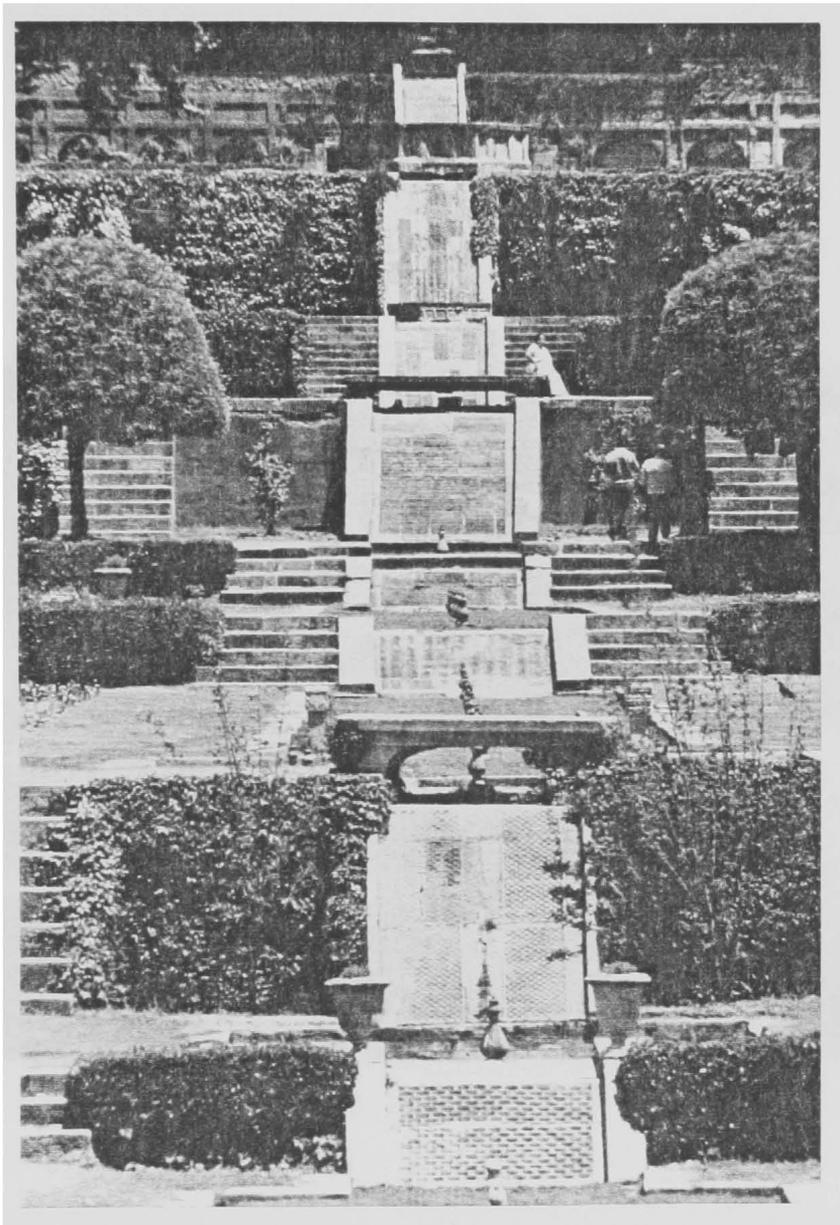
Figure 3-31: Nishat Bagh at Srinagar, India.

The photograph shows different terraces connected to one another by steps, and the water cascade in the middle. If one looks at the garden from the top terrace along the central axis, it is perceived as a Persian garden carpet.
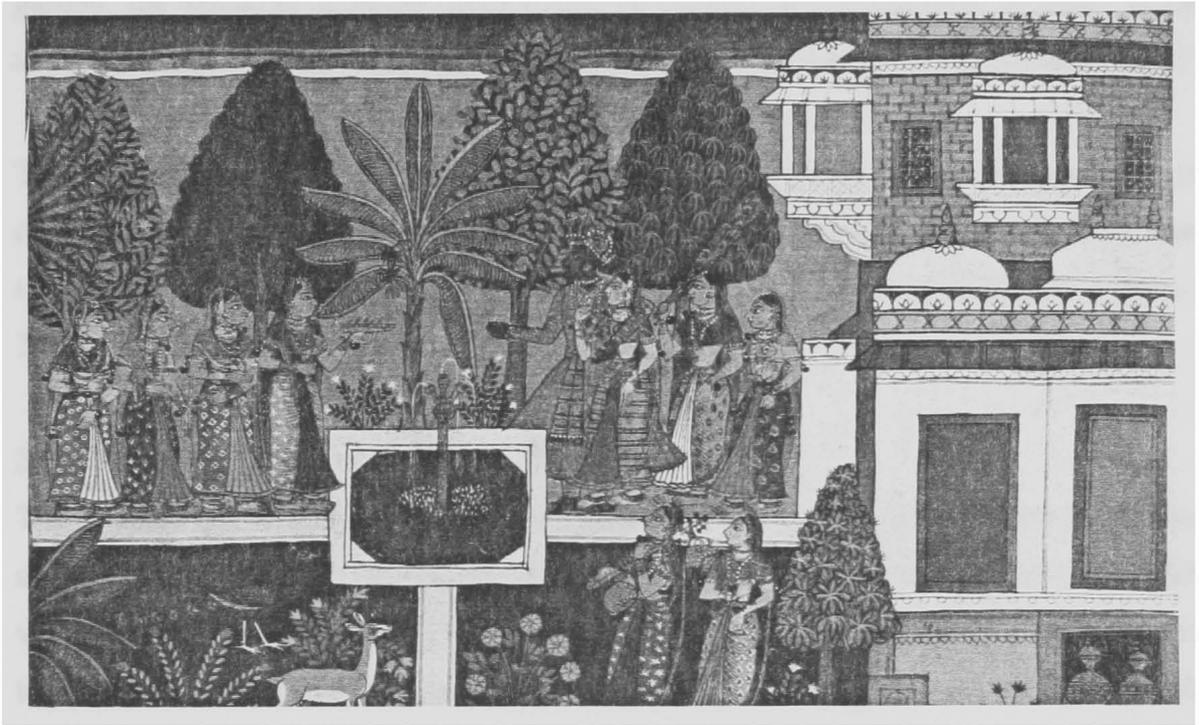
Figure 3-32:

This miniature shows that the <u>charbagh</u> has been incorporated
into an Indian setting.

turns into foam while filling the air with sound. Water also moves through the pavilion, which creates a vicarious sense of movement to the static mass of the building itself. In addition to moving water, there are also quiet pools which mirror the heavens and unites them with the earth (Lehrman, 1980, pp. 110-38).

In Mughal gardens, lights and candles are placed behind waterfalls to create a special effect. Holders of the lamps can still be seen in niches in the gardens. Within each garden, the variation of mood was dictated by changes in the treatment of water as well as by the complex play of sound, light, shade and reflection (Plumptree, 1993, p. 41).

The charbagh plan was adopted in many parts of India and contributed to the development of a new kind of garden. The concepts of charbagh continued for some time and can be seen in the background of the Hindu miniature paintings (cf. Figure 3-32).

3.6. SUMMARY

The chapter has examined all the stated four objectives. It first classified the Islamic architecture of India in two broad phases. The first phase is pre-Mughal (1206-1526) whereas the second (1526-1803) is Mughal. In the pre-Mughal era many Hindu and Jain temples were demolished and mosques were constructed from their dismantled materials. The Kutab Mosque in Delhi is one of the many examples. Mughal architecture begins with Humayun's Tomb which provides a basis for its evolution. Later on, this tomb served as a precedent for the Taj Mahal. Mughal architecture reached its mature state during the period of Shah Jahan.

The tomb built by Aurangzeb, the last Mughal Emperor for his wife, Rabia Daurani, can hardly be considered as creative. This mausoleum is a poor copy of the Taj Mahal and heralds the decline of Mughal architecture which had reached perfection in building art

during the era of the Emperors Akbar and Shah Jahan.

The chapter has met the second objective by defining Mughal architecture as a synthesis of Persian, Timurid and Indian architecture. Akbar's tomb is a synthesis of architectural elements from Hindu, Buddhist and Muslim architecture. It reflects Akbar's tolerance and his acceptance of ideas from the major Indian religions; these ideas formed the core of his own religion, Din-i ilahi. The third objective was to introduce the royal palaces at Agra and Delhi. The first, at Agra, was built by the Emperor Akbar whereas the palace at Delhi was built by Shah Jahan. These two palaces were primarily built out of red sandstone and white marble.

Finally, the chapter also looked at the new concepts of formal gardens brought to India by the Mughals. These were initially based on the charbagh in which the gardens were divided into four quarters with two axes intersecting each other at right angles. Later on, the gardens were carved out on sloping hills in the form of different terraces which were connected by water cascades and flights of steps. These gardens were based on two criteria. The first was an aesthetic criterion and the second, functional. The first one was based on the concept of the Persian carpet. This criterion was achieved by varying the garden bed depth below the pedestrian walkways according to the height of the vegetation planted. As a result, the garden in full bloom had a vegetation cover at a uniform height to create the vision of a Persian carpet. The second criterion was to create comfort and provide shade in the hot summer; this was achieved by providing dense vegetation. Water was exploited very creatively in its still and dynamic qualities. The unique features of Mughal gardens include the charbagh, the use of symmetry, the use of levels, the use of moving water, and the aerial view in the form of a Persian carpet.

4 - EVOLUTION OF FATEHPUR SIKRI

The objectives of this chapter are threefold. The first is to understand the historical evolution of Fatehpur Sikri. The second is to examine the historic role of Fatehpur Sikri in terms of its national, regional and local contexts. The third objective is to understand the population and social stratification of the city at the time of Akbar's residency.

4.1. INTRODUCING FATEHPUR SIKRI

Fatehpur Sikri is about 22 miles west of Agra, an important city during Mughal rule and 120 miles south of New Delhi, the capital of India. Fatehpur Sikri or "town of victory" was commissioned by the Emperor Akbar and it was constructed in less than fifteen years (1569-1574). It served as the capital of the Mughal empire from 1569 to 1585 during which period Akbar and his courtiers lived there. At present, most of its buildings remain in excellent condition. The complex has no streets, but consists of a series of interlocking courtyards set to the cardinal points. No symmetrical axes or monumental approaches are used; instead asymmetry seems to be deliberately employed in the setting out of the buildings. James Fergusson describes the imperial complex at Fatehpur Sikri as a "romance in stone such as few - very few - are to be found anywhere; and it is a reflex of the mind of the great man who built it more distinct than can easily be obtained from any other source" (Fergusson, 1910, p. 297). Vincent Smith thinks that nothing like Fatehpur Sikri was ever created before or perhaps can ever be created again in India. He further states that the complex is the "petrification of a passing mood in Akbar's strange nature, begun and finished at lightning speed while that mood lasted, inconceivable and impossible at any other time or in other circumstances" (Smith, 1917, p. 195).

Most of the buildings at Fatehpur Sikri are built with red sandstone using traditional Hindu trabeate construction and detailing, but with a simplicity that suggests Islamic influence. The architectural style "visualizes in red sandstone, Akbar's policy of uniting and fusing the diverse elements of India's age-long cultures and traditions" (Srivastava, 1964, p. 184). The buildings also employ the rich ornamentation of Hindu and Jain temple architecture of Gujarat, India. According to Percy Brown, ornamentation is used for decoration only; structurally, it has very little value because it was rarely used as a part of building structures. The ornamentation at Fatehpur Sikri reflects the imagination of the Hindu temple builder rather than the rationality and conservatism of Islam (Brown, 1962, p. 106).

4.2. HISTORICAL EVOLUTION

From the twelfth to sixteenth century, Fatehpur Sikri was a small frontier station known as Sikri. This was before the site was chosen by Akbar to be his ceremonial capital. There were, however, a number of factors which make Fatehpur Sikri a unique place in Mughal and Islamic history of India. Muslims settled in this area in the early thirteenth century. In the fourteenth and fifteenth centuries, several buildings, including a mosque and a tomb, were built there (Brand and Lowry, 1985, p. 3).

In 1527, Babur, Akbar's grandfather encamped at Fatehpur Sikri and spent about three to four weeks preparing for an important battle against Rana Sanga of Mewar, a tiny kingdom in Rajasthan. Babur writes in Babur-Nama that it was very hot in Agra and Sikri and that his soldiers were anxious to return to the cool air of Kabul. The morale of his soldiers was very low and it was here that he made a memorable moving speech to them. In a dramatic gesture, he destroyed all his gold and silver wine cups and poured his entire stock of wine onto the ground. He renounced wine and promised to lead a life of simplicity. He emphasized that the battle ahead was a holy war against infidels and made each soldier swear on the Koran to fight until death. The battle was

ten miles from Agra and Babur was the winner (Babur, 1971, pp. 547-586). He then called the place _Shukri_, the Arabic word for "thanksgiving," but this name never caught on in either popular or literary usage (Brand and Lowry, 1985, p. 3). Babur also commissioned a "Garden of Victory" to be laid there. This garden served as a respite for his son, Humayun, after he was forced to leave his throne. Humayun spent some time there while fleeing from Agra towards Persia (Brand and Lowry, 1985a, p. 40). Later on, after Fatehpur Sikri was built, Shah Jahan would go there while on his hunting expeditions and he would also pray at the Salim Chisti's tomb (Brand and Lowry, 1985, p. 4).

Fatehpur Sikri had a reputation as a spiritual place. Akbar was attracted to it for emotional reasons rather than strategic reasons because it was the residence of Salim Chisti, a well known Sufi saint. Chisti drew a large number of pilgrims from distant parts of the country. In 1569 Akbar did not have a male heir to his throne. He visited a number of holy people and shrines where he prayed and sought blessing for the birth of a son. Akbar also visited Salim Chisti who prophesied that he would have three sons. Some time after visiting the saint (in 1569), Akbar's wife, Miriam az-Zamani, became pregnant. She was sent to Salim Chisti's monastery to give birth to the future heir to the throne. This was Prince Salim or the future emperor Jahangir (Brand and Lowry, 1985, pp. 27-30). Salim himself describes the evolution of Fatehpur Sikri in the following way:

> When my mother [Miriam az-Zamani] came near the time of her delivery, he [Akbar] sent her to the Shaikh's [Salim Chisti's] house that I might be born there. After my birth they gave me the name of Sultan Salim, but I never heard my father, whether in his cups or in his sober moments, call me Muhammad Salim or Sultan Salim, but always Shaikhi Baba. My revered father, considering the village of Sikri which was the place of my birth, lucky for him, made it his capital. In the course of fourteen or fifteen years, that hill, full of beasts, became a city containing all kinds of gardens and buildings, and lofty, elegant edifices and pleasant places, attractive to the heart. After the conquest of Gujarat this village was named Fathpur (Brand and Lowry, 1985, p. 32).

4. EVOLUTION OF FATEHPUR SIKRI

The evolution of the city is also documented in <u>Akbar-Nama</u> by Abul Fazl, Akbar's biographer:

> "His [Akbar's] exalted sons [Salim and Murad] had taken their birth in Sikri and the God knowing spirit of Shaikh Salem [Salim Chisti] had taken possession thereof, his [Akbar's] holy heart desired to give outward splendor to this spot which possessed spiritual grandeur..... an order was issued that the superintendents of affairs should erect lofty buildings for the special use of Shahanshah (Fazl, 1979, pp. 530-531).

Salim's birth is also depicted in a miniature painting in <u>Akbar-Nama</u> (cf. Figure 4-1). The new city was first known as Fathpur Sikri, and later on as Fatehpur Sikri, both names however having the same meaning. Another miniature from <u>Akbar-Nama</u> illustrates the construction of the city (cf. Figure 4-2).

The imperial complex was built on the top of a ridge. This was a favorable spot because it provided visibility over a vast area. Symbolically, the complex was in an authoritative position since it overlooked the city and the surrounding area over which the emperor ruled. As soon as the design concept was developed, artisans from all over the empire were invited to take part in the execution of this project. The work progressed with "almost magical speed." Red sandstone, ranging from rose pink to deep purple, was already available in the nearby hills of Fatehpur Sikri. A number of stone cutting craftsmen also lived in this area; there was even a small mosque[1] which belonged to these craftsmen even before Fatehpur Sikri was built. Labor was performed in the open air close to the western limits of the ridge. Stone cutters chiselled the stone very skillfully "as no turner could do with wood" (Haig and Burns, 1963, pp. 538-539).

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[1] This mosque which was created by the stone cutters for their worship is probably one of the earliest buildings on the site (Haig and Burn, 1963, p. 539).

4. EVOLUTION OF FATEHPUR SIKRI

FIGURE 4-1: The birth of Prince Salim

The miniature shows the birth of Prince Salim, the future emperor of India. In the upper scene, Akbar's wife Miriam az-Zamani is sitting with Prince Salim in her arms. In the lower portion of the miniature, a crowd is gathered to receive alms. This was a common practice to celebrate births and special religious festivals.

4. EVOLUTION OF FATEHPUR SIKRI
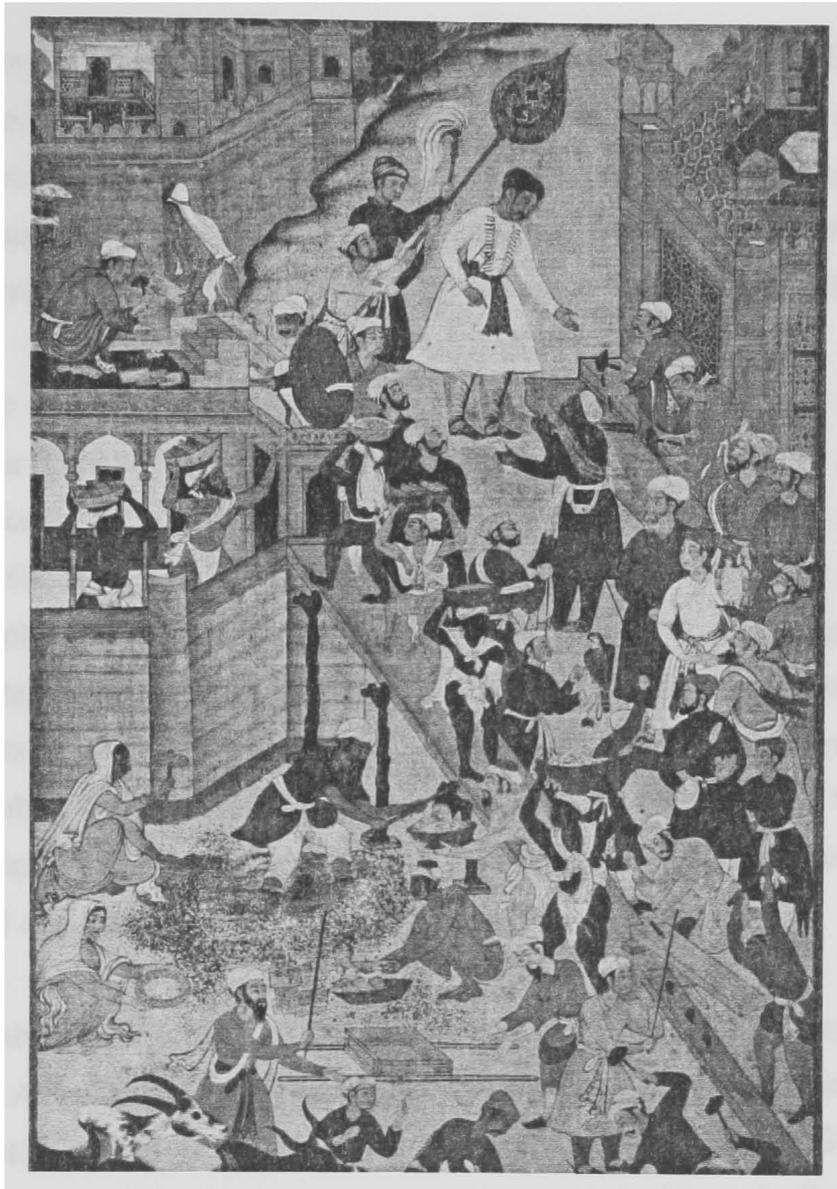
Figure 4-2: The building of the Fatehpur Sikri complex.

Akbar is inspecting the construction of Fatehpur Sikri (Akbar-Nama, 1590). At the top of the miniature Akbar is seen conversing with one of the artisans on the site. The miniature depicts many artisans engaging in construction activities, such as engraving slabs, chiseling stones, and moving mortar for the walls.

4. EVOLUTION OF FATEHPUR SIKRI   84

Father Anthony Monserrate, one of the Jesuit missionaries who resided at Fatehpur Sikri, in 1580, recorded that stones were dressed at the quarries according to the plans and then they were brought to the site where they were fitted and fastened together. Akbar sometimes quarried stone himself with the stone cutters. This is a testimony of the emperor's involvement in the creation of the city (Brand and Lowry, 1985, p. 10).

In September 1585, less than fifteen years after the city was founded, Akbar and his court left for Lahore never to visit Fatehpur Sikri again. Jahangir, in the early seventeenth century, raised the issue of water shortage in the area as reason for the desertion of the city. But according to contemporary sources, Akbar left Fatehpur Sikri because of political and military problems in the northwest[2]. In Akbar-Nama, Abul Fazl also states that Akbar decided to stay in Punjab to suppress rebels and to gain more territory (Brand and Lowry, 1985, pp. 2-3). Fatehpur Sikri, however, was not completely abandoned. Akbar's mother lived there until her death. When Jahangir visited Fatehpur Sikri in 1619, he found a large portion of Akbar's harem still living there (Brand and Lowry, 1985, p. 4).

Recently Prabhakar Begde argues that Fatehpur Sikri and its imperial complex were built long before Akbar's time. He even thinks that the city and complex were there at the time of Akbar's grandfather, Babur. He also maintains that Fatehpur Sikri is a Hindu city and its creation had nothing to do with Akbar and the Mughals (Bedge, 1982, pp. 88-100; p. 145). Begde's arguments, however, have no historical and factual basis[3].

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[2] There was instability in the area due to the sudden death of Akbar's half brother, Mirza Hakim Muhammad who was the governor of Kabul (Brand and Lowry, 1985, p.2).

[3] In addition to Forts And Palaces of India (1982) Bedge also wrote Ancient and Medieval Town Planning in India (1978). These books are biased and written with a closed mind. His aim is to give all the credit to Hindu architecture by ignoring all the

4. EVOLUTION OF FATEHPUR SIKRI   85

4.3. NATIONAL AND REGIONAL CONTEXT

Fatehpur Sikri was not important from a strategic defence point of view. The residence of Salim Chisti was the focal point in the evolution of this ceremonial city. Also, it was 22 miles from Agra and 120 miles from Delhi, both of which were big and important cities of the time. Fatehpur Sikri was also a part of an approximately 300 mile-long royal corridor running from Agra to Ajmer. Large numbers of people used to go to Ajmer on pilgrimage to the tomb of the renowned Sufi saint, Khwaja Muin ad-Din Chisti (d.1236). Akbar too had been making an annual pilgrimage to this holy place since 1560 (cf. Figure 4-3). In 1573-74, he ordered milestones to be installed every kuroh (approximately 2 miles) between Agra and Ajmer and that rest houses be built every ten kurohs along the way. These activities indicate that Fatehpur Sikri also served as a link between the old political city of Agra and Ajmer, a well known spiritual center (Brand and Lowry, 1985, p. 5).

4.4. LOCAL CONTEXT

Fatehpur Sikri is approximately 7 miles in circumference. It is surrounded on three sides by walls pierced by nine gateways. On its north west side there was a large artificial lake which is dried up at present (cf. Figure 4-4). The Agra Gate which is on the north east side of the walled city connects Fatehpur Sikri with the city of Agra. A road connecting the Thera Gate (on the south west side) with the Agra Gate (on the north east side) divides the walled city into two halves. Present-day Fatehpur Sikri has expanded along this road, in both the north western and south eastern directions (cf. Figure 4-5). The main entrance to the imperial palace was through the Agra Gate. Ordinary citizens lived between the outer city walls and the imperial palace.

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modern history of Islamic and Mughal Architecture in India. His work is purely interpretive and polemical.
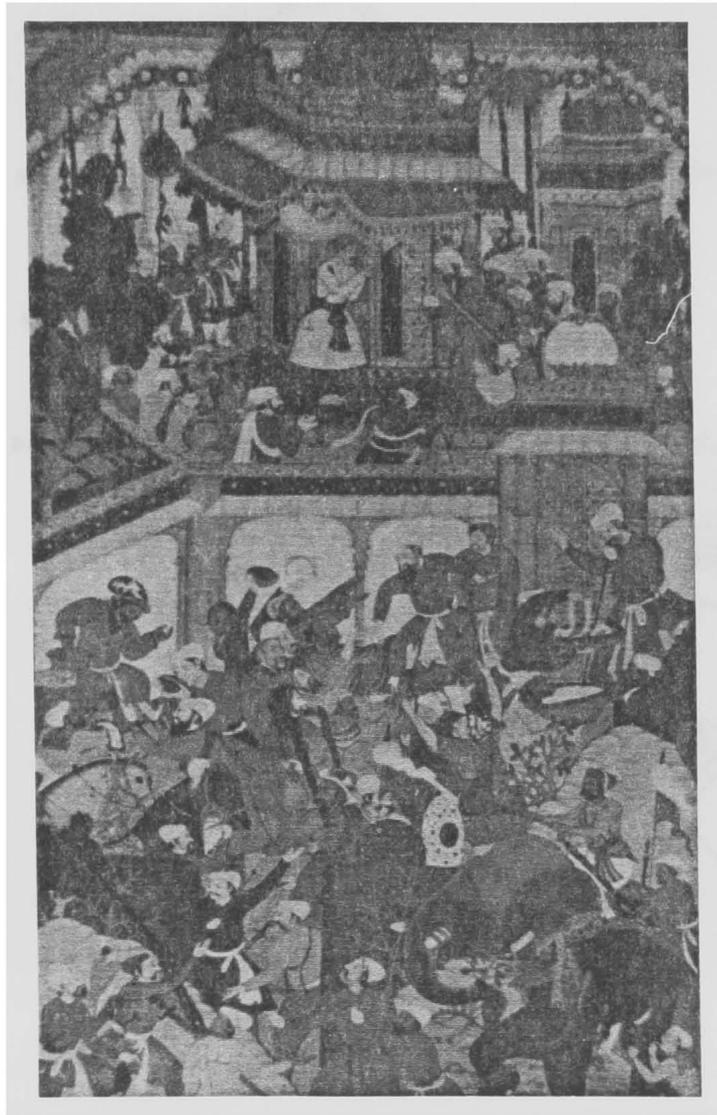
Figure 4-3: Akbar at the tomb of the Sufi saint,
Khawaja Muin al-Din at Ajmer

The lower half of the miniature depicts gifts being distributed to the city residents outside the shrine.

4. EVOLUTION OF FATEHPUR SIKRI 87
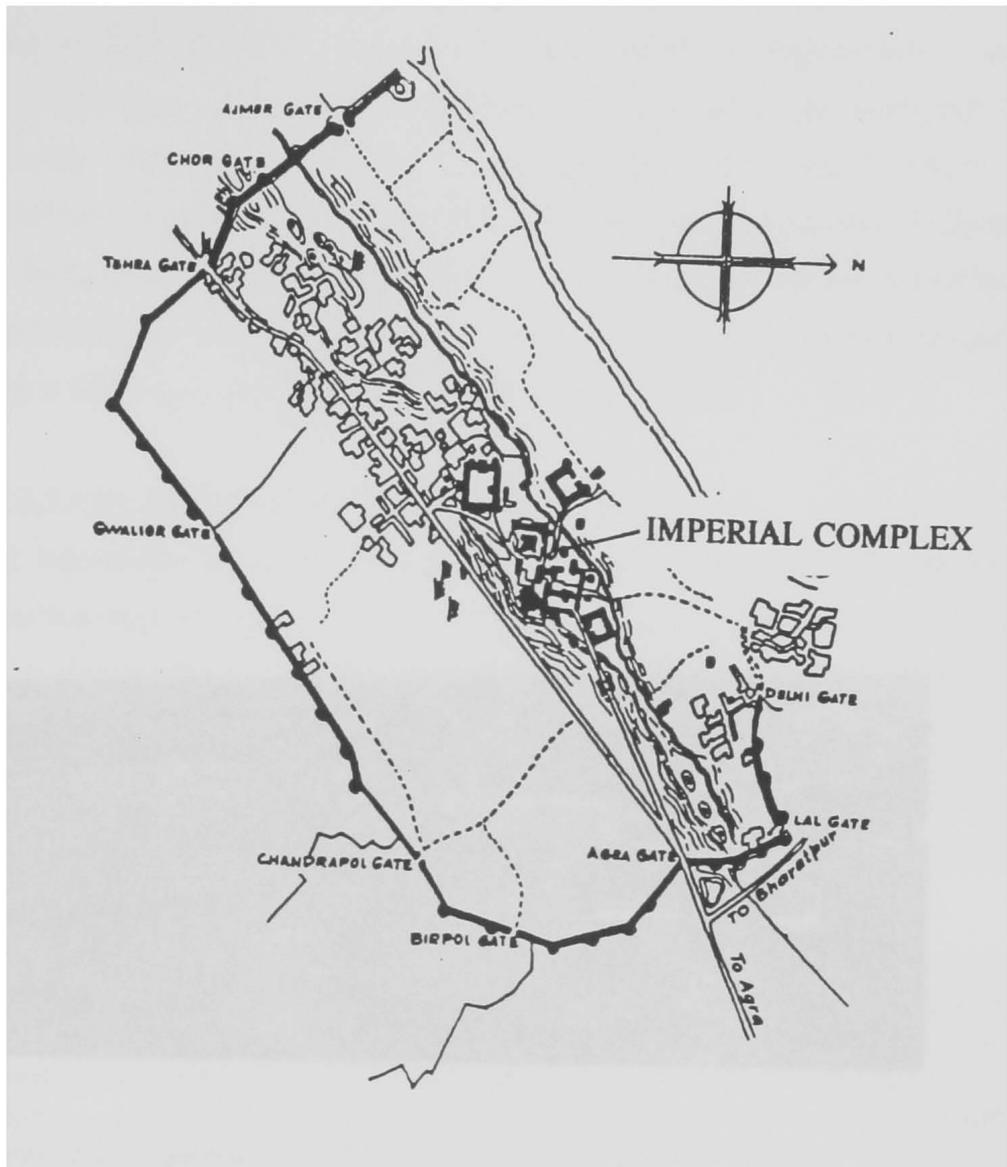
Figure 4-4: The walled city of Fatehpur Sikri

During Akbar's period on the northwest side there was an artificial lake which is dried up at present.

4. EVOLUTION OF FATEHPUR SIKRI
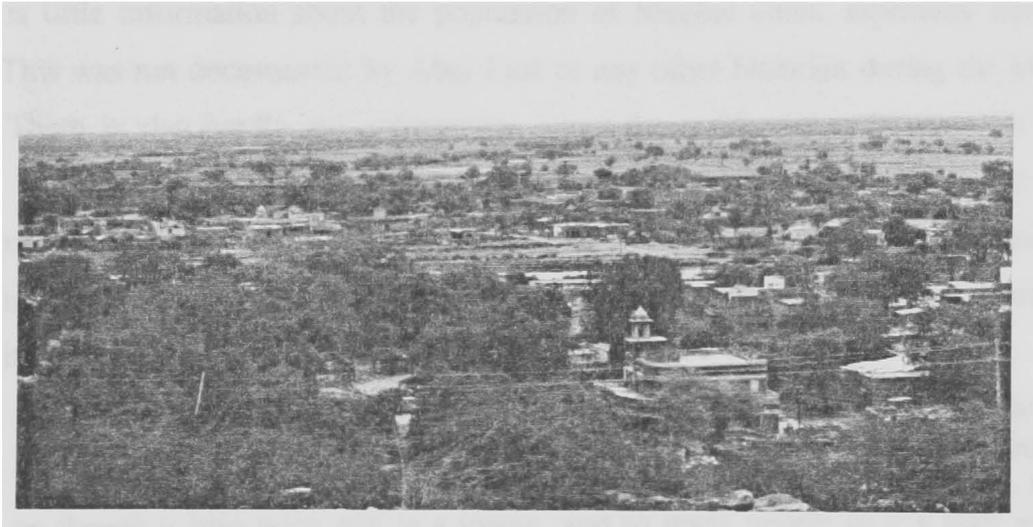
Figure 4-5: Fatehpur Sikri: the new development

The view is taken from the Buland Darwaza,
looking outwards.

The Delhi Red Fort was built as the imperial residence of Shah Jahan and was a part of the walled city of Shahjahanabad or present day Old Delhi (cf. Figure 4-6). Like Fatehpur Sikri, this city is surrounded on three sides by walls and on the fourth side by the river Yumuna. This wall can still be seen in Old Delhi. There are a number of entrances in the outer wall of the city. The purpose of the wall was twofold. It served to define the limits of the city and also to defend it. The imperial palaces at Fatehpur Sikri, Agra and Shahjahanabad were all located near water bodies; the first was bounded on one side by a lake while the other two, by the River Yumuna.

4.5. POPULATION AND SOCIAL STRATIFICATION

There is little information about the population of Mughal cities, especially Fatehpur Sikri. This was not documented by Abul Fazl or any other historian during the Mughal reign. There is also hardly any information about the residential architecture of these cities. A number of European travellers visited the Mughal cities and they have subsequently written about them in their travelogues. Ralph Fitch, an English merchant who visited Fatehpur Sikri in 1585 shortly before Akbar moved to Lahore, made the following remarks:

> Agra and Fatepore [Fatehpur Sikri] are two very great cities, either of them are much greater [than] London and very populous. Betweene Agra and Fatepore are 12 miles (kos)[4], and all the way is a market of victuals and other things, as full as though a man were still in a towne, and so many people as if a man were in a market.........Hither is great resort of merchants from Persia and out of India, and very much merchandise of silke and cloth, and of precious stones, both rubies, diamants [diamonds], and pearles (Fitch, 1583-91, pp. 17-18).

Ralph Fitch observed that Fatehpur Sikri was greater than London. It is hard to predict the criteria he used to make this observation. The population of London at the turn of sixteenth century was somewhere between 150,000 to 200,000 (Mol, 1974, p. 42). On

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[4] A kos is approximately = 2 miles.
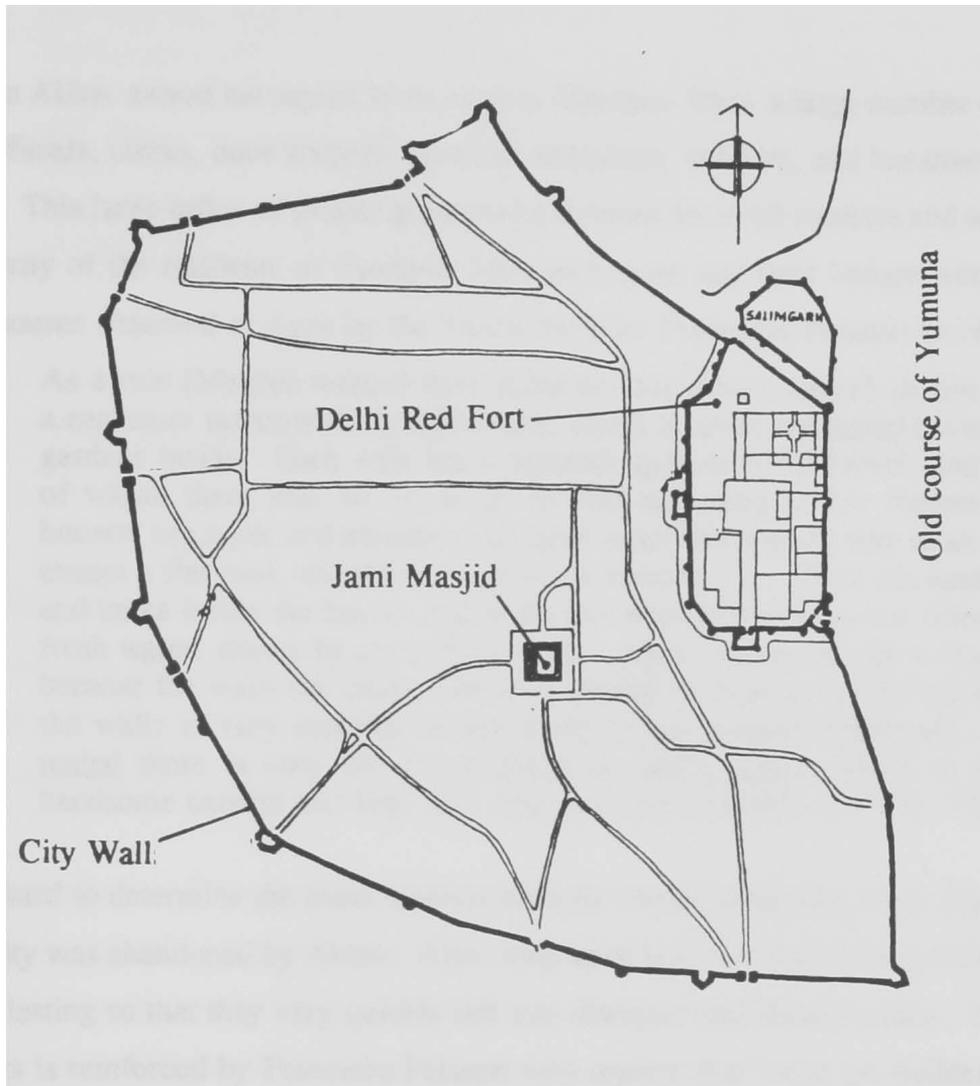
Figure 4-6: The walled city of Shahjahanabad (Old Delhi).

4. EVOLUTION OF FATEHPUR SIKRI

this basis, one can surmise the population of Fatehpur Sikri to be somewhat greater than 200,000.

When Akbar moved his capital from Agra to Fatehpur Sikri, a large number of staff such as officials, clerks, door keepers, personal attendants, soldiers, and horsemen went with him. This large influx of people generated a demand for retail markets and service. The majority of the residents of Fatehpur Sikri were poor and their houses were similar to the houses observed at Agra by the Dutch traveller Francisco Pelsaert in 1623.

> As a rule [Mughal nobles] have three or four wives...[they] all live together in a enclosure surrounded by high walls, which is called the mahal having tanks and gardens inside. Each wife has a separate apartment for herself and her slaves, of whom there may be 10 or 20 or 100 according to her fortune...they [the houses] are noble and pleasant, but there is not much in the way of an upper story except a flat roof, on which to enjoy the evening air. There are usually gardens and tanks inside the house: and in the hot weather the tanks are filled daily with fresh water, drawn by oxen from wells....these houses last for a few years only because the walls are made with mud instead of mortar, but the white plaster of the walls is very superior to any thing in our country [Holland]...outside the mahal there is only the diwan-khana or sitting place, which is spread with handsome carpets and kept very neat and clean (Habib, 1987, p. 78)

It is hard to determine the exact location of these houses since they were neglected after the city was abandoned by Akbar. Also, they were built out of materials which were not long lasting so that they very quickly fell into disrepair and became ruins. This state of affairs is reinforced by Francisco Pelsaert who reports that "once the builder [owner] is dead, no one will take care of the buildings; the son will neglect his father's work, the mother her son's, brothers and friends will take no care for each other's buildings....." (Qaiser, 1988, pp. 3-4). In Agra, the majority of the nobility lived along the riverfront, and the poor formed the next line of settlement, not very far from the riverfront. A similar type of pattern may also have developed in Fatehpur Sikri (Habib, 1987, p. 80), around the artificial lake. The number of servants employed by the nobility depended on their social status and affordability. The Dutch traveller also describes the life of the

poor at Fatehpur Sikri:

> Furniture there is little or none, except some earthenware pots to hold water and for cooking, and two beds, one for the man other for his wife.....Their bed clothes are scanty, merely a sheet or perhaps two, serving both as under and over sheet: this is sufficient in hot weather, but bitter cold nights are miserable indeed, and they try to keep warm over little cow dung fires, which are lit outsides the doors, because houses have no fire-places or chimneys; the smoke from these fires all over the city is so great that the eyes run, and the throat seems to be choked (Habib, 1987, p. 80).

According to Francisco Pelsaert's observations, the poor hardly owned anything. Their housing conditions were miserable since they had no means of keeping their living space smoke free.

4.6. SUMMARY

The chapter has met its three defined objectives. It first discussed the general characteristics of the city and has examined the importance of Fatehpur Sikri in its historical context of Mughal rule, especially during Akbar's period.

Akbar built the walled city of Fatehpur Sikri as the ceremonial capital city of his empire. The imperial palace complex was built in less than fifteen years (1569-1574). The complex has no streets but its buildings are interconnected by a series of courtyards. Local red sandstone was used as the prime building material in its construction. Fatehpur Sikri was historically important since it was on this site that Babur, the grandfather of Akbar fought and won a battle against the Rajasthani ruler, Rana Sanga of Mewar. To celebrate his victory, Babur laid out a garden which was visited by almost all the rulers of the Mughal dynasty.

Akbar's decision to move his capital from Agra to Fatehpur Sikri was based on personal reasons. It was done because Fatehpur Sikri was the home of the Sufi saint, Salim

Chisti, who prophesied that Akbar would have a son. In 1585, less than fifteen years after the city was built, Akbar moved to Lahore, Punjab, for political reasons and never returned.

The second objective was met by examining Fatehpur Sikri in the framework of its national, regional and local contexts. The city was not important from a strategic point of view. The residence of Salim Chisti was the focal point in its evolution and the city was situated between Agra and Ajmer, an important place of pilgrimage at that time. Fatehpur Sikri is approximately seven miles in circumference and is surrounded on three sides by walls; the fourth side faced a large artificial lake which is dried up at present. Entrance into the city was provided through eight gateways with the Agra Gate serving as the connection between Fatehpur Sikri and Agra.

The third objective which was to understand the population and social stratification of the city during Akbar's reign, was met through an examination of the travelogues of the European travellers who visited the Mughal cities at that time. An English traveller, Ralph Fitch, who visited Fatehpur Sikri in 1585, described it as a city greater than Agra or London. A Dutch traveller, Francisco Pelsaert, in 1623, observed that most of the people during this time were poor and they were employed as servants and peons by the wealthy class. The houses of the rich were located near the riverfront while the poor lived close to their masters. The houses were of mud and the roofs were thatched. Living in close proximity to water was also important because mud houses continuously required mud plaster. Since mud was the building material used, the houses did not last long and so it is hard to identify their exact locations at Fatehpur Sikri. The structures which can be identifiable today are those of the royal buildings including Salim Chisti's residence which were made of red sandstone.

5 - FORM AND FUNCTION

The objectives of this chapter are fourfold. First, it examines the architecture of Fatehpur Sikri: how it differs from prior architectural forms. Second, it looks at the plan form, and the functional relationships of various physical structures of Fatehpur Sikri in terms of the social life at the Mughal court. Third, the chapter looks at Mughal encampment and the <u>mandala</u>, a Hindu concept of spatial planning and design used as a basis for the development of the plan of Fatehpur Sikri. The last objective is to compare and contrast the architecture and spatial design conceptions of Akbar with Shah Jahan in terms of their personalities.

5.1. THE ARCHITECTURE OF FATEHPUR SIKRI

The advent of Islam into India resulted in new architectural forms. These new Islamic and Mughal architectural forms were simpler as compared to the art and architectural forms of the Hindu period. This new architecture was based on the abstract principles of mathematics, law, and a profound belief in the unity of God. Its designs were geometric, relying on calculated division and subdivision, and upon enclosure from a hostile environment (Crowe et al., 1972 p. 25).

The architecture of Fatehpur Sikri can be examined in terms of Wolfflin's approach as described in his <u>Principles of Art History</u>[1]. Wolfflin compares and contrasts Renaissance with Baroque architecture in terms of five principles of polarities: 1) Linear

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[1] For further information and clarity on Wolfflin's approach, please refer to Heinrich Wolfflin's (1968) <u>Renaissance and Baroque</u>.

versus Painterly, 2) Plane versus Recession 3) Closed Form versus Open Form, 4) Multiplicity versus Unity and 5) Absolute Clarity versus Relative Clarity. Wolfflin suggests that his model can also be applied to a study of non-Western architecture.

An analysis of Indian architecture shows that pre-Islamic, Hindu architectural forms[2] can be compared to Baroque architecture in the West and can be described according to the characteristics of Painterly (painting-like), Recession, Open Form, Unity and Relative Clarity. On the other hand, a study of Mughal architecture reveals its similarity to Renaissance architecture. It can be characterized in terms of Linear, Plane, Closed Form, Multiplicity and Absolute Clarity.

The difference between the two architectural forms is revealed in a comparison between a Hindu Temple, the Kandariya Mahadev temple at Khajuraho, and the Diwan-i-Khas at Fatehpur Sikri (cf. Figures 5-1 and 5-2). The Kandariya Mahadev temple is a result of the complexity of Hindu religious thought. Visual perception here is based on the drama of light and shade. The vantage point is oblique and it is an Open Form. The temple comprises of sculptures and ornamentation which reflect complexity and movement. It also indicates Unity which can be perceived at one glance. Hindu temple architecture of this era produced powerful dynamic and dramatic forms which are massive in character and with curvilinear exterior surfaces.

In contrast, the Diwan-i-Khas reflects the simplicity of Islam. Its elevations are two dimensional and they call for an ideal vantage point, a one point perspective. It is also

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[2] For a study of the Buddhist, Hindu and Islamic periods, please refer to Percy Brown (1961). Indian Architecture: Buddhist and Hindu Period; Percy Brown (1962). Indian Architecture: Islamic Period; Harle, J.C. (1987). The Art and Architecture of Indian Subcontinent.; Andrea Volwahsen (1969). Living Architecture : Indian; Andrea Volwahsen (1970). Living Architecture: Islamic Indian; and Mario Bussagli (1988). Oriental Architecture. Vol.1.

5. FORM AND FUNCTION   96
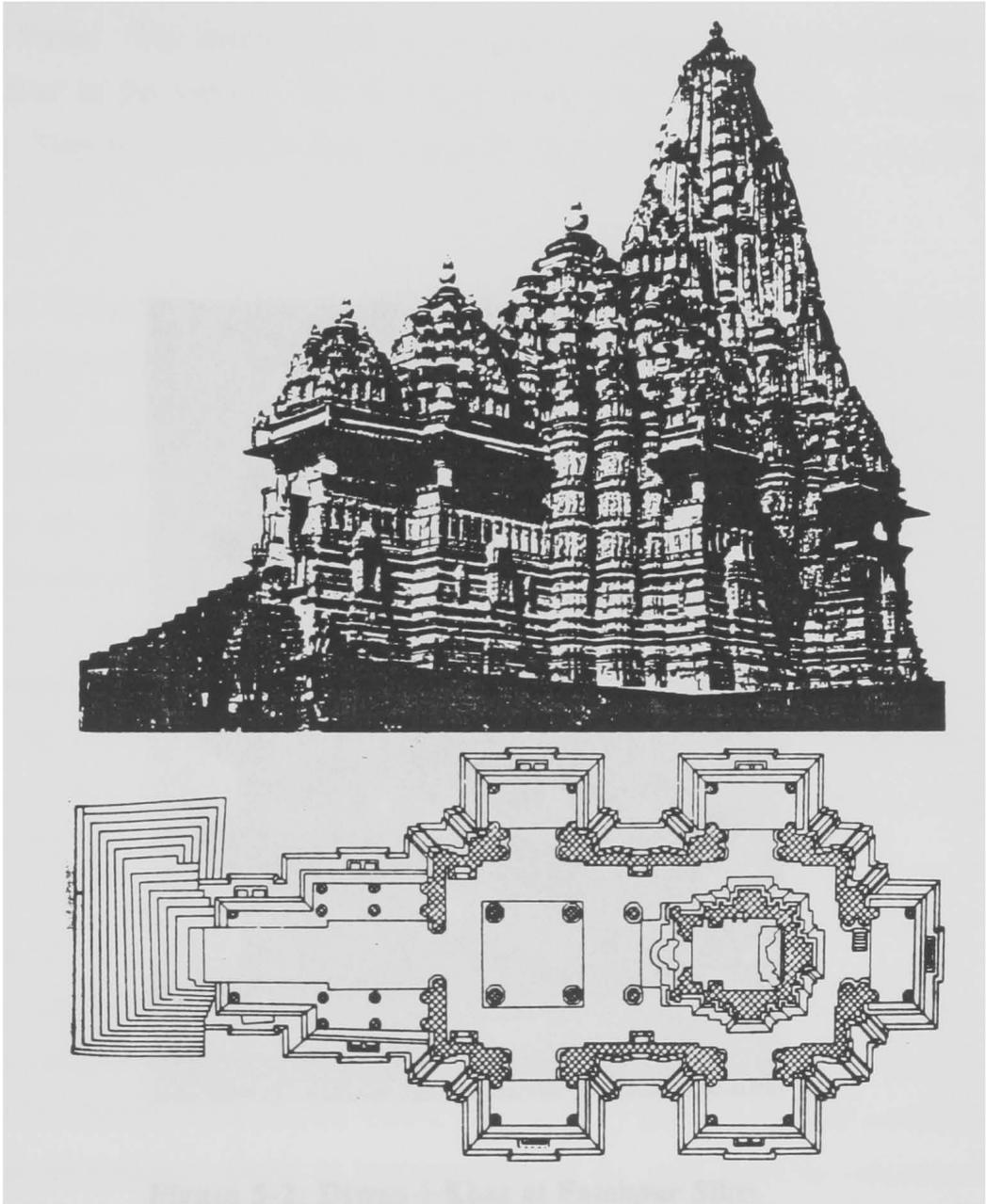
**Figure 5-1: Kandariya temple at Khajuraho, India
(11th century, pre-Mughal, Hindu architecture)**

The Hindu temple, the Kandariya temple at Khajuraho is a pre- Mughal architectural monument. It is a dynamic form and can be described as Painterly. Its unity is felt at one glance.

5. FORM AND FUNCTION   97
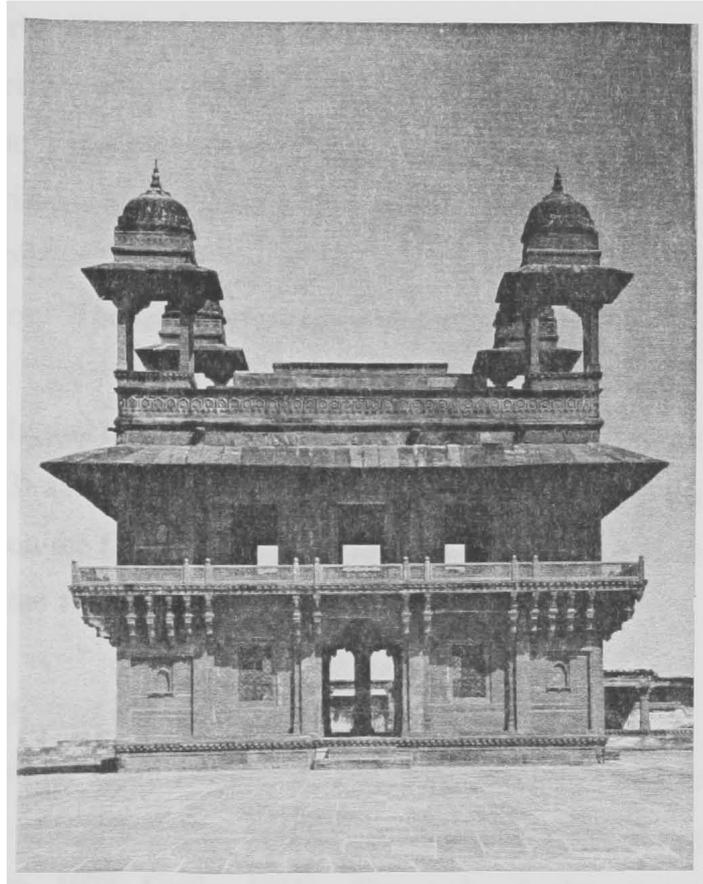
Figure 5-2: Diwan-i-Khas at Fatehpur Sikri
(16th century, Mughal architecture)

In contrast to the Kandariya temple at Khajuraho, the Diwan-i-Amm of Fatehpur Sikri is static and linear. Here, there is a subordination of various parts to the total form.

5. FORM AND FUNCTION

a Closed Form. The exterior walls or the vertical planes of the Diwan-i-Khas are perpendicular to the ground. The buildings of Fatehpur Sikri convey a feeling of lightness. They also reflect Absolute Clarity and the subordination of parts to the total form.

In the West, Painterly characteristics as found in Baroque architecture were preceded by the Linear characteristics of Renaissance architecture thus reflecting a linear development in architecture from simplicity to complexity. In Indian architecture, however, the Painterly characteristics of the Hindu era which were based on rich and diverse symbolism were followed by the simplicity of Mughal architecture which exhibited Linear characteristics. This simplicity was a reflection of Islam.

At the collapse of Mughal rule, architecture again moved in the direction of the Painterly style (cf. Figure 5-3) and is referred to as Mughal Baroque. This can be seen through a comparison between the Diwan-i-Khas in Fatehpur Sikri and the Hawa Mahal of Jaipur which was built in the first half of the eighteenth century.

5.2. THE PLAN FORM OF FATEHPUR SIKRI

Architects, planners and urban designers have emphasized the importance and need of employing the town or building plan as a tool for studying urban design and architecture (Kostof, 1991; Bacon, 1976; Grillo, 1960). The study of urban design and architecture is therefore incomplete without an understanding of the plan; it would otherwise be limited to a study of facades. It is also important to remember that facades are the outcome of plans. Plans can also reveal the kind of government that rules a society[3]

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[3] Paul Jacques Grillo in his Form, Function and Design provides a good discussion on city layout plans and their relationship to the kind of leader or government that rules the society. He uses three plans as examples: theocratic, democratic and dictatorial. The theocratic plan is based on providing a large number of enclosures around the inner
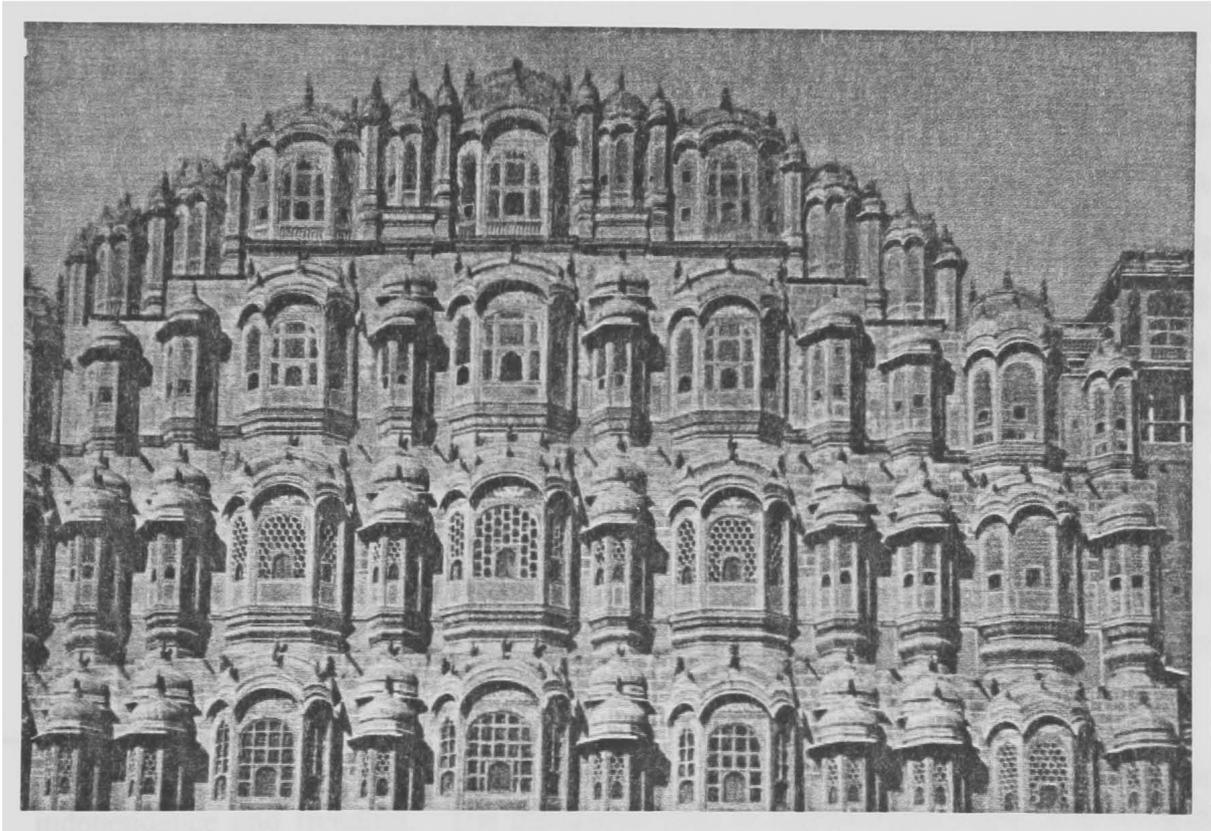
Figure 5-3: Hawa Mahal at Jaipur
(First half of the eighteenth century)

The architecture at the end of the Mughal period moved in the direction of the Painterly style and is referred to as Mughal Baroque.

(Grillo, 1960, p. 22). The plan of Fatehpur Sikri (cf. Figure 5-4) is open, carefree and flexible; it accommodates the architectural forms of Akbar's entire domain. It reflects democracy where everyone is welcomed and accepted irrespective of religion. During Akbar's time, a new relationship based on tolerance and fairness developed between the emperor and his subjects, in particular his non-Muslim ones. It was this new relationship which formed the basis for the plan of Fatehpur Sikri[4].

5.3. PRE EXISTING STRUCTURES BEFORE FATEHPUR SIKRI

On my visit to the site of Fatehpur Sikri, I found two distinct types of buildings: 1) the buildings which seem to have existed before Akbar founded his capital and 2) the buildings which were built under the supervision of Akbar. The pre existing buildings which include Salim Chisti's monastery and the caravanserai (cf. Figure 5-5) exist on the outer edges of the imperial complex. In the caravanserai, the style and the color of the stone used differ from the core buildings. The caravanserai uses rough gray sandstone as the building material whereas in the core buildings, the material is red sandstone.

Salim Chisti's monastery included a mosque which is known as the stonecutter's mosque. This was used by Chisti and the town people. These buildings have not been preserved

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sanctuary. The democratic plan is open, carefree and somewhat chaotic; it breathes independence and freedom. The dictatorial plan is symmetrical, rigid, and arrogant. This architecture is generally ordered by the absolute ruler. For a detailed discussion, please refer to Paul Jacques Grillo's (1960) Form, Function and Design pp. 22-23.

[4] This plan can be compared to the plan of the Roman imperial forums (46 BC - 117 AD). Fatehpur Sikri was planned as a whole unit by one ruler and no additions were made by successive Mughal emperors. Design unity was achieved by the interlocking of the courtyards of the palace complex. Like Fatehpur Sikri, the plan of the Roman imperial forums was flexible to accommodate different buildings but unlike Fatehpur Sikri, it was not planned and designed as a whole unit. Each part was added by successive emperors. Unity in the plan of the Roman imperial forums was achieved by the axial alignment of the buildings (Croix, Tansey and Diane, 1987, pp. 220-21).
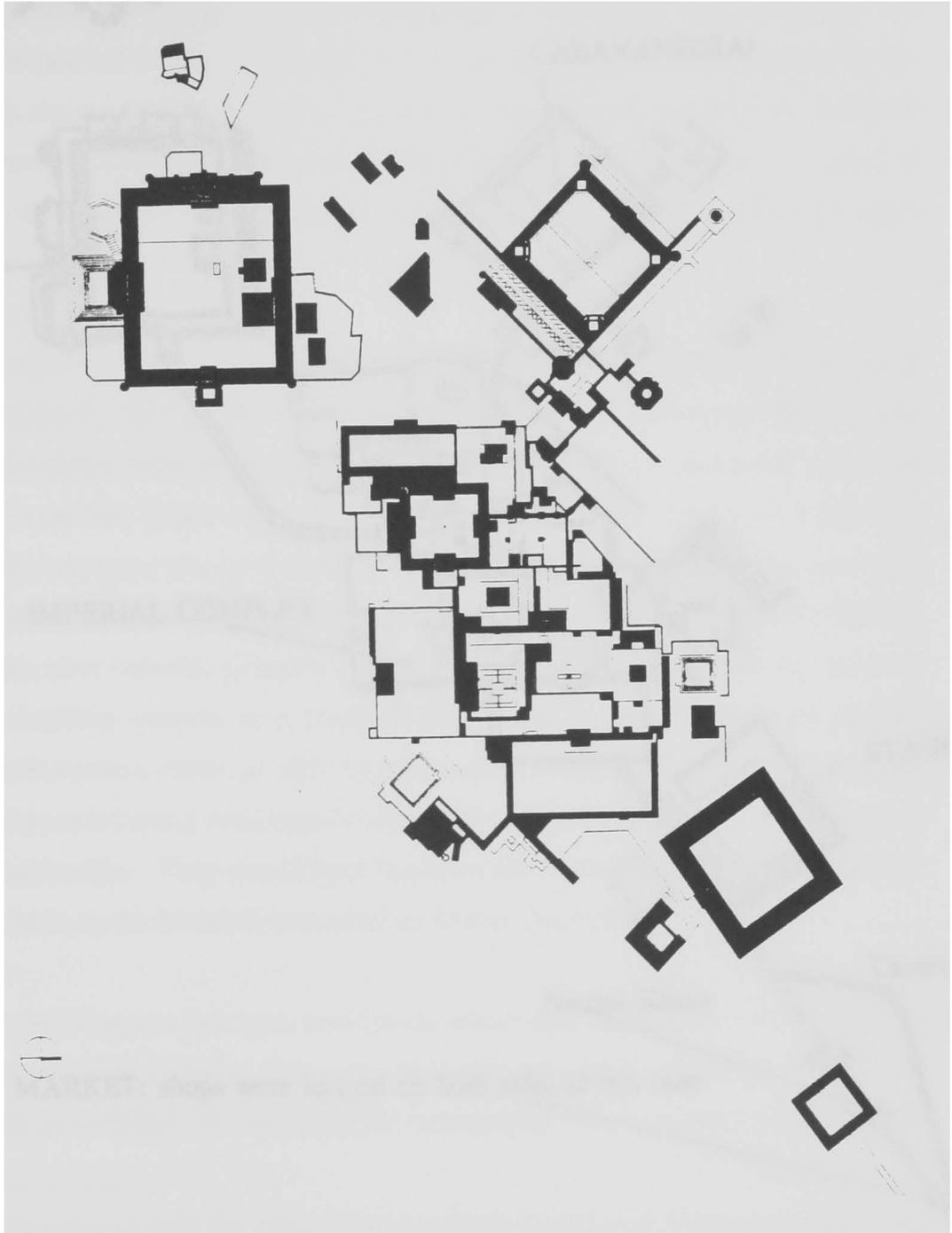
Figure 5-4: Fatehpur Sikri's plan form

Stone Cutter's Mosque

Rang Mahal

CARAVANSERAI

JAMI MASJID

IMPERIAL COMPLEX

STABLES

Tansen Baradari

Naubat Khana

MARKET: shops were located on both sides of this road

Figure 5-5: The layout of Fatehpur Sikri

5. FORM AND FUNCTION

and they are practically in ruins. During Chisti's life, his monastery was one of the focal points of Fatehpur Sikri. After his death, the focus changed; the stream of pilgrims who visited him at the monastery deviated to his tomb in the Jami Masjid complex. Akbar's decision to locate Chisti's tomb in this complex must have been based on his policy of bringing Muslims and non-Muslims together since Salim Chisti had a large following of non-Muslims.

The caravanserai[5] was a public building constructed on imperial orders possibly given by Sher Shah Suri[6]. Its function was to house pilgrims who came to see Salim Chisti as well as travellers enroute to Ajmer, to visit the tomb of the renowned Sufi saint Khwaja Muin ad-Din Chisti (d. 1236). There is an enclosed courtyard within the building. This courtyard was probably used for social activities. It could also have been used to accommodate the animals (horses and camels) which were used by travellers. These animals were valuable property and so people would not want to sleep far from them. The building consists of a hundred rooms with a covered porch all around. According to Srivastava (1964, p. 187), a large number of merchants from different parts of India, Persia and Central Asia used to come to Fatehpur Sikri during Akbar's time to sell their merchandise. They would have stayed at the caravanserai and may have held fairs and bazaars in the enclosed courtyard to display their goods.

West of this building are two open courtyards which may have been used for parking caravans and tethering animals. They may have also been used as a camping ground to accommodate an overflow of visitors at the caravanserai or for visitors who could not

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[5] The caravanserai was the place where caravans would stop for an overnight stay. This was very similar to the modern concepts of motels.

[6] Sher Shah Suri, who ruled Delhi and its surrounding areas from 1540 to 1555, built many public buildings and roads such as the Grand Trunk Highway which connects Kabul and Calcutta.

5. FORM AND FUNCTION

afford to pay for a room. It could also have served the function of a maidaan, a multi-purpose open space, traditionally found in Indian towns or villages. This type of open space is generally used as a playground, or as a place to celebrate religious festivals, or to hold village or town fairs.

The location of Salim Chisti's monastery and the caravanserai along with the existing roads may have been important elements in determining the layout and plan form of Fatehpur Sikri. It is very likely that the Agra gate was placed on the existing approach road from Agra. These pre-existing buildings were incorporated in the development of overall physical plan of the ceremonial city of Fatehpur Sikri.

Akbar also built the Agra Fort before building Fatehpur Sikri (cf. Figure 3-7). The architecture and layout of the Agra Fort does not, however, reflect the complete ideology of Akbar since this layout was superimposed on the fort of Ibrahim Lodhi, the king who was defeated by Babur. The Agra Fort also went through many transformations during the later rules of Jahangir and Shah Jahan. The plan of the Agra Fort is based on the norms of Karmuka-Khadga (cf. Figure 5-6), a plan described in the Hindu architectural treatise, the Mansaras. Karmuka in Sanskrit means "bow" and the plan is semi-circular in shape. This type of layout is best suited to river banks where the straight side would face the river. The plan also emphasizes fortification by walls and moats of its curved area.

5.4. THE FUNCTION OF VARIOUS BUILDINGS AND COURTYARDS

Fatehpur Sikri is enclosed by walls on three sides (cf. Figure 4-4). The longer side wall runs parallel to the line of the ridge in a northeasterly to a southwesterly direction. The north-west side or the fourth side is fronted by an artificial lake which is dried up at present. An examination of the plan shows that not all the buildings fit with the general orientation of the town. Some buildings located on the hill side follow the natural

N

Delhi Gate
Hathi Pol
Moti Masjid
JAMUNA

AGRA FORT

Diwan-i-Am
Samman Burj
Anguri Bagh
Khas Mahal
Jahangiri Mahal

Amarsingh Gate

KARMUKA-KHADGA LAYOUT
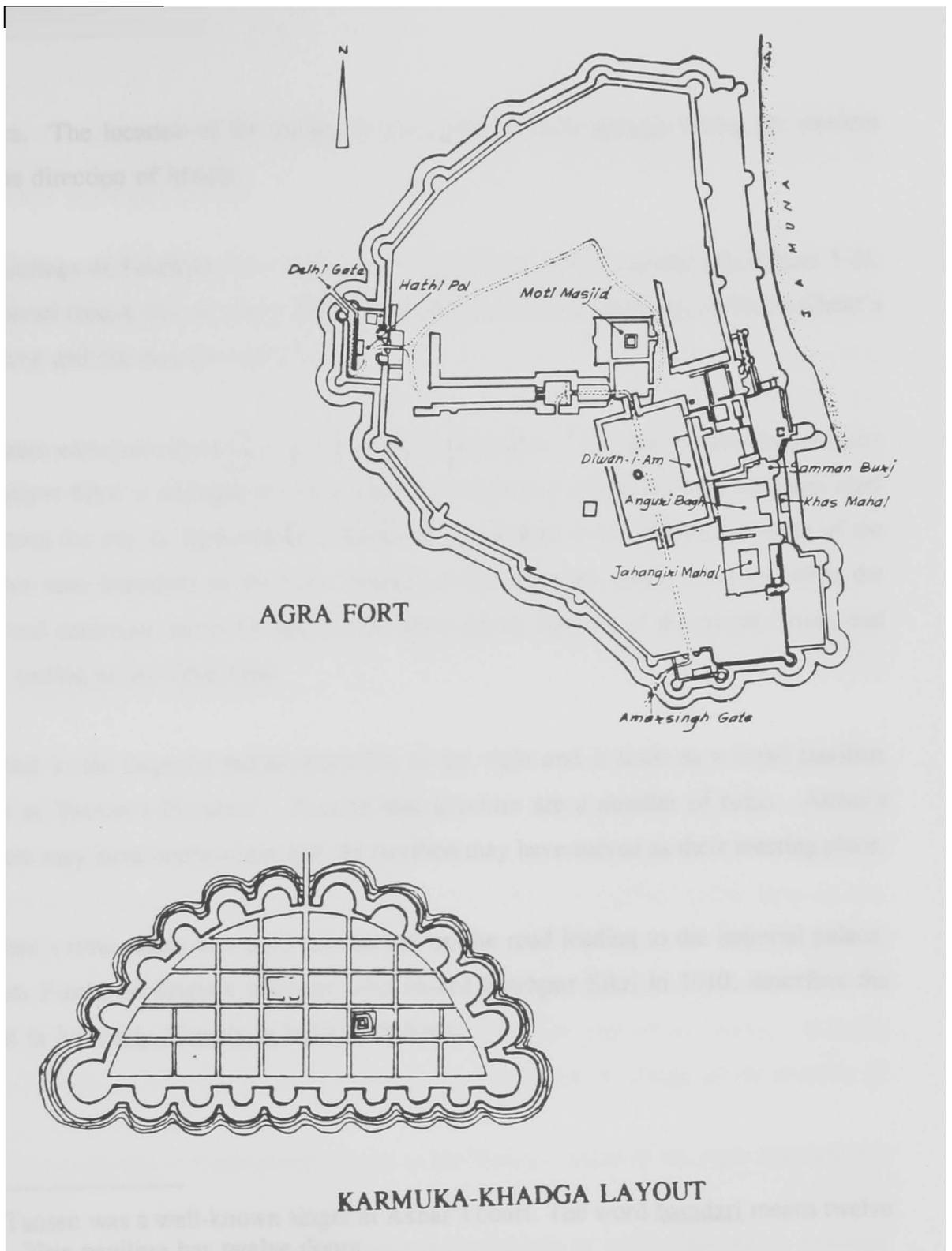
Figure 5-6: Agra Fort and its precedent

contours. The location of the mosques was based on their <u>mihrab</u> facing the western side, the direction of Mecca.

The buildings of Fatehpur Sikri can be categorized into three sections (cf. Figure 5-5): the imperial palace (A), the Jami Masjid (B), the pre-existing buildings of Salim Chisti's monastery and the caravanserai (C).

Nine gates were provided in the wall surrounding the city. The major entry into the city of Fatehpur Sikri is through the Agra Gate which was so called because the Agra road connecting the city to Agra ended at this point (cf. Figure 4-4). Within the walls of the city, this road branches to the right, leading to the imperial palace complex while the main road continues on to the part of the town where the rest of the people lived, and finally ending at the Tera Gate.

The road to the imperial palace branches to the right and it leads to a small pavilion known as Tansen's Baradari[7]. Around this structure are a number of ruins. Akbar's courtiers may have resided here and the pavilion may have served as their meeting place.

In Akbar's time, there was a public market[8] on the road leading to the imperial palace. William Finch, an English traveller who visited Fatehpur Sikri in 1610, describes the market in his <u>Early Travels in India</u> as follows:

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[7] Tansen was a well-known singer at Akbar's court. The word <u>baradari</u> means twelve doors. This pavilion has twelve doors.

[8] Markets or bazaars were also provided at the entrances of the Agra Fort and the Red Fort at Shahjahanabad (Old Delhi).

5. FORM AND FUNCTION 107

At the entrance of the northeast gate [the Agra Gate] is a goodly bazar [market place] of stone, halfe a mile long, being a spacious, straight-paved street with faire buildings on either side (Finch, 1921, p. 149).

The above passage indicates that shops were located on both sides of this road. Another feature of this market road is its width; this was enough to facilitate imperial processions which included decorated elephants, camels, horses and foot soldiers. At present, however, the market no longer exists but its ruins were recently excavated by the Archeological Survey of India. In the market, there is the Naubat Khana which is also known as the Naqqar Khana, a gateway similar to the triumphal arches in the West. Drums were played at this point to inform subjects of Akbar's appearance in the Diwan-i-Amm. Abul Fazl (1927, p. 166.) describes in the Ain-i-Akbari:

> "Whenever His Majesty holds court they beat a large drum, the sounds of which are accompanied by Divine praise. In this manner, people of all classes receive notice [of the emperor's presence in the Diwan-i Amm].

The market road may have been the road used by Akbar's subjects to go to the Diwan-i-Amm[9]. After passing through the Naubat Khana, one would find on the right, an enclosed courtyard known as taksal[10] which appears to have been a stable, according to recent excavation[11] (Koch, 1990, p. 68). It is easy to imagine stables here as this area is close to both the Diwan-i-Amm and the Diwan-i-Khas yet it is physically separated. Opposite the stables and on the left is a building which may have served as the residence of the person who overseed the training and care of the horses. It could also have been used as the office or residence of the person in charge of the security of

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[9] There was also a direct public access to the Diwan-i-Amm of the Agra Fort and the Delhi Fort.

[10] It was believed that this area contained kharkhanas or workshops which included a mint known as taksal.

[11] For detailed information, consult "Explorations and Excavations: Uttar Pradesh," in Indian Archeology (1981-82). p. 63.

the complex. This building however, is partly in ruins. After this, the main road from the Agra Gate leads into the Diwan-i-Amm (cf. Figure 5-7).

As the name suggests, the Diwan-i-Amm or the hall of public audience (cf. 1 in Figure 5-7) was the place where ordinary subjects were permitted daily access to the emperor. It is comprised of an enclosed courtyard with a raised throne-pavilion set in the axis of this courtyard[12]. The entries into the Diwan-i-Amm courtyard and the emperor's pavilion are not located on this axis. Kulbushan Jain thinks that the side entry into the emperor's pavilion is a poor architectural detail (Jain, 1983, p. 37) but this was done intentionally to ensure proper security for the emperor. His subjects could not walk directly towards him. These types of entrances can also be found in Buddhist stupas and in Vedic villages (cf. Figure 5-8). At the north-west end of the Diwan-i-Amm, there is another access (cf. 2 in Figure 5-7) which may have been a service entrance used by the emperor's attendants and security guards.

The Diwan-i-Amm served a number of functions which included formal receptions and celebrations. It was also the place where public prayers were sometimes held since the pavilion was oriented towards the west (Lowry, 1987, p. 33) and thus, Mecca. It was where coronation anniversaries[13] were conducted on a very large scale with pomp and show. Akbar also held audience in this hall on the day of Eid-ul-Fitr which marks the

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[12] At present, the courtyard is planted with lawn grass and hedges but during Akbar's reign, there was only unpaved ground.

[13] The first coronation ceremony was celebrated on a very large scale. At the time of the accession, the entire title of the emperor was read to the open court. The assembled people then congratulated the emperor in a loud voice while at the same time showering him with money which was then distributed to the poor.

5. FORM AND FUNCTION   109

Figure 5-7: Plan of the imperial complex of Fatehpur Sikri
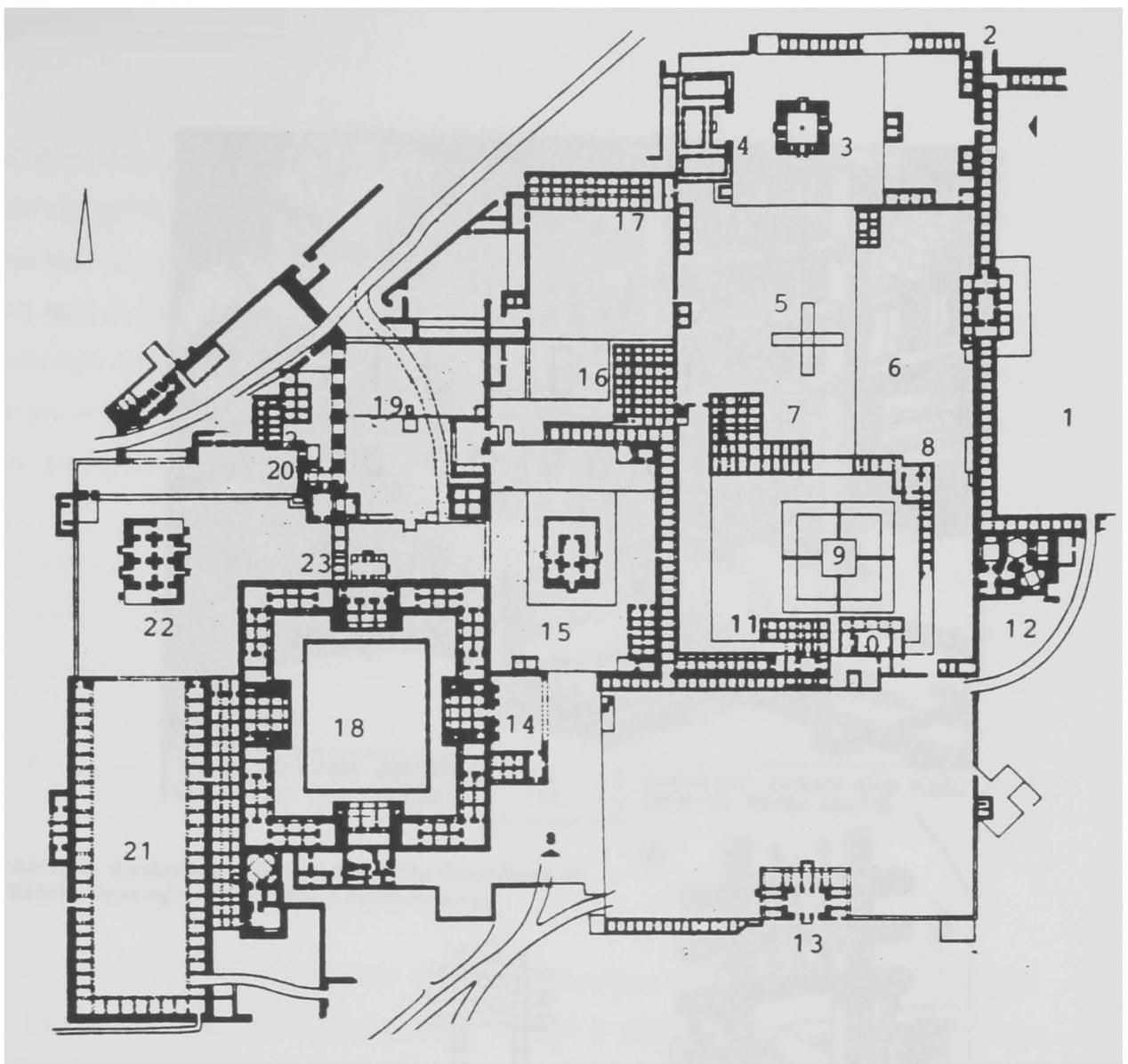
1. Diwan-i-Amm
2. Service entrance
3. Diwan-i-Khas
4. Royal Treasury
5. Pachisi Court
6. Garden
7. Madrasa or school
8. Turkish Sultana
9. Anup Talao
10. Library and reading room
11. Emperor's residential area
12. Shahi Hamam
13. Daftar Khana
14. Porter's Lodge
15. Miriam's Palace
16. Panch Mahal
17. Hospital and Garden
18. Jodhabai's Palace (Harem)
19. Harem Garden
20. Nagina Masjid
21. Royal Bazaar
22. Birbal's Palace
23. Viaduct

5. FORM AND FUNCTION

VEDIC VILLAGE SHOWING GATEWAY AND FENCE ①

BUDDHIST TORAN AND RAIL DERIVED FROM ABOVE ②

Access to the circumambulatory path of the Great Stūpa at Sānchi, showing the two stages in its construction

a)
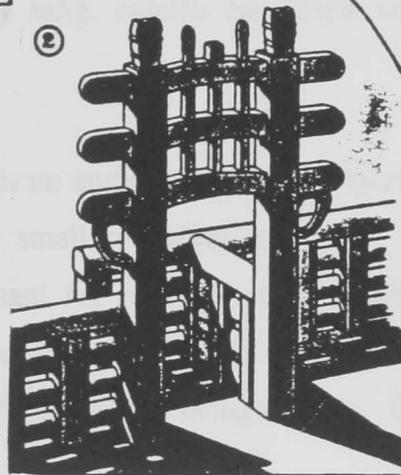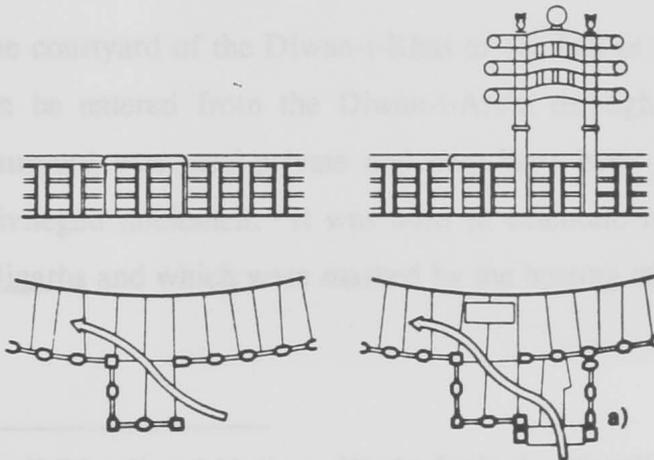
**Figure 5-8: Entrances to the Vedic village
and the Buddhist stupa**

end of the Muslim fasting month of Ramadan. The Hindu festivals of Diwali and Holi[14] were also celebrated in the Diwan-i-Amm (Ansari, 1961, pp. 183-84; p. 196). Besides these festivals, outdoor activities such as acrobatics, juggling, wrestling and animal fights were held in this space. Animal fights were conducted in many ways: different kinds of animals were led into the arena to match their skill either with one of their own species or with some other, for example, the elephant with another elephant (cf. Figure 5-9), or the buffalo with a lion (Ansari, 1972 pp. 21-26).

The Diwan-i-Amm served as a multi-purpose urban space; it adapted well to accommodate different activities. For the recreational activities of wrestling, juggling and animal fights, the space became an arena with the focus on the central courtyard. In contrast, during the prayer ceremonies and official state receptions, the emperor's pavilion served as the focus of public attention. During the Holi celebration, the people became the performers in the courtyard-arena; they sang, danced and threw colored powders at one another.

The courtyard of the Diwan-i-Khas or the hall of private audience (cf. 3 in Figure 5-7) can be entered from the Diwan-i-Amm through a small reception pavilion[15]. This courtyard was semi-private and may have been meant for only the royal family and privileged noblemen. It was used to celebrate royal birthdays which were known as saligarhs and which were marked by the beating of drums and the firing of guns. Guests

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[14] Diwali and Holi are Hindu festivals. Diwali, the festival of lights, is celebrated in the months of October / November. Holi is a Spring festival which is observed in March / April.

[15] At present time, this entrance is sealed and the modern visitor has to enter the Diwan-i-Khas via the emperor's pavilion of the Diwan-i-Amm and through the garden east of the pachisi court.

5. FORM AND FUNCTION
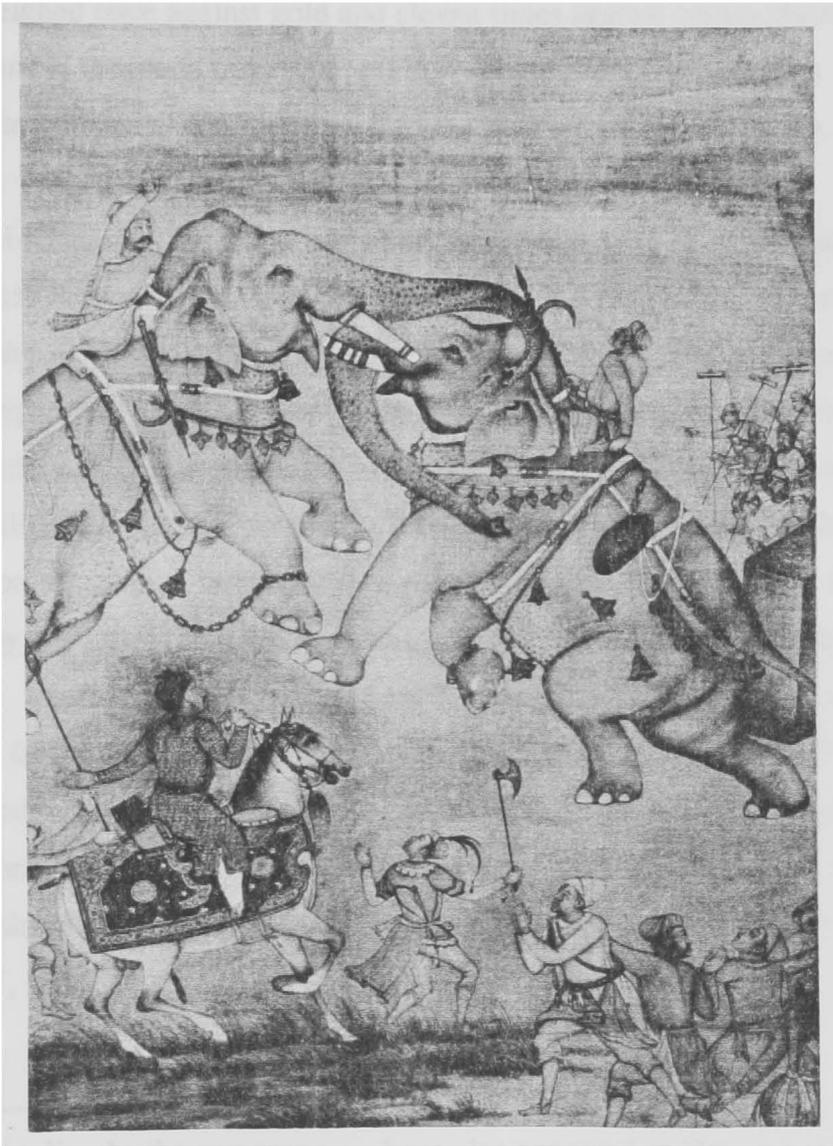
Figure 5-9: An elephant fight

Elephant fights were common during the Mughal rule. This miniature depicts a fight during Shah Jahan's reign.

5. FORM AND FUNCTION

were entertained by female singers and dancers. On the birthdays of the emperor[16] or his sons, special importance was given to the weighing ceremony. The one being honored would be weighed once against gold and eleven times against commodities, such as silk, silver, perfumes, copper, milk and grain. These items would then be appraised, converted into currency, and distributed to the needy (Ansari, 1961, pp. 191-92).

The Diwan-i-Khas, as its name suggests, was used to hold audiences for special dignitaries (cf. Figure 5-10). It is the most unique building in the imperial complex in terms of its design and spatial conception. It is a square building with a very distinctive interior arrangement. In the center of the hall, there is a profusely carved pillar which is surmounted by a cluster of thirty six closely set vaulted flower-like brackets. At the top of this pillar is a circular platform. This platform is encircled by a hanging gallery which runs on all sides at the upper level of the interior. The platform is connected to the gallery by four stone bridges along each diagonal of the hall (cf. Figure 5-10). This arrangement must have important symbolic value. Scholars have stretched their imagination far beyond reality. Rizvi, for example, names this the "imperial jewel house" (Brand and Lowry, 1985, p. 111) and suggests that the structure may have been used by Akbar to inspect his jewels while Jairazbhoy is of the opinion that "the pillar evokes the shape of a monumental udder symbolizing Akbar's worship of the cow" (Koch, 1987, p. 122).

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[16] On his saligrah, the emperor may have also appeared in Diwan-i- Amm and in one of the jahrokhas of the imperial palace. Jahrokha windows are provided in a number of buildings. These windows were used by the emperor to show himself to his subjects. This practice was taken from the Hindu kings and was known as darshan. These windows were used according to the occasion. For example, on the saligarh of one of the princes, the emperor may show himself in the jahrokha of the harem or the palace of one of his queens.

5. FORM AND FUNCTION

Ground floor

Upper storey

Throne
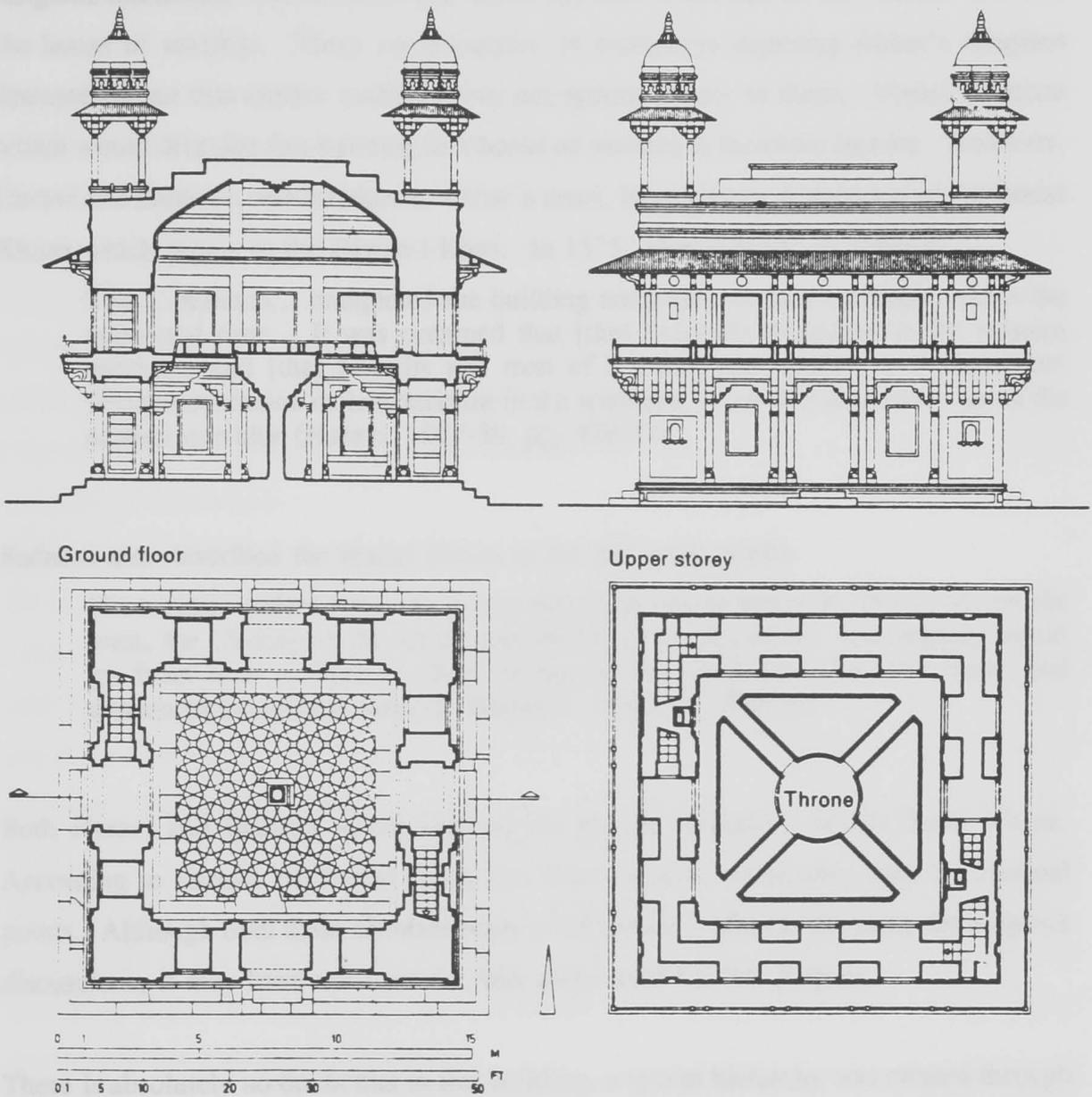
Figure 5-10: Diwan-i-Khas at Fatehpur Sikri
(section, elevation and plan)

The structure has also been popularly described as the place where Akbar conducted his religious discourses with scholars and hence has been described as the Ibadad Khana or the house of worship. There are a number of miniatures depicting Akbar's religious discussions but this unique building does not appear in any of them. Visual evidence which would describe this building as a house of worship is therefore lacking. However, Haravi and Badauni, two scholars at Akbar's court, have given a description of the Ibadat Khana which points to the Diwan-i-Khas. In 1575, Haravi wrote as follows:

> The... builders... completed the building consisting of four corridors within the appointed time... It was ordained that [the] Saiyyads should sit in the western corridor; and [the] Shaikhs and men of learning and wisdom and pious men without confusion or intermixture in the southern. A number of amirs... sat in the eastern corridor (Haravi, 1927-39, pp. 470-71).

Badauni also described the Ibadat Khana in the following words:

> His majesty ordered that the Amirs should sit on the east side, the Sayids on the west, the Ulamas on the south, and the Shaiks on the north. His Majesty would go from time to time to these various parties, and converse with them, and discuss philosophical subjects (Badauni, 1898, pp. 204-05).

Both Haravi and Badauni throw light on the spatial conception of the Ibadat Khana. According to Haravi, the Ibadat Khana has four corridors which also mark the cardinal points. Although both these scholars point to the Diwan-i-Khas as the place for religious discussions, it may have not been the only place used for this purpose.

There is absolutely no doubt that in this building, a spatial hierarchy was created through the construction of such an extraordinary pillar. In addition to being a place for special meetings, religious discussions and audiences with special ambassadors or dignitaries, the plan of the building evokes a similarity to the Hindu temple plan where the deity is placed at the center with the path of circumambulation or pardakhsana path surrounding

it. The connecting bridges may have been designed for the worshipper to approach the deity with offerings.

It is possible that Akbar used to sit on this center pillar which may have represented the axis of his rule over the four quarters. It may have also symbolized the connection between the earth, Akbar and God. Through the connecting bridges, he may have received gift "offerings" from his courtiers. Only important people would have been allowed the privilege to go up while servants would have stayed on the ground floor. Alternatively, these connecting bridges could symbolize the religions of his subjects coming together because of Akbar and ultimately through his Din-i ilahi. The monolithic column with its thirty-six decorative brackets also serves as a representation of the diversity of his empire.

On the west of this building was the royal treasury (cf. 4 in Figure 5-7). On my site visit, I observed in the walls of this building, deep storage spaces which were probably used for valuables. Attached to this building, on the south side, there is a small pavilion popularly known as the "Astrologer's Seat[17]." There is, however, no historical evidence which supports this label. The name was probably developed by tourist guides in an effort to embellish their stories of the city's colorful and romantic past. The importance of this small square pavilion is marked by its highly decorated struts which are peculiar to the Jain temples of Gujarat. It was probably used by the emperor as a seat from which to look at courtyard activities. This area was a semi-public area to which only the privileged had access.

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[17] This name is also used by J. Burton Page (1970) in an article "Fatehpur Sikri" published in Splendours of the East and also by Ebba Koch (1987) in "Architectural Forms" published in Brand and Lowry's (1987) Fatehpur Sikri.

To the north of the Diwan-i-Khas were the elephant stables. The stables for horses and the elephants were placed in close proximity to each other. Immediately south of the Diwan-i-Khas, the gameboard of pachisi[18] is marked on the ground of the courtyard (cf. 5 in Figure 5-7). Instead of the traditional wooden figures, the game was played with young women wearing garments of different colors. Akbar's biographer, Abul Fazl describes:

> At times, more than two hundred persons participated in the game and no one was allowed to go home until he had played sixteen rounds. This could take up to three months. If one of the player loses his patience and becomes restless, he was made to drink a cup full of wine. Seen superficially, this appears to be just a game. But His Majesty pursues higher objectives. He weighs up the talents of his people and teaches them to be affable (Volwahsen, 1970, p. 134).

Between the Diwan-i-Amm and the Pachisi Court, a garden (cf. 6 in Figure 5-7) separated the public from the semi-public space. West of the Pachisi Court is an open pavilion of five stories (cf. 16 in Figure 5-7) known as the Panch Mahal[19]. The five stories consist of five halls with columns stacked one above the other. The number of columns total to one hundred and seventy six, with eighty four on the ground floor, fifty six on the first floor, twenty on the second, twelve on the third and four pillars supporting a small pavilion on the fourth and top floor. According to Rizvi, the use of eighty four columns on the ground floor was not arbitrarily chosen. It is an auspicious number to Hindus and is the result of "the seven classical planets multiplied by the twelve signs of the zodiac" (Rizvi, 1972, p. 43). This unusual structure has a

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[18] This is an ancient Indian board game played with dice and counters on a cruciform board in which players attempt to be the first to reach the home square. The Western board game of Parcheesi was adapted from this.

[19] The word panch means five and here it refers to the five floors of the building.

pyramidical form and provides interest to the skyline of the palace. The form may have been derived from Buddhist Viharas[20].

The Panch Mahal may have been used as a covered pavilion for harem functions and also as a pleasure pavilion since it provided shade in the Summer, protection against the rain in the Monsoon season[21] and because of its open facade, took advantage of the cool breezes. It also provided a scenic view of the distant land around. The facade of the Panch Mahal was covered with stone screens. It was where the Iranian festival of Nawruz[22] was celebrated. Singers, musicians and dancers were invited to take part in the festivities. The harem women also participated in the events inside the building. They were able to see the outside into the Diwan-i-Khas courtyard without being seen themselves. During Akbar's reign, the celebrations lasted for as many as 19 days.

Rizvi refers to the Panch Mahal as a badgir but it definitely cannot be classified as such (Rizvi, 1972, p. 43). The Iranian badgir is basically a wind catching tower; the wind enters a duct-like opening at the top of the building and moves down to the underground chamber where the family would take refuge in the hot season. This helps to cool down the building in the Summer months. Classifying the Panch Mahal as a badgir is inaccurate since the Panch Mahal does not "catch" the wind at the top; there is no duct-like opening. Instead, the wind flows through the building which is open on all sides.

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[20] In Buddhist architecture, the vihara is symmetrical whereas in the case of the architecture of the Panch Mahal, it is not symmetrical.

[21] This occurs in the months of July and August in India.

[22] This festival marks the beginning of the Iranian New Year which is on March 21.

5. FORM AND FUNCTION

North of the Panch Mahal, there was a hospital and a garden for the harem (cf. 17 in Figure 5-7) and to the east, there is a building known as Madrasa or school (cf. 7 in Figure 5-7). It is very likely that this school was for the children of the harem. To the south is the emperor's private space which includes a small building known as the House of the Turkish Sultana (cf. 8 in Figure 5-7). Its interior walls are richly carved with figures of animals and a variety of plants and flowers. It has been described as the palace of one of Akbar's wives but this seems to be unlikely because of its location and size[23]. The function assigned to this building may have been based on folklore and old stories told by the guides. The importance of this structure is marked by the rich ornamentation of the interior. It is therefore possible that the emperor used it for small meetings or discussions. The accessibility of this building from the emperor's residential area and from the Diwan-i-Khas makes it an ideal place for this.

The emperor's residential quarters or Khawabgah is located across the courtyard, south of the House of the Turkish Sultana (cf. 11 in Figure 5-7). This area included a large room (cf. 10 in Figure 5-7) which may have been used as a reading room or library. Since the emperor could neither read nor write, he may have been read to in this room. He may also enjoyed looking at the books which were especially illustrated for him with miniature paintings.

The courtyard around which these buildings are located was completely private for the emperor's use. In the center of it, was a water tank known as the Anup Talao (cf. 9 in Figure 5-7), the design of which was based on the concepts of charbagh. In the middle of the water tank, there is a platform where the emperor could sit and enjoy the cool breeze. It is also possible that this platform could have been a stage for musicians or

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[23] Miriam's house and Jodhabai's palace are close together in the harem section of the complex. It is logical that all the women would be housed in this area which would be kept completely private. Women of the harem were secluded from the public areas.

singers to perform since in the building immediately south of this, there is a small second floor projection from where the emperor could sit and watch.

To the east of the Anup Talao is the royal bath, known as the Shahi Hamam (cf. 12 in Figure 5-7) which included a hot bath, a cold bath and a dressing room[24]. Due south of the emperor's sleeping quarters is the Daftar Khana (cf. 13 in Figure 5-7) or the administration center. Akbar had direct access to this place from his private residence.

To the west of the Anup Talao and south of the Panch Mahal, is Miriam's house (cf. 15 in Figure 5-7). Miriam-az-Zamani was Akbar's chief queen and the mother of the emperor Jahangir, the fourth Mughal emperor. It is a small structure of two levels without a central courtyard. South-west of Miriam's house is the palace of Jodhabai (cf. 18 in Figure 5-7).

Jodhabai's palace has only one entrance and was the residence of Akbar's other wives and members of the harem[25]. The scale of the building suggests that it was the principal residence for the imperial harem. The building has a large open courtyard surrounded by single story rooms, with double story rooms in the center of each wall; these rooms all face inward on to the courtyard. The entire construction of this building is by lintel-and-bracket, with the Hindu bell-and-chain ornamentation used on the pillars. This type of ornamentation is common in the Gujarat area.

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[24] A similar type of royal bath is also found at the Delhi Red Fort.

[25] The harem was the place where the emperor's wives, female relatives and concubines lived and where babies were born and raised. It was also the place where the emperor sometimes slept. There was a hierarchy within the harem and the chief authorities were the wives and relatives of the emperor.

5. FORM AND FUNCTION

The entrance to Jodhabai's palace is on the east and it is mounted by two elegant kiosks. There are two jahrokhas and a porter's lodge (cf. 14 in Figure 5-7) on one side of the gate. The entrance is created in such a way that one cannot directly look into the palace. The design of the building is based on seclusion and safety. The palace is self contained with a bath and a prayer area. It is completely Hindu and carved decorations, niches and brackets are based on the designs of the Hindu temples of Gujarat. The pillar shafts are also created in the form of bell-and-chain in relief. They, too, are found in the Hindu temples of Gujarat. These features lead one to believe that this palace may have been created by artisans from Gujarat (Koch, 1991, pp. 56-57).

Service and bathing facilities are located south of Jodhabai's palace while due north of it is a small double story pavilion, the Hawa Mahal. The first story is open and is supported on square columns in a double row. The second story is closed with stone screens. The Hawa Mahal was the place where the women of the harem went to relax, alone or with Akbar. North of Jodhabai's Palace is the Harem Garden (cf. 19 in Figure 5-7). This was a social space for the women of the harem and was secluded from the public area. West of this garden is the Nagina Masjid, a small mosque which was used by the harem. A viaduct which carried the water supply, also connected Jodhabai's palace with the Harem Garden (cf. 23 in Figure 5-7).

To the north-west of Jodhabai's palace is the palace of Raja Birbal (cf. 22 in Figure 5-7) so called after one of Akbar's courtiers. It seems highly unlikely that Akbar would allow a courtier to be so close to the women of his family. It was probably another residence for one of Akbar's queens. This building is again highly ornamented. To the south of Raja Birbal's palace is a long one-level building (cf. 21 in Figure 5-7) which may have

5. FORM AND FUNCTION

been used for the royal bazaar[26], where a large number of vendors would come to sell their exquisite items. This bazaar catered to the imperial harem and other women associated with the court. It provided them the opportunity to buy jewelry, clothes and foods. Abul Fazl describes this in <u>Ain-i-Akbari</u>:

> "On the third day of every month, His Majesty holds a large assembly for the purpose of inquiring into the many wonderful things found in this world. The merchants of the age are eager to attend, and layout articles from all countries. The people of His Majesty's harem come, and women of other men were also invited, and buying and selling is quite general" (Brand and Lowry, 1985, p. 101).

The guides on the site even today suggests that this building served as stables for camels and horses. The idea of labelling this area as stables is based on the evidence of stone slots in the walls. It is assumed that these slots were used to tie animals. It seems unlikely that stables would be placed in such close proximity to the harem and palaces of the queens. In a hot country like India, and especially in the Summers, this place can be putrid and unbearably hot for the animals. There is more of a probability that the royal bazaar was held here since the women of the imperial family and the court were in strict seclusion.

Rizvi (1972, pp. 52-53) suggests that this building may have been used as the sleeping quarters of the maidservants. This too does not seem possible since one side of this building is open. Thus, this semi covered space would have been uncomfortable for the maidservants during the monsoons and in the Winter.

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[26] These types of bazaars were very common during Mughal rule. Shah Jahan was supposed to have met Mumtaz in a similar bazaar known as the <u>mina bazaar</u> which was held at the Agra Fort. Since Mughal time, monthly mina bazaars are held in open air at various locations in Delhi and Agra. They are also held at night.

North-west of the imperial palace is the palace fortification which may not have been for the purpose of defense but whose function was to separate the palace from the city (cf. Figure 5-5). An interesting feature of this is a gate with two statues of stone elephants. This gate is known as the Hathi Pol. Elephants are important in the Indian religious context. They are not only considered a royal mount but are also important symbols in Buddhism and Hinduism. Sculptures of elephants are found on the gateways of Buddhist stupas and Ganesh, the Hindu god of good fortune is depicted with an elephant's head. This gate may have been the imperial entrance into the city and was probably the entrance through which ceremonial processions passed and Mughal armies marched in display of the power of the Mughal empire. Inside the Hathi Pol, was another Naqqar Khana where ceremonial drums were played to inform the public of the emperor's arrival into or departure from the palace complex.

In front of the Hathi Pol is the caravanserai[27] and north of this is a tower known as Hiran Minar[28] which is spiked with stone projections in the form of elephant tusks. According to Captain Leopold von Orlich, a European traveller in 1845, this is the tower "from which the emperor viewed the combat, or killed the animals, driven together for his diversion" (Orlich, 1845, p. 66). On their hunting expeditions, Mughals used to encircle and drive all the animals to a smaller spot and finally slaughter them.

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[27] This building is described in the section, "Pre existing Structures before Fatehpur Sikri."

[28] In the present context, the area beyond Hiran Minar is in agricultural use and there is no trace of any of the people's residences. Since the houses were made of mud, they were not maintained and were probably vacated once Akbar abandoned Fatehpur Sikri as his ceremonial capital. The mud houses may also have been washed away by the monsoons.

5. FORM AND FUNCTION

This type of tower can be traced back to Iran where they were built to glorify the ruler as a great hunter. It is likely that the Hiran Minar was erected for this very reason. According to Father Monserrate, the Hiran Minar was also the starting point of a system of milestones (Koch, 1987, p. 125). On the Fatehpur Sikri-Agra road, a number of structures of similar form can be seen even today. To the east of the Hathi Pol, there is a monumental well which may have been used by the people staying at the caravanserai.

South-west of the imperial complex is the Jami Masjid (cf. Figures 5-5 and 5-11). The site of this building was dictated by the direction of Mecca. It has a large central courtyard with the dimensions, 430 feet long by 360 feet wide. This complex can be entered through two gates (cf. 2 & 3 in Figure 5-11), one on the eastern side and the second on the southern side. The gate on the eastern side, the Badshahi Darwaza, was used by the emperor (cf. 2 in Figure 5-11) and the royal family while the second gate, the Buland Darwaza, on the south side, provided a connection with the city and was used by the public. The Buland Darwaza (cf. 3 in 5-11) is of a monumental scale. It dominates the city's landscape and acts as a landmark of the city. It is approached from the city by a large number of steps. The Buland Darwaza was not part of the original design of the Jami Masjid. It was added later on to celebrate a major military victory.

The impact of the Hindu master craftsmen can also be seen in the main sanctuary of the Jami Masjid, on the western wall which faces Mecca. Here the space is divided into three units: the main sanctuary in the middle and the two secondary ones on the sides. In other mosques, this space is not divided. According to Andreas Volwahsen, the creation of the three units is reminiscent of the Hindu trinity of Brahma, Vishnu and Shiva (Volwahsen, 1970, p. 47). This is because the Jami Masjid was built by Hindu craftsmen who were so well acquainted with Hindu symbolism that it was difficult for them to break away from the traditions handed down by their forefathers. This same
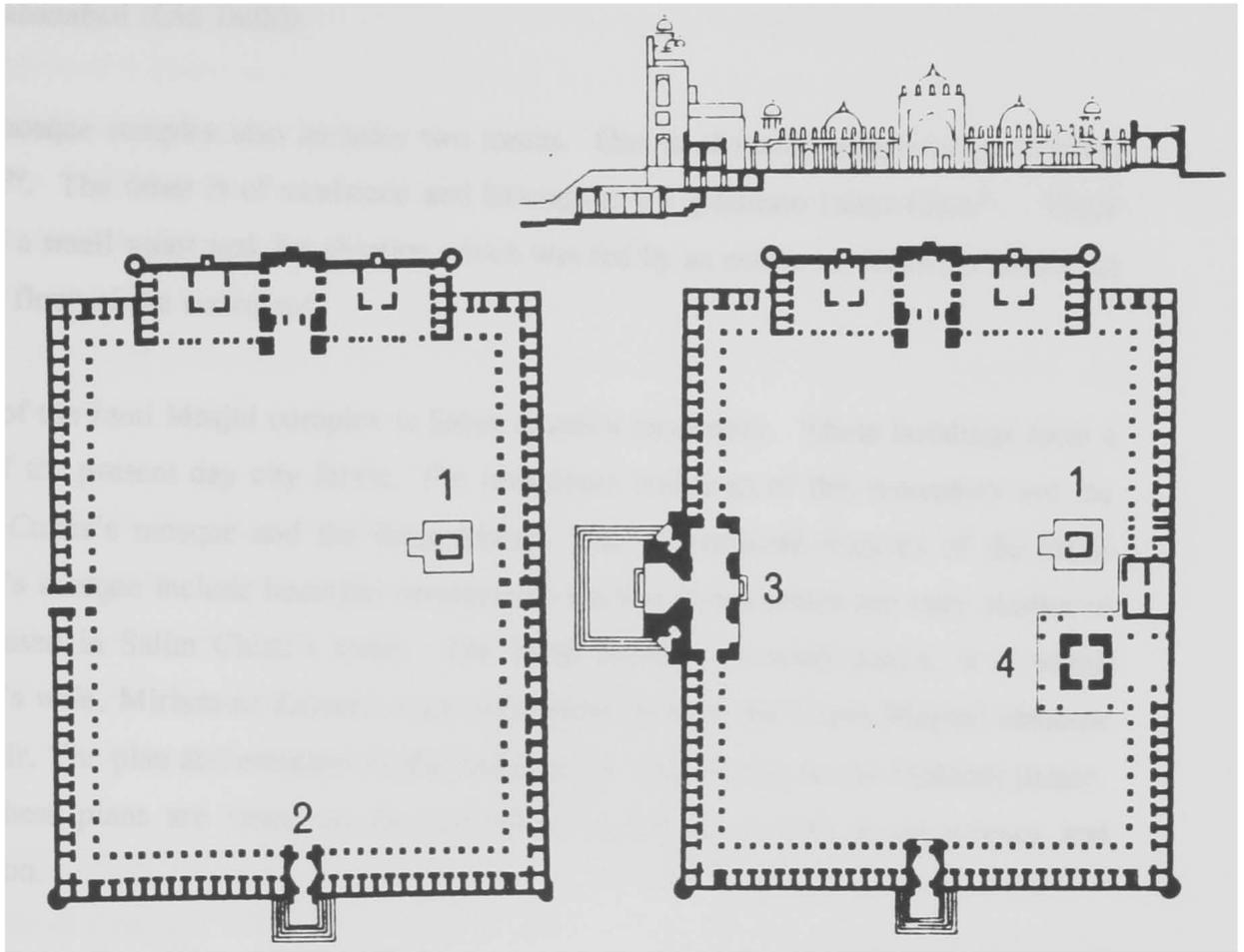
a) Reconstruction of original state   b) Enlargement during reign of Akbar

1. Salim Chisti's tomb

2. Imperial gate or the Badshahi Darwaza

3. Victory gate or the Buland Darwaza

4. Islam Khan's tomb

Figure 5-11: Jami Masjid complex at Fatehpur Sikri

5. FORM AND FUNCTION

theme[29] can also be found in the mosques of the Agra Fort and the Jami Masjid in Shahjahanabad (Old Delhi).

The mosque complex also includes two tombs. One is of marble and belongs to Salim Chisti[30]. The other is of sandstone and belongs to his grandson Islam Khan[31]. There is also a small water tank for ablution which was fed by an enormous reservoir under the paved floor of the courtyard.

West of the Jami Masjid complex is Salim Chisti's monastery. These buildings form a part of the present day city fabric. The prominent buildings of this monastery are the Stone Cutter's mosque and the Rang Mahal. The architectural features of the Stone Cutter's mosque include beautiful ornamented bracket forms which are very similar to those used in Salim Chisti's tomb. The Rang Mahal is a small palace, it is where Akbar's wife, Miriam-az-Zamani, may have given birth to the future Mughal emperor Jahangir. The plan and entrance of this building are very similar to the Jodhabai palace. Both these plans are based on the centralized courtyard as well as on privacy and seclusion.

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[29] For further information cf. Ebba Koch (1991). Mughal Architecture p. 121 and George Michell (1984). Architecture of the Islamic World p. 21.

[30] According to W. H. Sleeman, Salim Chisti's tomb was completed in 1578, six years before his death (Sleeman, 1858, pp. 305-6). The tomb was originally made of sandstone but during the early reign of Jahangir, it was faced with marble. It is visited by a constant stream of pilgrims of many faiths, such as Hindus, Sikhs, Muslims and Jains. Pilgrims tie pieces of threads on the perforations on the marble screen and make wishes. If their wishes are fulfilled, they return to untie one of the threads.

[31] He was appointed governor of Bengal by Jahangir.

5. FORM AND FUNCTION

The buildings and courtyards of Fatehpur Sikri were not designed for specific functions. These buildings and spaces must have served more than one purpose. In Mughal times, the rooms of a house did not have specific functions. Assigning particular functions to individual buildings and spaces is a Western phenomenon based on rationality and analysis. This may have been introduced into India by the British through the construction of their houses or bungalows. The plan of Fatehpur Sikri was therefore flexible and easily adaptable to a multiplicity of activities. For example, religious discussions may have held at more than one place, depending upon the availability and requirement.

In a warm climate where there is little fluctuation in temperature, many activities are performed outside, in courtyards or verandas. Interlocked courtyards were provided to facilitate court activities and social life. The plan of Fatehpur Sikri was also designed according to climate; there are a number of pavilions which have no walls. These were pleasant spaces to sit and to hold discussions.

5.5. THE PRECEDENT FOR THE PLAN: THE MUGHAL ENCAMPMENT

The plan of Fatehpur Sikri may have been based on Naksa-i-Ain-Manzil, the plan of the Mughal encampment[32]. Akbar spent a large amount of time travelling around his empire and every time a stop was made, the Mughal camp was laid out in a particular fashion[33] (cf. Figure 5-12). The spatial arrangement for the royal residence was linear in Mughal camp planning and it was based on the principles of public and private spaces. In the first section of this order, the emperor would meet his subjects and soldiers. The second

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[32] cf. Abul Fazl's Ain-i-Akbari translated and edited by H. Blochmann, 1965, plate iv. pp. 49-50.

[33] This sketch (Figure 5-12) is drawn by Attilio Petruccioli and it is based on cloth painting. It depicts Mughal camp order. This painting is preserved at the Tropen Museum in Amsterdam.

HAREM

EMPEROR'S
PRIVATE
SPACE

SEMIPUBLIC SPACE

PUBLIC SPACE

4.   Guarded area: only for the women of the harem.

3.   Emperor's day palace where he could rest.

2.   Emperor would meet privileged noble men here (similar to the Diwan-i-Khas).

1.   Emperor would meet his subjects here (similar to Diwan-i-Amm).
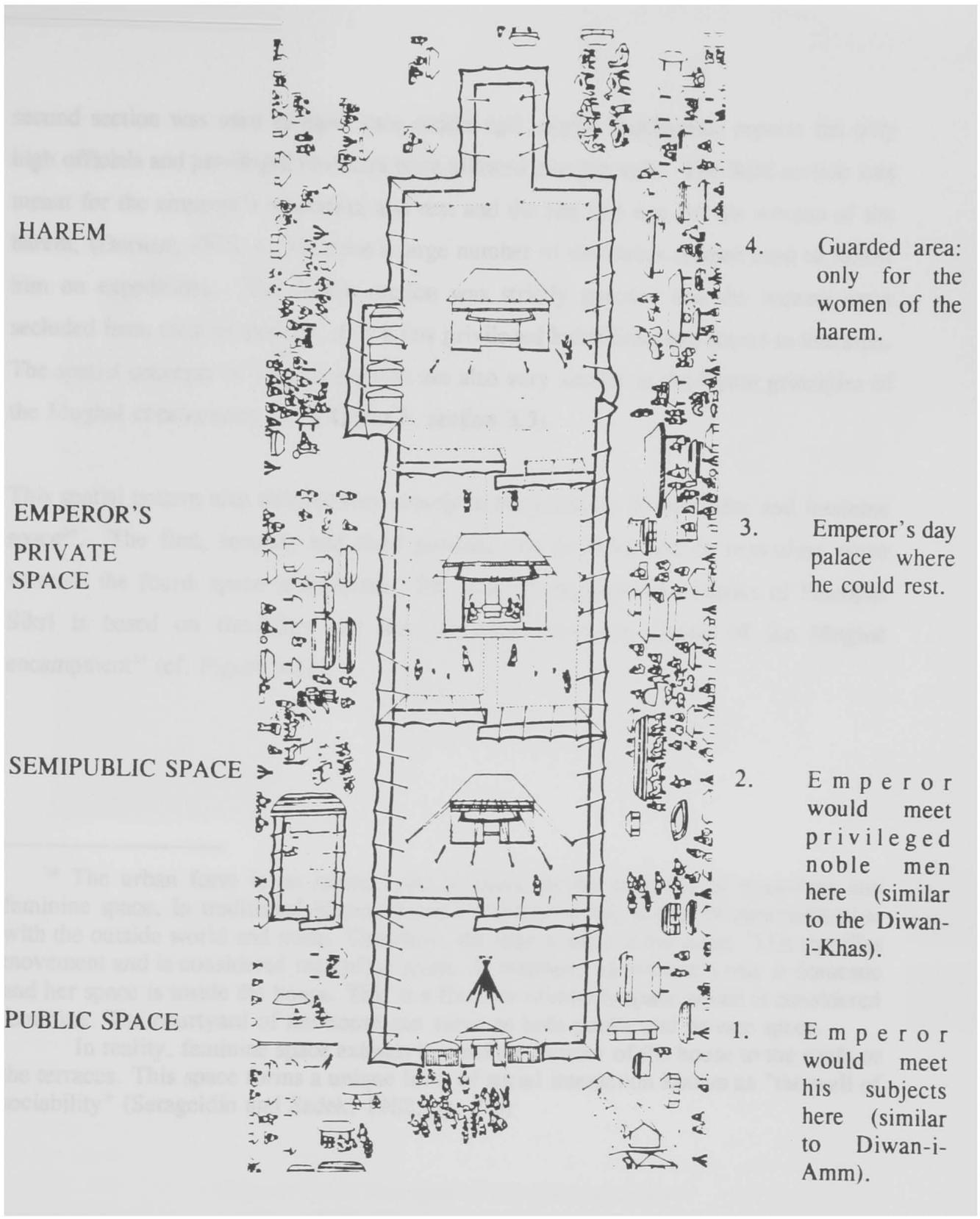
Figure 5-12: Sketch of Mughal encampment

5. FORM AND FUNCTION

second section was used to issue state orders and receive intelligence reports but only high officials and privileged courtiers were allowed into this area. The third section was meant for the emperor's relaxation and rest and the last one was for the women of the harem, (Darwar, 1978, p. 53) since a large number of the harem women used to follow him on expeditions. The harem section was strictly guarded and the women were secluded from most of the men, only a few privileged individuals had access to this area. The spatial concepts of Mughal gardens are also very similar to the layout principles of the Mughal encampment (cf. Chapter 3, section 3.5).

This spatial pattern also follows very closely to the concepts of masculine and feminine space[34]. The first, second, and third portions can be described as masculine space whereas the fourth space is feminine. The plan of the imperial complex of Fatehpur Sikri is based on flexibility and the functional land use zoning of the Mughal encampment[35] (cf. Figure 5-13).

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[34] The urban form in an Islamic city is based on the concepts of masculine and feminine space. In traditional Islamic society, the man's role is one of communication with the outside world and trade. Therefore, the man's space is the street. This signifies movement and is considered masculine space. In contrast, the woman's role is domestic and her space is inside the house. This is a fixed or immobile space which is considered feminine. The courtyard of the house can serve as both public and private space.

In reality, feminine space extends beyond the interior of the house to the roofs or the terraces. This space forms a unique form of social interaction known as "the wall of sociability" (Serageldin and Sadek, 1982, pp. 7-8)

[35] In addition, the Jami Masjid and Salim Chisti's monastery were located close to one another in a religious activity area.

1. Public Area
2. Semi-Public Area
3. Private Area for the Emperor
4. Harem Area (Secluded)
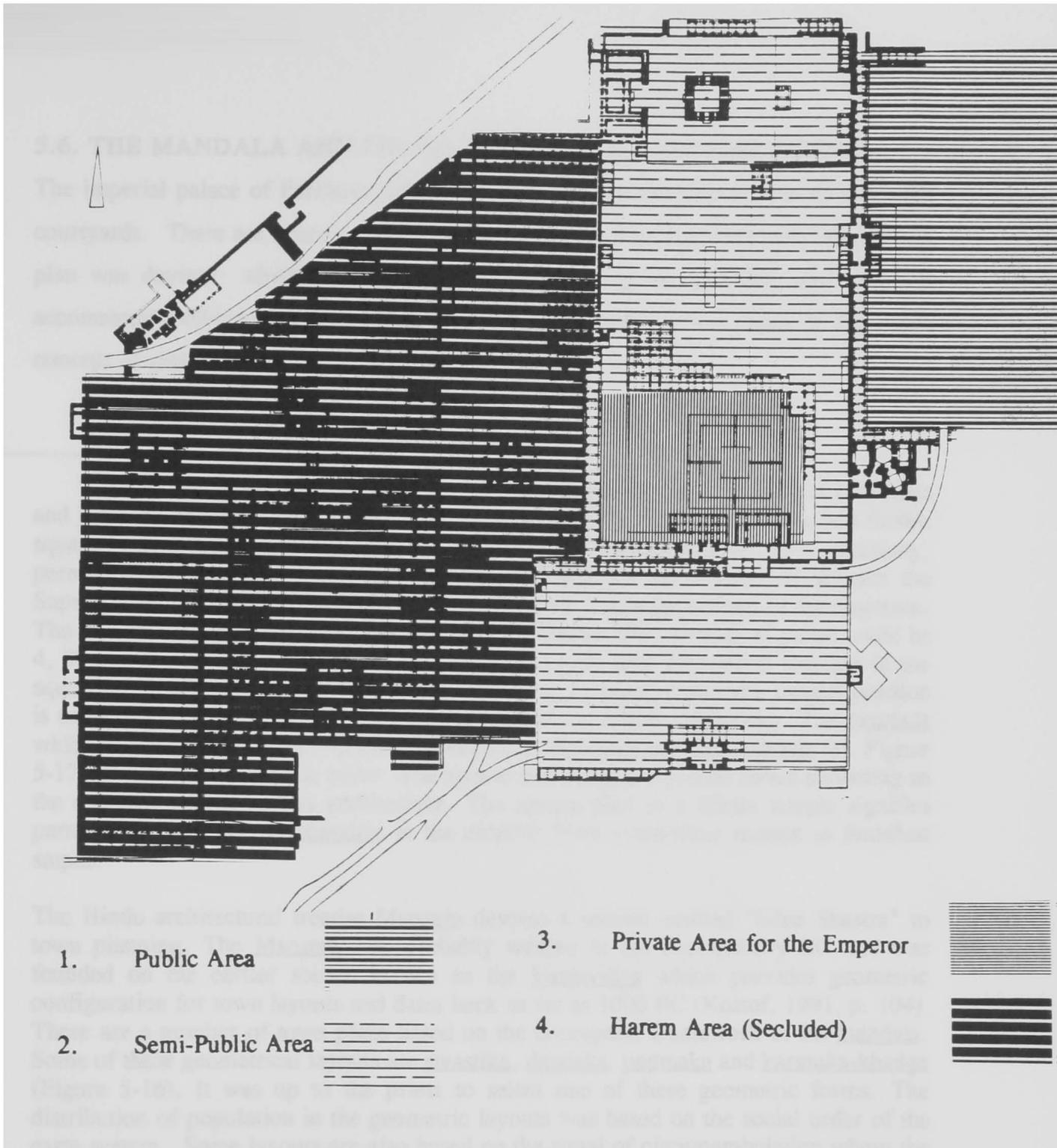
**Figure 5-13: Fatehpur Sikri plan in terms
of the Mughal encampment**

5.6. THE MANDALA AND ITS ROLE IN MUGHAL SPATIAL DESIGN

The imperial palace of Fatehpur Sikri was laid out as an irregular system of staggered courtyards. There are a number of queries which arise from this plan: why this type of plan was devised; whether it was employed because of its flexibility and so could accommodate different types and sizes of buildings; whether it was based on the Hindu concept of mandala[36].

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[36] The mandala was the basis of the spatial organization of Hindu temples and cities and it was in existence around 1000 BC (Kostof, 1985, p. 227). It exists in two forms: square and circular. A mandala in the square form is considered to be a stationary, permanent and absolute. This perfect form is employed by Hindus to indicate the Supreme. It is also used to represent the earth which is a manifestation of the Supreme. The square is divided into smaller squares called padas. The number of padas could be 4, 9, 16, 25, 36 and so on. The most important gods take the central location in the square while the outer padas are occupied by gods of lower rank. The central position is occupied by Brahma, the creator of the universe in Hindu mythology. The mandala which holds the entire figure of a man is known as the vastu-purusha mandala (cf. Figure 5-17). It symbolizes cosmic order. The square and circle are primal forms according to the ancient texts on Indian architecture. The square plan in a Hindu temple signifies permanence whereas the mandala in the circular form symbolizes motion in Buddhist stupas.

The Hindu architectural treatise Mansara devotes a section entitled "Silpa Shastra" to town planning. The Mansara was probably written in the first century BC and was founded on the earlier source known as the Vastuvidya which provides geometric configuration for town layouts and dates back as far as 1000 BC (Kostof, 1991, p. 104). There are a number of town plans based on the conceptual framework of the mandala. Some of these geometrical layouts are swastika, dandaka, padmaka and karmuka-khadga (Figure 5-16). It was up to the priest to select one of these geometric forms. The distribution of population in the geometric layouts was based on the social order of the caste system. Some layouts are also based on the ritual of circumambulation where the mandala is divided into concentric rings instead of padas. This can be seen in the plan of the South Indian city of Shrirangam (cf. Figure 5-18). For detailed information on ancient city planning in India, please refer to Prasanna Kumar Acharya (1933). Architecture of the Mansaras London: Oxford University Press and D. N. Shukla (1960). Vastu-Shastra vol. 1. Bharatiya Vastu-Shastra series. Chandigarh: Punjab University.
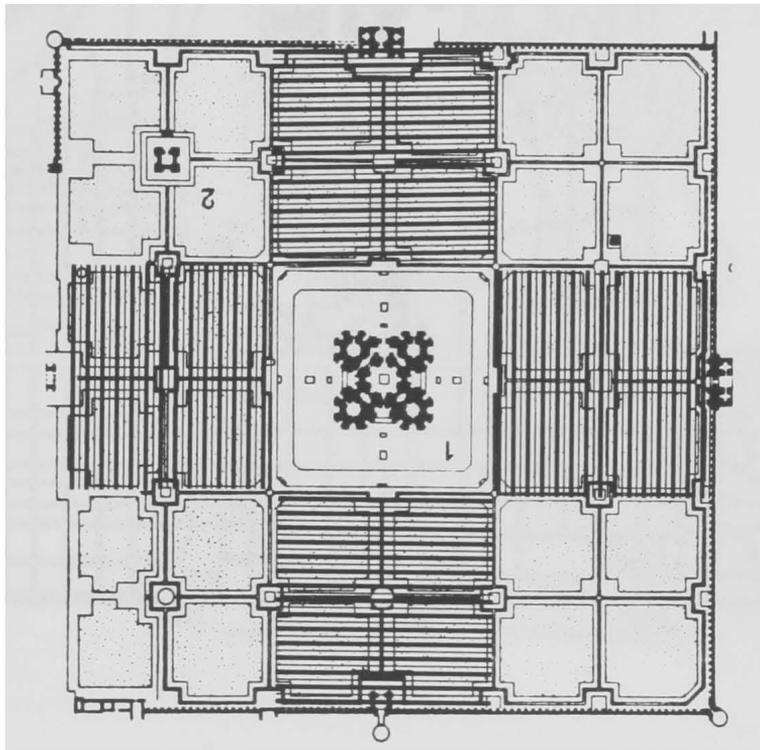
Figure 5-14: Humayun's Tomb

The spatial design of Humayun's Tomb is based on the concepts
of the <u>mandala</u> in the form of the nine square grid.

5. FORM AND FUNCTION
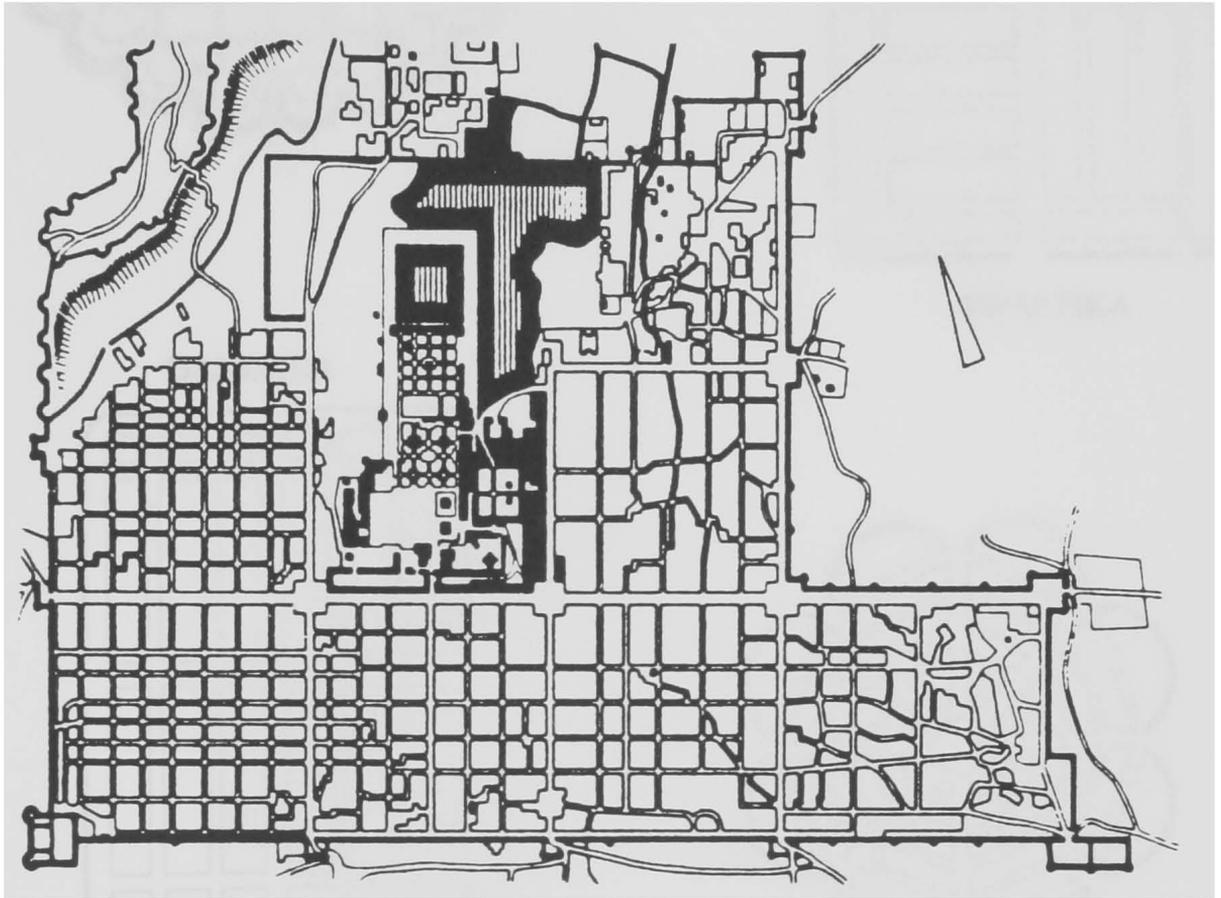
Figure 5-15: Plan of Jaipur in Rajasthan

Jaipur, also known as the Pink City was commissioned by Maharajah Man Singh (1700-1743), a Hindu King. The town was laid out on the principles of the mandala (nine square grid plan). In this plan, the Maharajah's palace is located in the center of the nine square grid.

ADGA LAYOUT
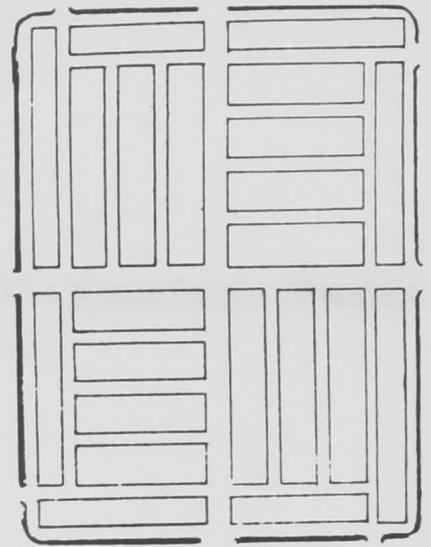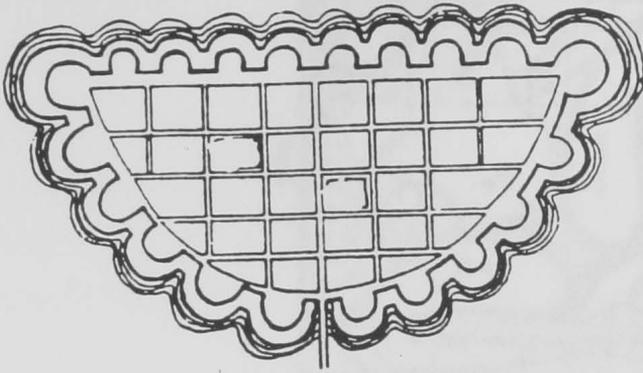
SWASTIKA

DANDAKA
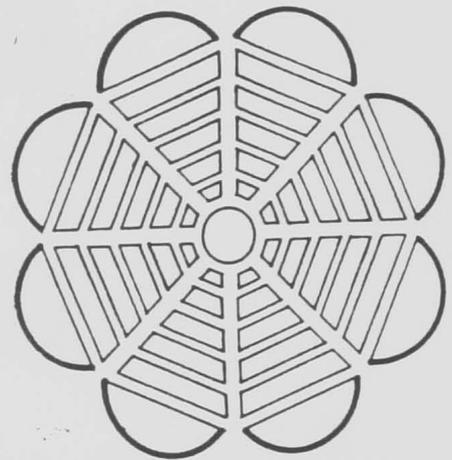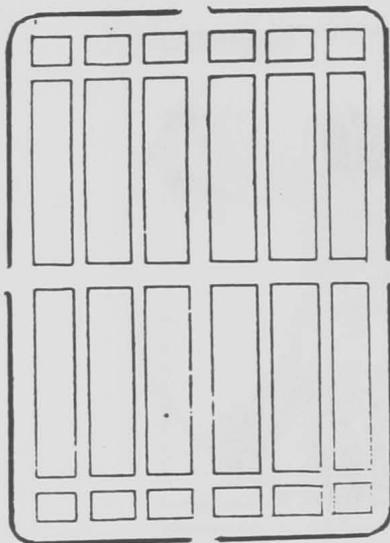
PADMAKA

Figure 5-16: Town plans based on the conceptual
frame work of the <u>mandala</u>

5. FORM AND FUNCTION

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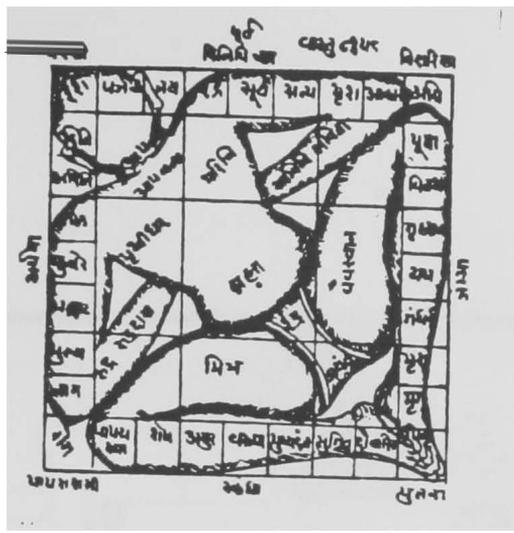
The <u>Vastu-Pursha Mandala</u>
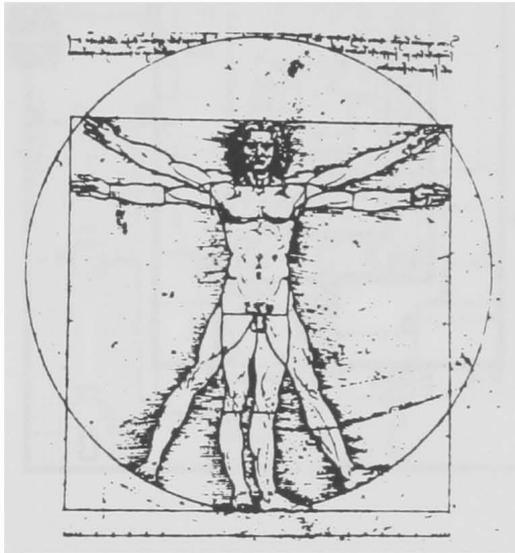
Leonardo da Vinci, *The Vitruvian Man*, ca. 1490. (Accademia, Venice, Italy) This is Leonardo's interpretation of a famous passage in Vitruvius (Book III, chapter 1) which describes how a well-built man, with extended arms and legs, will fit exactly into those most perfect of geometrical figures—the circle and the square.

Lenardo da Vinci's Vitruvian Man

Figure 5-17: The <u>Vastu-Pursha Mandala</u> and
Leonardo da Vinci's Vitruvian Man

5. FORM AND FUNCTION

136
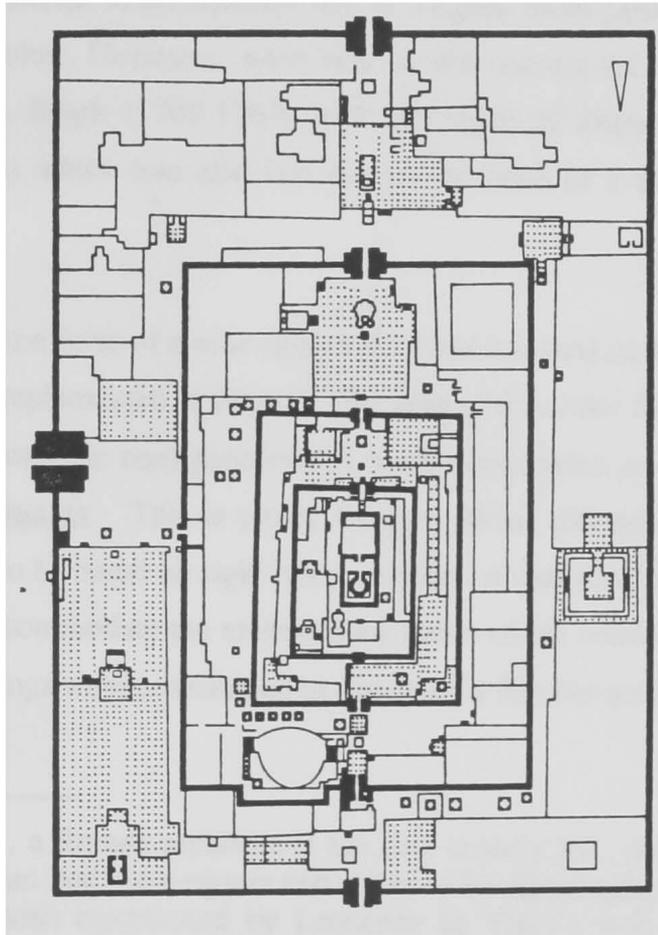
**Figure 5-18: Plan of the South Indian
city of Shrirangam**

The temple city of Shrirangam is dedicated to Lord Vishnu, a Hindu god. The original sanctuary of the temple is located in the center. Later on, the temple was enlarged by the addition of concentric rings in the form of enclosures. This allowed circumambulation around the inner sanctuary. The temple is entered through gates in the form of towers, known as gopurams. The gopurams range in size from the smallest at the inner sanctuary and the largest at the outer ring of the temple enclosure.

5. FORM AND FUNCTION   137

In Akbar's time, the mandala in the form of a nine square grid was used as a spatial organizational concept in architecture and in Mughal tomb gardens. The tombs of both Akbar and his father, Humayun, were built on this concept (cf. Figure 5-14). Later on, Maharajah Man Singh (1700-1743) built the town of Jaipur[37] (cf. Figure 5-15) in Rajasthan (India) which was also laid out on the basis of a nine square grid (Kostof, 1991, p. 182).

The mandala in the form of a nine square grid was not used in the grid plan of Fatehpur Sikri as it was implemented in Jaipur. The plan of Fatehpur Sikri does not correspond to any of the geometric configurations of town plans which are provided in the Hindu treatise, the Mansaras. This is partly because Akbar did not want the design of his ceremonial city to be based on rigid rules. Instead, it was important that spatial concepts be flexible to accommodate the architectural forms of his whole domain. Since a large number of buildings were constructed at one time, a flexible grid system was developed.

Vitruvius, a Roman architect in the first century BC, described the relationship between the human body to a square and circle in his Ten Books on Architecture (Book 111). This has been represented by Leonardo da Vinci's well known diagram of the Vitruvian Man (ca. 1490) which shows how a well built man, with his extended arms and legs will fit exactly into a circle and a square (cf. Figure 5-17). Renaissance architects in the West favored the forms of the square and the circle in their design ((Kostof, 1985, p.195).

[37] The plan of Jaipur is based on vastu-pursha mandala in the form of a nine square grid (nine padas). People were allocated to certain parts of the town according to their professions. For example, all carpenters live in one district while all washermen live in another. The streets in the town run in an east-west and north-south direction. The central portion of the city is occupied by the maharajah's palace. (Volwahsen, 1969, p. 48).

5. FORM AND FUNCTION
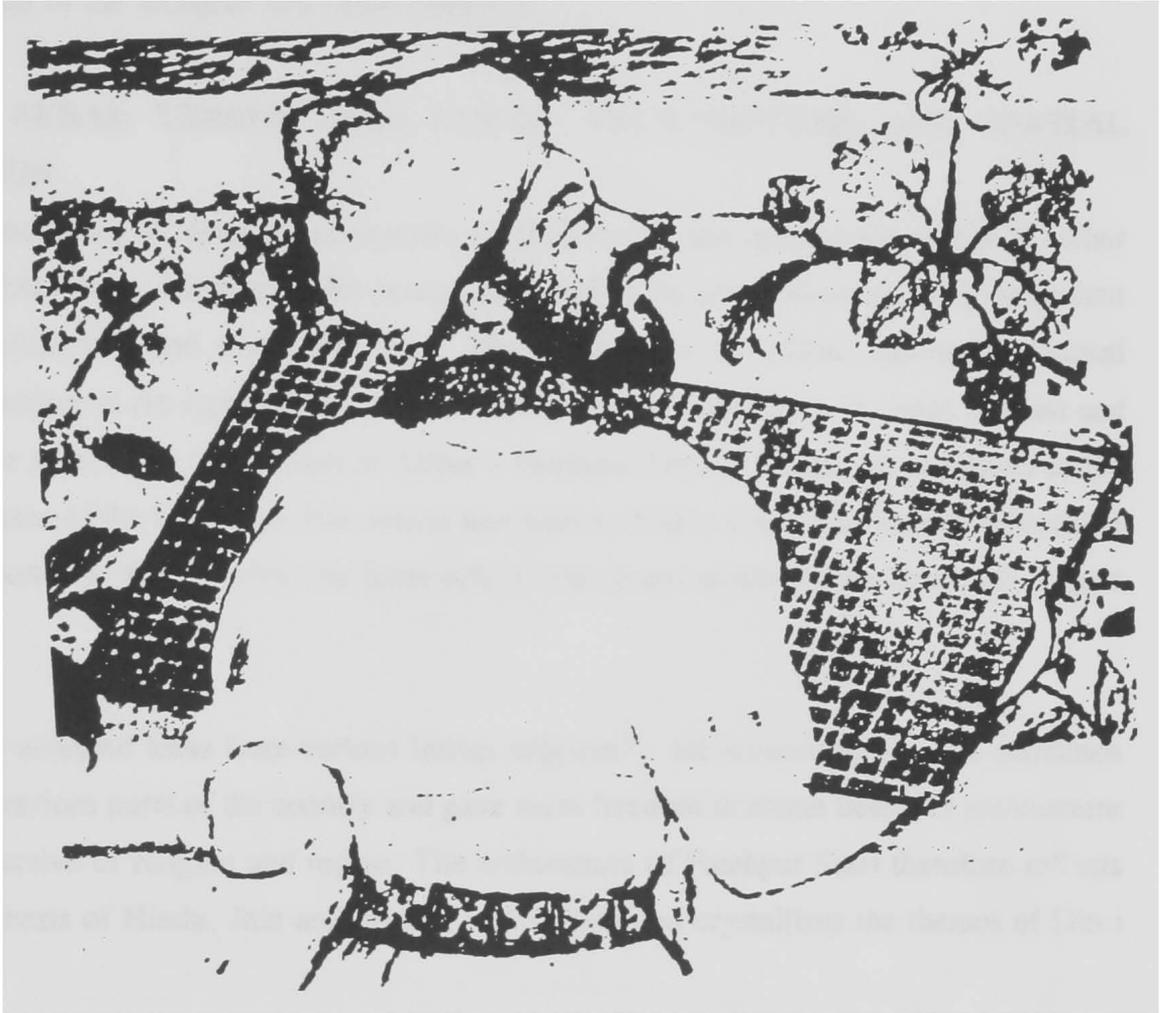
Figure 5-19: Master mason with a grid board

According to Anthony Smart (1974, p. 22-23), a grid system must have been used in laying out the foundation of Mughal buildings and gardens (cf. Figure 5-19) while topography as well as the direction of Mecca played a vital role in determining the location of the mosques and other buildings.

5.7. AKBAR VERSUS SHAH JAHAN: ARCHITECTURE AND SPATIAL DESIGN

It is interesting to compare and contrast the personalties and spatial conceptions of Akbar and Shah Jahan. Ideology of the ruling class is often the prime factor in the development of architecture and town planning. The architecture of Akbar represents Mughal architecture in the early stage whereas Shah Jahan represents it in the later, refined and mature state. The layout plan of Akbar's Fatehpur Sikri is flexible as compared to the rigid plan of the Delhi Red Fort which was built by Shah Jahan. The former reflects the open mind of Akbar, while the latter reflects the closed mind of Shah Jahan (cf. Figure 5-20).

Akbar accepted ideas from various Indian religions[38]. He invited artisans and craftsmen from various parts of the country and gave them freedom to create beautiful architecture irrespective of religion and region. The architecture of Fatehpur Sikri therefore reflects a synthesis of Hindu, Jain and Islamic architecture and crystallizes the themes of Din-i ilahi.

Shah Jahan had absolutely no sympathy with indigenous Indian religions; he demolished many Hindu temples and in many instances, Hindus were forced to accept Islam. To discriminate between the followers of each faith, Hindu males were required to fasten their upper garment (a shirt or jacket) on the left while Muslims fastened theirs on the

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[38] Akbar's religious philosophy has been already described in the first chapter.

IMPERIAL COMPLEX

Fatehpur Sikri

Red Fort.

Figure 5-20: Plans of Fatehpur Sikri and the Red Fort
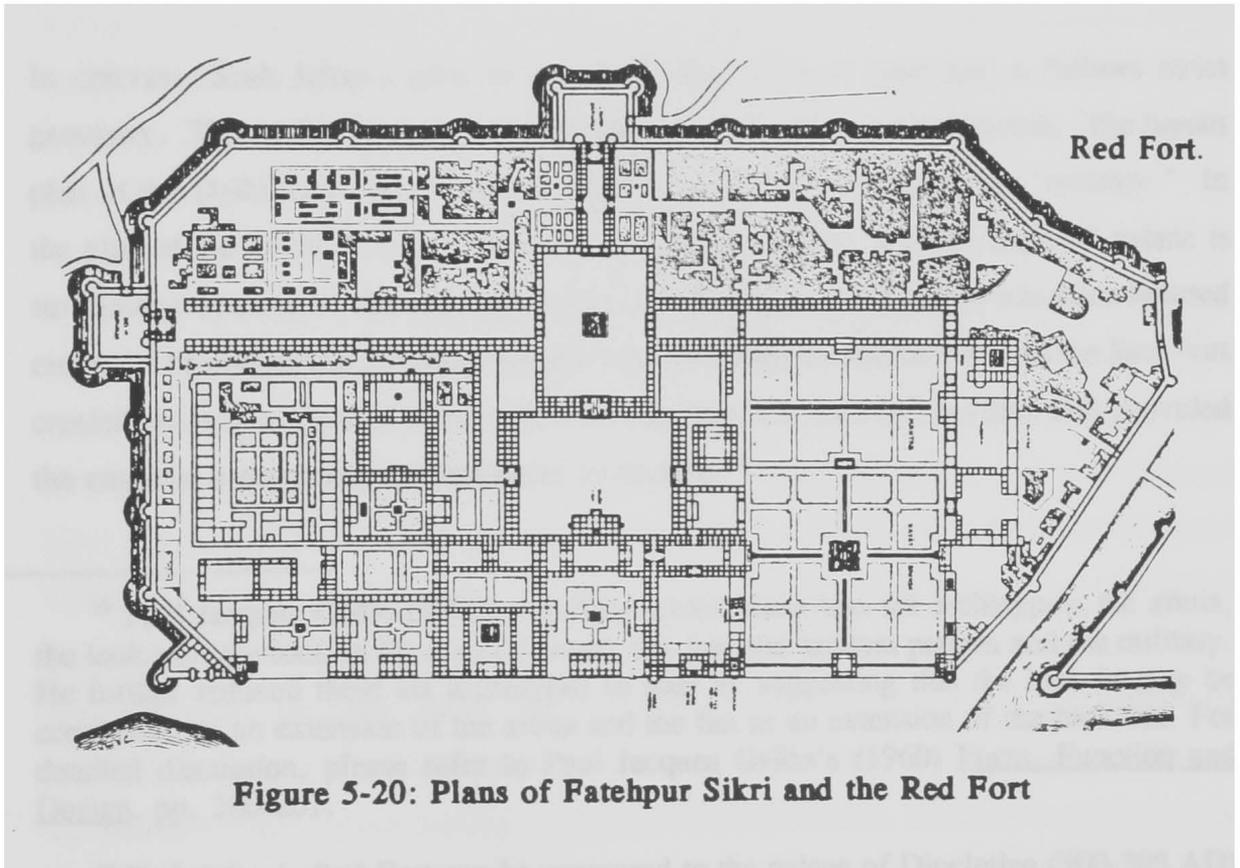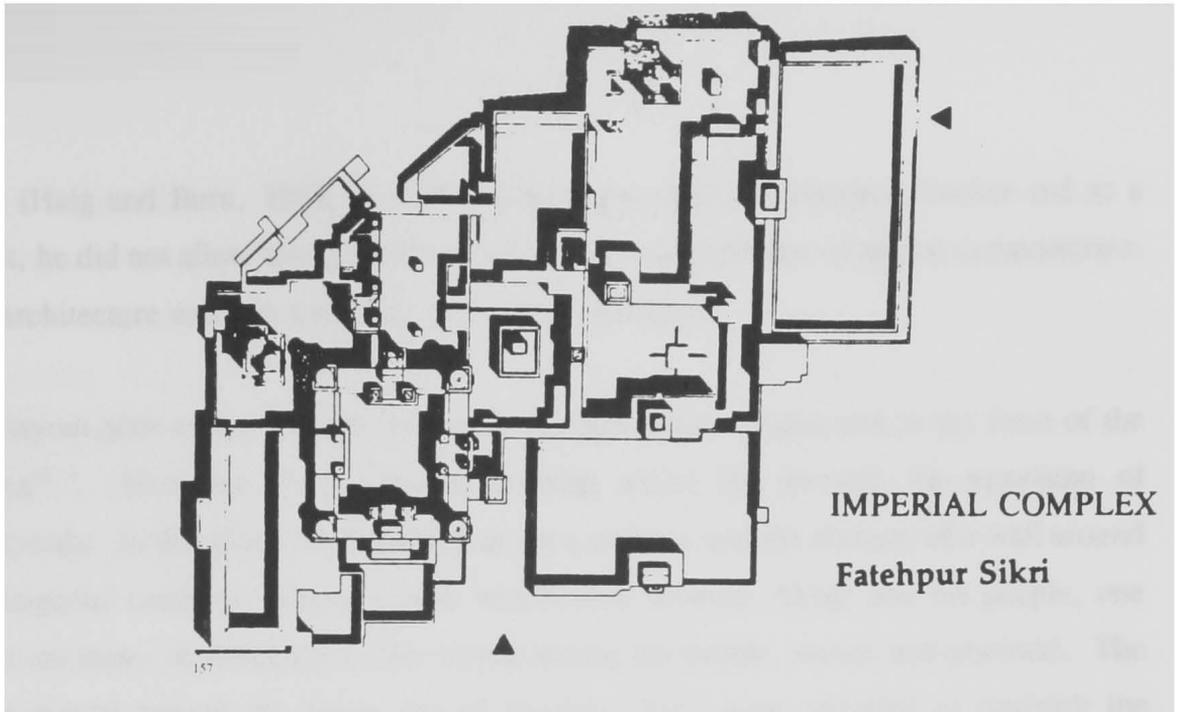
right (Haig and Burn, 1963, p. 217). Shah Jahan was an orthodox Muslim and as a result, he did not allow his architects any freedom in the creation of spatial compositions. His architecture exhibits a distinctive Islamic character.

The layout plan of the imperial palace at Fatehpur Sikri is open and in the form of the "arena[39]." Here the focus was on creating social life through the provision of courtyards. In this plan too, defense was not a concern and the absence of a wall around the imperial complex reflects a new relationship between Akbar and his people, one based on trust. It indicated a ruler living among his people, secure and unafraid. The walls placed around the entire city of Fatehpur Sikri were provided to establish the boundaries.

In contrast, Shah Jahan's plan of the Delhi Red Fort is rigid and it follows strict geometry. The roads run straight in an east-west and north-south direction. The layout plan of the Delhi Red Fort is introvert and it reflects the themes of the "military." In the plan of the Delhi Red Fort, defence was a prime factor and the imperial palace is surrounded by massive battlemented walls. Unlike Akbar, Shah Jahan was not a favored emperor; he completely insulated himself from his subjects and the walls of the Red Fort created not only a physical barrier between the ruler and the ruled but they also provided the emperor a psychological assurance of security[40].

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[39] Paul Jacques Grillo (1960) classifies layout plans into six archetypes: the arena, the look-out, the look-in (or amphitheater), the fan, the random pattern and the military. He further reduced these six archetypes to four by suggesting that the look-in may be considered as an extension of the arena and the fan as an extension of the look-out. For detailed discussion, please refer to Paul Jacques Grillo's (1960) Form, Function and Design. pp. 200-201.

[40] Shah Jahan's Red Fort can be compared to the palace of Diocletian (300-305 AD) at Spalato (Split) in Yugoslavia. This complex was also laid out on the basis of the military camp. There is a strict geometric order and it reflects defensive needs (Croix,

5.8. SUMMARY

The chapter has met its four objectives. It first examined the Mughal architecture of Fatehpur Sikri in the framework of Heinrich Wolfflin's approach. By comparing and contrasting the architecture of Fatehpur Sikri with the pre-Mughal architecture of the Hindu period, it was determined that the architecture of Fatehpur Sikri is Linear, Static and it represents Absolute Clarity. The Hindu architecture of the pre-Mughal era, however, is Painterly, Dynamic and it shows Relative Clarity.

The architecture of Fatehpur Sikri employs parallel planes, its architectural forms are open and there are a number of subordinate architectural parts contributing to the total form. In contrast, the architecture of the Hindu period before the Mughal era is created through the interplay of mass and void. Their form is closed where nothing can be added or subtracted, there is total unity. It is interesting to note that at the end of the Mughal period, the architecture again shows the characteristics of the pre-Mughal period: painterly, closed form and relative clarity.

The second objective was to analyze the plan form which was found to be open, carefree, flexible and reflecting democracy. The architecture of Fatehpur Sikri reflects the themes of Din-i ilahi where everybody is welcomed irrespective of religion. Decorative ornamentation from various Hindu as well as Jain temples was employed in Fatehpur Sikri. The second objective was also to examine the functions of the imperial palace buildings in terms of their court activities and social life. Nine gates were provided in the city wall but the main entrance into Fatehpur Sikri was through the Agra Gate. Inside the gate, the road diverts leading visitors to the Diwan-i-Amm after first going through the Naubat Khana where drums were beaten to mark the presence of Akbar in the Diwan-i-Amm. After passing through the Naubat Khana, there were stables on the

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Tansey and Diane, 1987, pp. 240-41).

right hand side of the road and a residence on the left for the caretaker of the horses or for the security guards of the palace.

The Diwan-i-Amm was a very important part of the imperial complex. It was a public area where the emperor held audience for all of his subjects and where a number of festivals was celebrated. From the Diwan-i-Amm there is an entrance into the courtyard of the Diwan-i-Khas, in which only privileged persons were allowed. In the Diwan-i-Khas, architectural and spatial hierarchy was created through a very sculptured space. This building may have been used for special dignitaries and meetings.

Immediately south of the Diwan-i-Khas, is the Pachisi Court and west of this is a private space for the royal family which includes a pleasure pavilion known as the Panch Mahal, the Harem Garden, the palaces of Akbar's wives and the Royal Bazaar. This was the harem section of the complex. North of the Panch Mahal was a hospital and a garden and to the east, there was a Madrasa, which may have been used for harem children.

Between the Diwan-i Amm and the Pachisi Court, a garden separated the public space from the royal space. To the south, was the House of the Turkish Sultana which may have been used by the emperor as a meeting area. South of the House of the Turkish Sultana is the emperor's private area which includes his sleeping quarters. These buildings are arranged around a courtyard with a water tank, the Anup Talao, at its center. East of this is the royal bath, the Shahi Hamam. South of Akbar's sleeping quarters is the Daftar Khana, the administrative center.

North-west of the imperial palace complex is the Hathi Pol which was the imperial entrance into the city. In close proximity to this gate are the pre existing structures of the caravanserai, and Salim Chisti's monastery which includes the Stone Cutter's Mosque. South-west of the imperial palace is the Jami Masjid complex which includes

the tombs of Salim Chisti and his grandson, Islam Khan. There are two gateways into this complex, the private Badshahi Darwaza provided an entry from the imperial palace to the Jami Masjid. This was used by the emperor. The second entrance, the Buland Darwaza, was a public entrance.

The third objective was met by looking at the relationship of the Mughal encampment and the mandala to the development of Fatehpur Sikri. It was discovered that spaces were zoned according to the level of public and private spaces. The harem was completely separated from the public. The layout plan shows that mandala concepts in the form of a nine square grid were not applied in the grid plan of Fatehpur Sikri as they had been implemented in the planning and design of Jaipur. Spatial concepts were developed to accommodate the architectural forms from different regions of Akbar's empire.

The last objective was to compare and contrast Akbar and Shahjahan, two great patrons of Mughal architecture and urban design. Akbar's architecture and spatial design concepts reflect his open mind and tolerance. In contrast, the architecture and spatial conceptions of Shah Jahan follow Islamic forms and rigid rules of geometry. They reflect his orthodox beliefs in Islamic theology and tradition.

6 - SPATIAL DESIGN PRINCIPLES

There are three main objectives for this chapter. The first is to understand the role of the architect in Indian society of the past. The second objective is to understand the movement patterns of Fatehpur Sikri in Akbar's times: how the emperor, his courtiers and the people moved from one place to another within the imperial complex and its surroundings. The third objective is to understand the physical structure as well as the design and planning principles employed by the architects of Fatehpur Sikri. To study this aspect, visual analysis of the physical structure of the city was carried out. This was based on a walk through the entire city on a specific path which covered the formal movement paths of the era. The chapter also discusses the imperial complex of Fatehpur Sikri in relation to the Mughal complexes of Agra and Delhi. From a visual observation of the site and an analysis of the plan form, theoretical aspects of design and planning principles are laid out. In conclusion, the chapter summarizes the design and planning principles employed in the exterior spaces of Fatehpur Sikri.

6.1. THE ARCHITECT IN INDIAN SOCIETY

Very little is known about the architects of ancient India. Unlike the West, the designers and builders of the ancient Hindu and Buddhist architectural monuments cannot be identified. The idea of signing a work of art or architecture was of little importance in ancient times. Artists and architects believed that they were only the executers of the work and that their creative skills were bestowed on them by Vishvakarma, the mythological architect of the universe. They were guided by the higher castes and in particular, the Brahmins. Indian society was rigidly caste structured and since these

artisans belonged to the Vaishya caste[1], they were not given credit for their work. The upper classes looked at these master builders and artisans as no more than mere service men needed to construct buildings (Michell, 1988, p. 54). This practice continued into Mughal times and so it is not surprising that the names of the architects who built the masterpieces of art and architecture in Fatehpur Sikri are not known[2].

In the pre-Mughal and Mughal eras, there were no formal academies for the study of architecture. Knowledge was passed on orally from one generation to another and it was kept within the family (Qaiser, 1988, p. 39). Knowledge was also based on the architect's own experience and on trial and error. In contrast to the Renaissance period in the West, no architectural treatises were written during the Mughal period in India. Drawings or sketches of Fatehpur Sikri done by the architects or master builders in charge of the buildings are no longer in existence. Miniatures done during Mughal rule, however, provide a clue that some sort of grid boards were employed to locate the buildings on the grounds (cf. Figure 5-19).

As in the pre-Mughal era, architects did not achieve a high social status in Mughal society and as a result, no master builder was given any high position of great importance in the Mughal court. This was because many of these architects or master builders rose out of the lower level of non-literate artisans. This restricted their social mobility to the upper class (Qaiser, 1988, p. 40). In contrast, the architects of sixteenth

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[1] In Hindu society there are four castes: Brahmins, Kyshatriyas, Vaishyas and Shudras. The Brahmins were the priests and the teachers. The Kyshatriyas were the soldiers whose job was to defend the country from invaders. The Vaishyas were tradesmen and business people while the Shudras comprised the service class and performed all the menial work.

[2] There is even a controversy about the identity of the architect of the Taj Mahal. Historians refer to a number of names but there is no consensus among them (cf. Jean-Louis Nou, Amina Okada and M.C. Joshi (1993). Taj Mahal. pp. 18-21.

6. SPATIAL DESIGN PRINCIPLES

century Europe were men of letters. They were intellectuals and were knowledgeable in many fields. They developed architecture into a distinct discipline.

It is worthwhile to remember that in the Mughal era, a number of architects were non-Indians. For example, Humayun's Tomb at Delhi is the first building of Mughal architecture in India. It was designed by the Persian architect, Mirak Mirza Ghiyas (Brown 1962, p. 97). Although the social status of these architects must have been enhanced by Mughal patronage, there is no evidence that they were given much prestige in the Mughal court (Qaiser, 1988, p. 40).

6.2. MOVEMENT PATTERNS

On the basis of research and my site investigation, I have identified the movement patterns of Fatehpur Sikri during Akbar's era into two categories: external circulation and internal circulation (cf. Figure 6-1). External circulation patterns connected the city of Fatehpur Sikri with the imperial complex, the Jami Masjid and Salim Chisti's monastery. Path 1 began at the Agra Gate and led the public through the market to the Diwan-i-Amm where the emperor held public audience. Path 1 terminated here since the public was not allowed beyond this point. Path 1 also served as a ceremonial path where colorful processions of elephants, camels, horses and soldiers marched in pomp and show. Path 2 led the public through the Buland Darwaza to the Jami Masjid. This was the connection between the city and the Jami Masjid complex. To visit Salim Chisti's monastery, the public used path 3. This pathway which started at the caravanserai and the Hiran Minar went through the Hathi Pol. At this point it branches into two directions; one led the public to Chisti's monastery while the other was a ceremonial path to the Diwan-i-Amm. The latter is depicted in a miniature painting (cf. Figure 6-2) which shows Akbar's return to Fatehpur Sikri through the Hathi Pol (cf. Lowry and Brand's (1987) Fatehpur Sikri, pp. 16-17). Path 4 was the connection between the
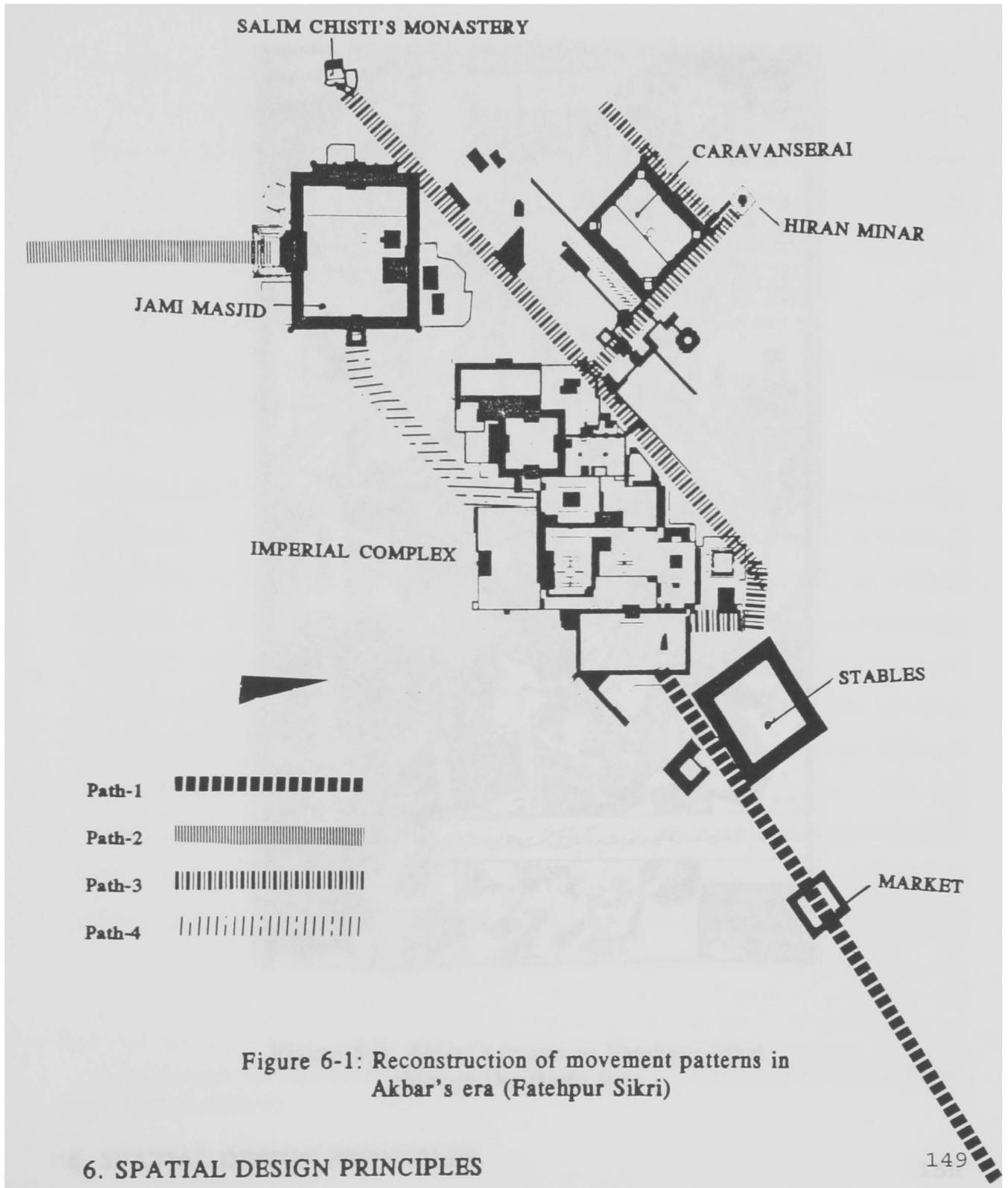
Figure 6-1: Reconstruction of movement patterns in
Akbar's era (Fatehpur Sikri)

Figure 6-2: Akbar's return to Fatehpur Sikri through the Hathi Pol.

imperial complex and the Jami Masjid through the Badshahi Darwaza. This path was only meant for the royal family.

The internal circulation pattern of the imperial complex was not based on pathways but on the arrangement of interlocking courtyards. This provided many options for the royal family and their courtiers to move from one place to another. This spatial arrangement was based on the Mughal camp layout where movement was from the public to the private zone.

6.3. SPATIAL SEQUENCES: A WALK THROUGH THE CITY

To study the design and planning principles of the exterior spatial structure, I walked on the four paths described in the last section of this chapter.

Fatehpur Sikri is enclosed by a wall on three sides. The fourth side bordered a lake which is dried at present time. The enclosure wall was intended for the demarcation of the city boundaries but it is not intact at present. In contrast, the enclosure city walls of Old Delhi or Shahjahanabad are high since defence was an important consideration. Therefore, the major difference between the outer walls of Fatehpur Sikri and Shahjahanabad is that the former only defined the boundary whereas the latter served as a defensive barrier against the enemy. Unlike these Mughal cities of Fatehpur Sikri and Shahjahanabad, the city of Agra is not surrounded by a wall enclosure. This was probably due to the fact that the city had been built long before the Mughals entered India[3]. It was very heavily populated so that it may not have been possible to create an internal circulation system and a defensive wall enclosure. The Agra Fort which was

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[3] Agra was the capital city of the Lodhi dynasty which ruled northern India before the Mughal invasion.

6. SPATIAL DESIGN PRINCIPLES   151

built by Akbar was surrounded by moats on three sides and bounded by the River Yumuna on its fourth side.

The main entrance to the historic city of Fatehpur Sikri is through the Agra Gate which lies in the enclosure wall[4]. The facade of this gate is symmetrical about its vertical axis and was conceived in terms of solids and voids. The projected portion of the facade creates an interesting play of light and shade. The rear facade of this gate is plain with sloping walls (cf. Figures 6-3 and 6-4). At present time, the main road from Agra leads directly through this gate to the present day bazaar of the city. Inside the Agra gate, the main road branches out to right, leading the modern tourist to the Diwan-i-Amm. This may have been the same path which led Akbar's subjects[5] to his palace.

On the way to Diwan-i-Amm, the road again branches out towards the right leading to the Tansen's Barahdari, a small pavilion with a centralized plan (cf. Figures 6-5 and 6-6). This building has a covered colonnaded veranda all around and it is open on its four sides. The internal space of the building flows outside through the doors, extending to the surrounding landscape. The openness of the pavilion allows for a breeze on a hot Summer's day. The building has an intimate scale which is created by a low roof level.

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[4] Gates are very important in cities. They are more than utilitarian openings; they are transitional elements allowing residents or visitors to penetrate into a different world and serve as powerful landmarks guiding them to their destination (Lozano, 1990, p. 219).

[5] At present, the state of Uttar Pradesh transport buses take the modern tourist to the present market place of Fatehpur Sikri. Here tourists encounter many guides who take them first to see the Jami Masjid complex. After this, they are taken to the imperial complex through a small check point near Jodhabai's palace. During Akbar's time this path was only used by the king himself, his harem and his courtiers. Tourist guides are not only discouraged by the complex authorities to take visitors through the Diwan-i-Amm, but they are not allowed to go through it themselves. Tourists, however are not prohibited to use this path on their own.

6. SPATIAL DESIGN PRINCIPLES
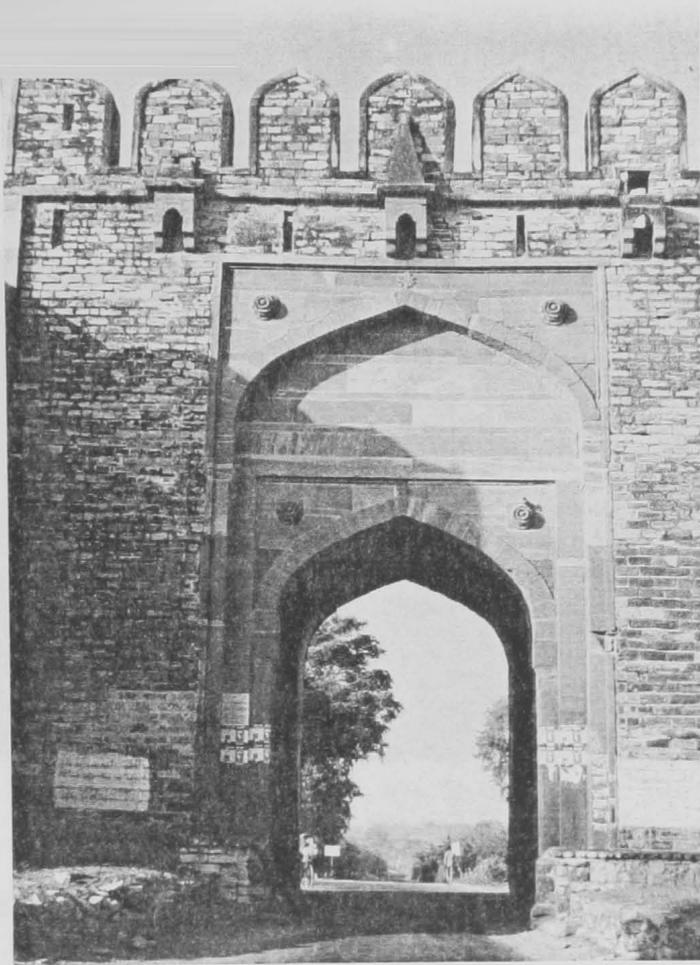
Figure 6-3: Agra Gate: front view (Fatehpur Sikri)

This was the main approach from the city of Agra. At present, it also serves as the entry point into Fatehpur Sikri.
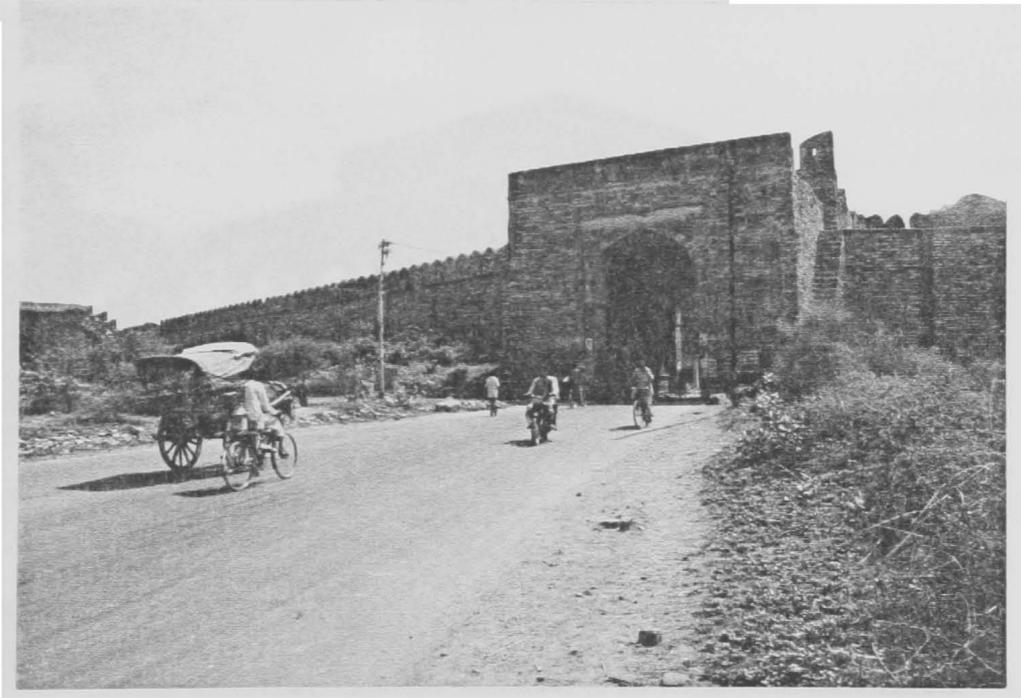
Figure 6-4: Agra Gate: rear view (Fatehpur Sikri)
The rear gate walls are sloped.
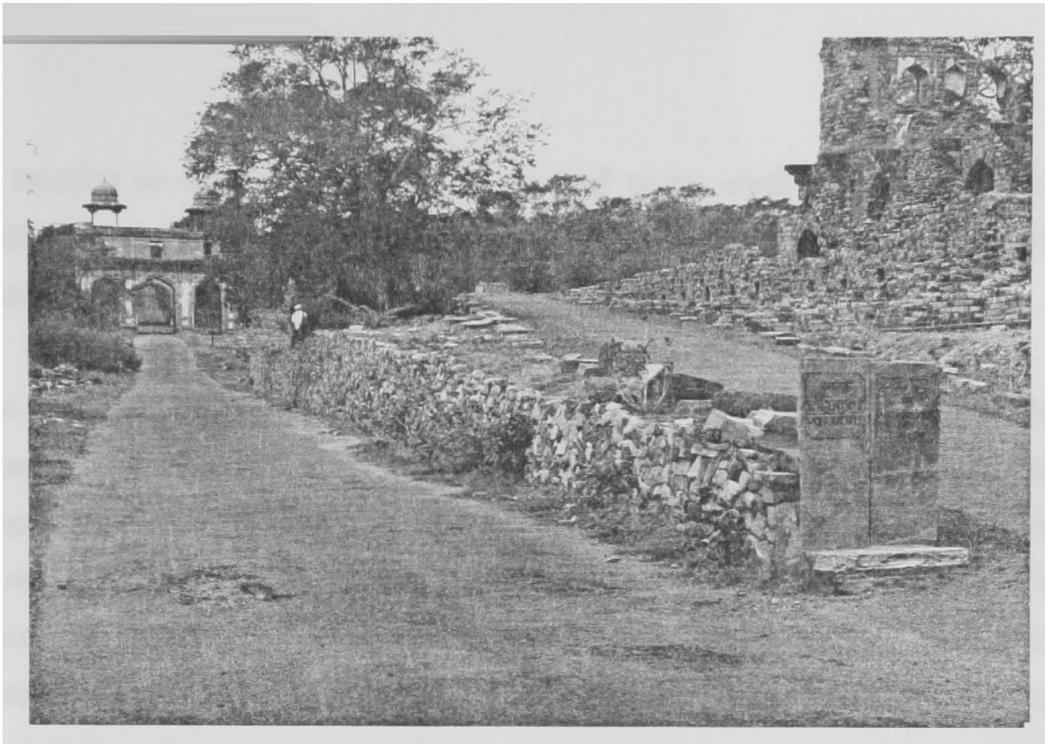
**Figure 6-5: An Approach to the Diwan-i-Amm
and Tansen's Barahdari (Fatehpur Sikri)**

This road leads to the Diwan-i-Amm through the Naubat Khana. The road branching to
the right leads to Tansen's Barahdari.
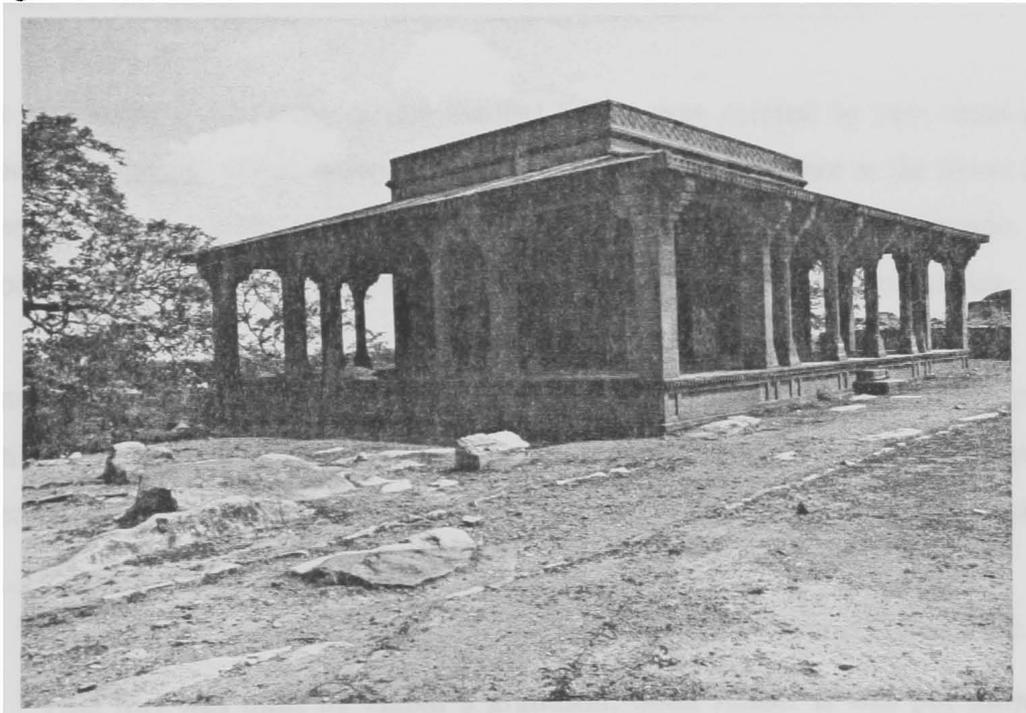
Figure 6-6: Tansen's Barahdari (Fatehpur Sikri)

This building has one large central space: a centralized plan.

6. SPATIAL DESIGN PRINCIPLES   154

Its location on the ridge provides an overlook to the north. The building is set on a platform and the main entrance is defined by steps. The roof line and the pillars also create dramatic shadows.

The main road from the Agra Gate continues to the top of the ridge through the Naubat Khana[6] which provides entry into the Char Suq or the marketplace. The plan of the Char Suq is in the form of an enclosed square with a gateway on each side. The arches of the main gateways, the Naubat Khana and the gateway directly opposite to it provide a sense of direction and orientation since they are both located on the main road. There were shops on all four sides of the Char Suq. The geometry of this public space was created through a combination of a square and a linear pattern of shops on both sides of the main road as it led out of the Char Suq. Here symmetry is utilized in the design of this public space (cf. Figures 6-7 to 6-10). A similar type of linear spatial structure also appears in the bazaars of the Agra Fort and the Red Fort at Delhi.

The architectural hierarchy of the Naubat Khana was created by two small pavilions, known as chattris, which crown the gate. There are three arches at the lower level with three rectangular openings above them. The vertical effect of the facade is broken through the creation of a horizontal projection at the top of the three arches.

A structure providing a similar function to the Naubat Khana of Fatehpur Sikri is found in the Red Fort of Delhi[7]. This is also a gateway where drums were played. It is referred to by the same name, Naubat Khana and was also a part of the bazaar during

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[6] To study its function, please refer to the chapter 5: Form and Function.

[7] This fort was built by Akbar's grandson, Shah Jahan. It was put through many changes during the reign of the later Mughal emperors and the British Raj (reign). The British constructed a number of barracks within the fort, some of which at present are still used by the Indian Armed Forces.

6. SPATIAL DESIGN PRINCIPLES
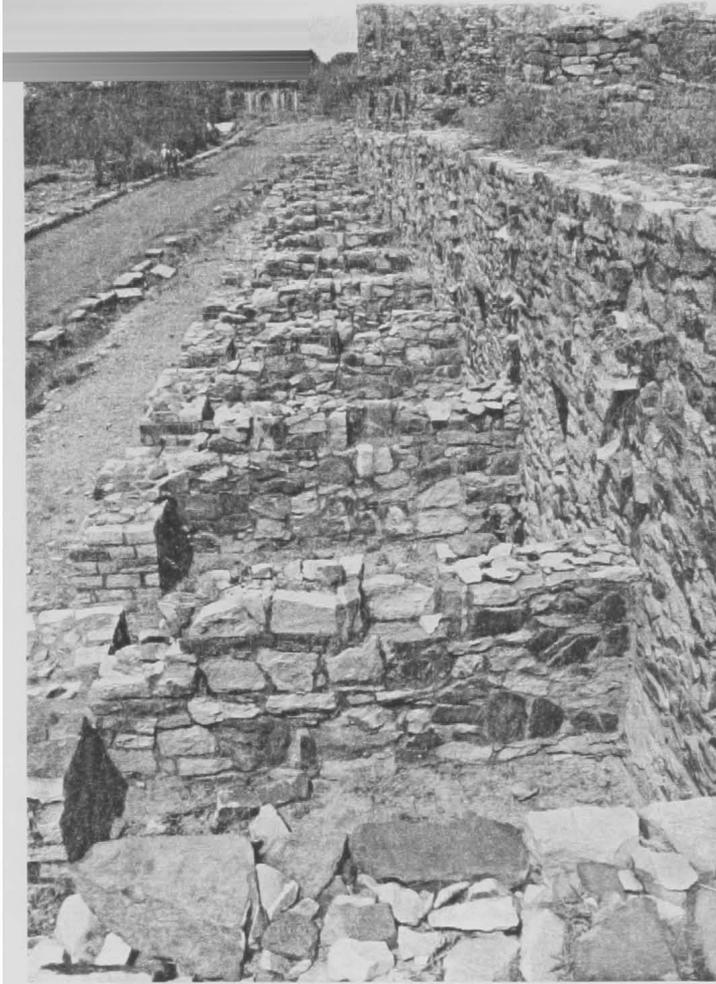
Figure 6-7: The bazaar in Fatehpur Sikri.

Shops were arranged on both sides of the main road in a linear pattern. This was discovered in recent archeological excavations.

Figure 6-8: The Approach to the Naubat Khana (Fatehpur Sikri)
This is where drums were played to inform the populace of Akbar's presence in the Diwan-i-Khas.
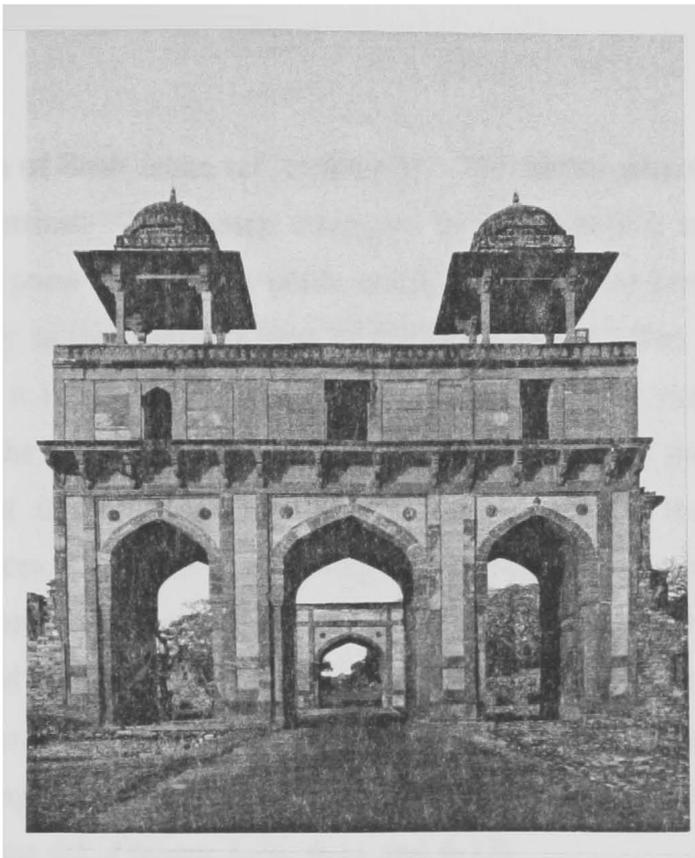
Figure 6-9: Facade of the Naubat Khana (Fatehpur Sikri).

The approach to the imperial palace was made through the central arch and it is emphasized by the big opening. On the main path another archway was also placed to provide orientation and a sense of direction.
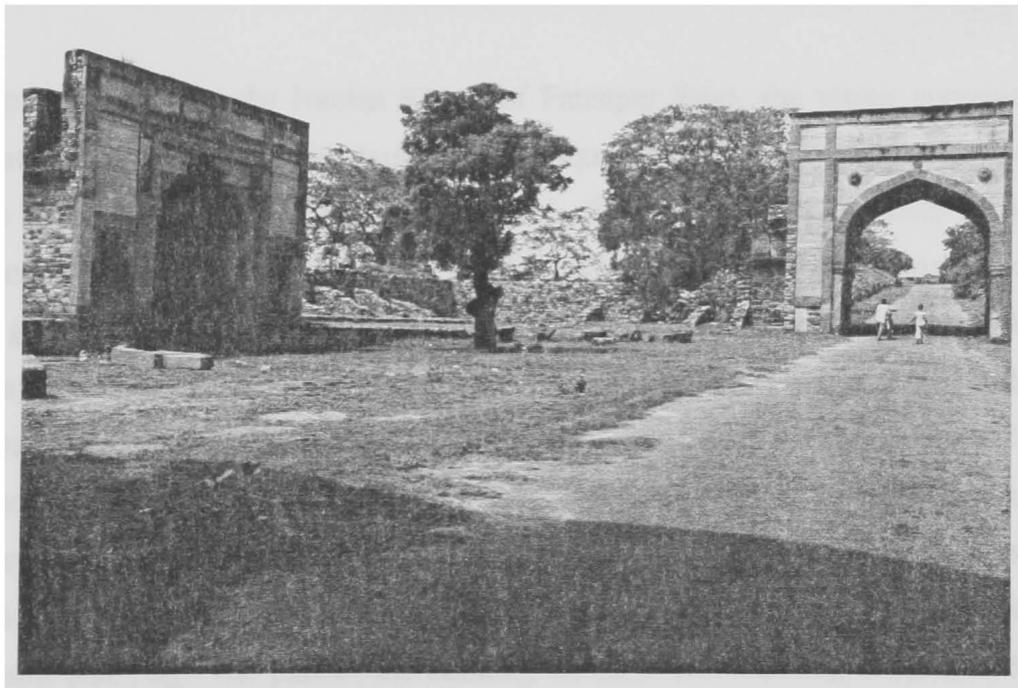
Figure 6-10: Inside View of the Char Suq
(Fatehpur Sikri)
The spatial design of this square was based on the Charbagh concept.
A gateway is provided on the each side of the square.

6. SPATIAL DESIGN PRINCIPLES 157

the era of Shah Jahan (cf. chapter 3). The spatial structure of this bazaar is radial and symmetrical. The central courtyard in the form of a square has three radiating arms which point towards the north, south and west. At present, the covered bazaar leads directly to the Naubat Khana or the Drum House. The structure of the Naubat Khana or, as it is also called, the Naqqar Khana, is symmetrical and comprises three arches. Here the main entrance is marked by the large size of the recessed archway. On either side of this entrance is another recessed entrance; these two were used as service entrances. The structure is comprised of two stories with the upper story facade broken into three divisions by vertical bands. Each division is in turn emphasized by three foliated arches. The building is crowned by two small pavilions. The axis of the structure passes through the center of the covered bazaar and the Diwan-i-Amm. The building facade has a horizontal effect which was created by emphasizing the horizontal roof line (cf. Figures 3-24, 6-11 and 6-12).

After passing through the Naubat Khana of Fatehpur Sikri, the visitor approaches the horse stables on the right. This building has a square plan with a central courtyard. The facade is linear in form and has a vaulted roof. The architectural hierarchy of the main entrance is achieved through the shape and height of the main gate. The entrance opening in the gate is also emphasized by the creation of an archway. The horizontal scale in the building is realized through the visibility of each shallow dome and also by emphasizing each bay and its individual opening. The linear form of this building facade defines the road edge. It allows for enough light and air to enter, thus enabling the interior to be cool and breezy in the hot Summer (cf. Figures 6-13, 6-14 and 6-15). Opposite the stables are the ruins of a one story structure whose spatial organization is based on courtyard planning. The part of the building which is still standing is open in the front and encloses a courtyard on its three sides (cf. Figure 6-16).

6. SPATIAL DESIGN PRINCIPLES
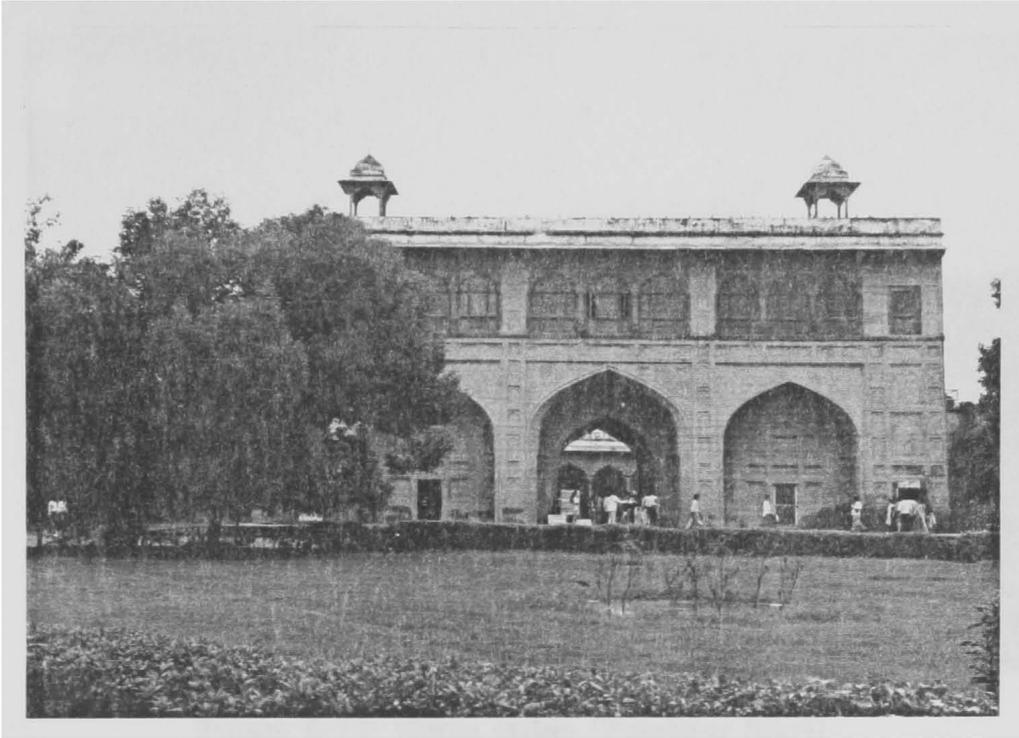
Figure 6-11: Approach to the Naubat Khana from the bazaar
(Delhi Red Fort)
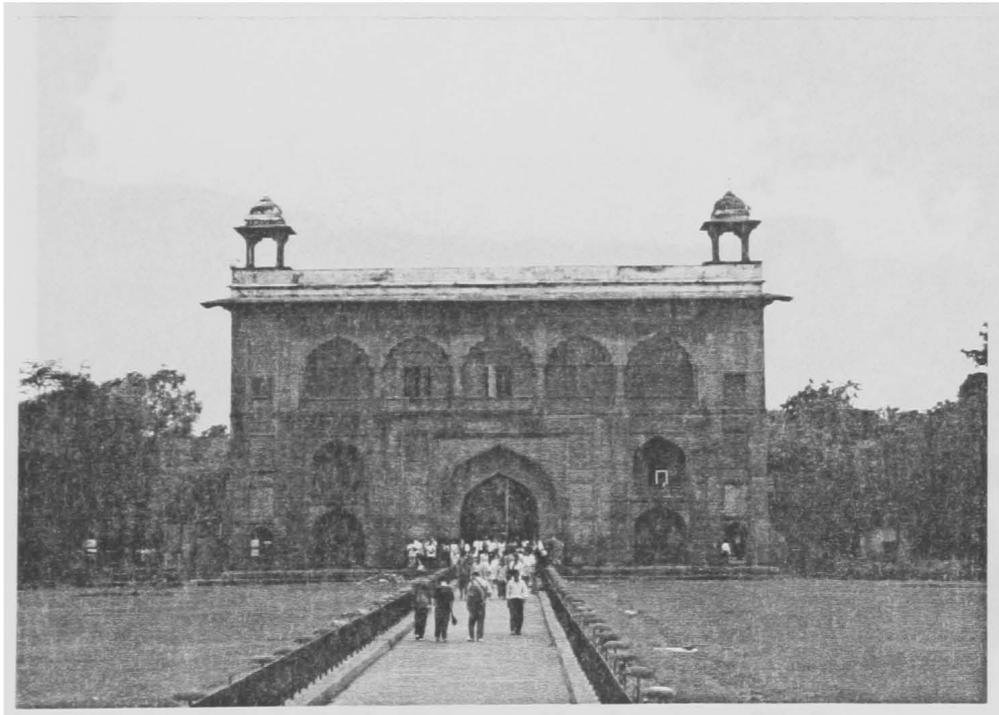
Figure 6-12: Naubat Khana (Delhi Red Fort)
This is a view of the Naubat Khana from the Diwan-i-Amm.

6. SPATIAL DESIGN PRINCIPLES
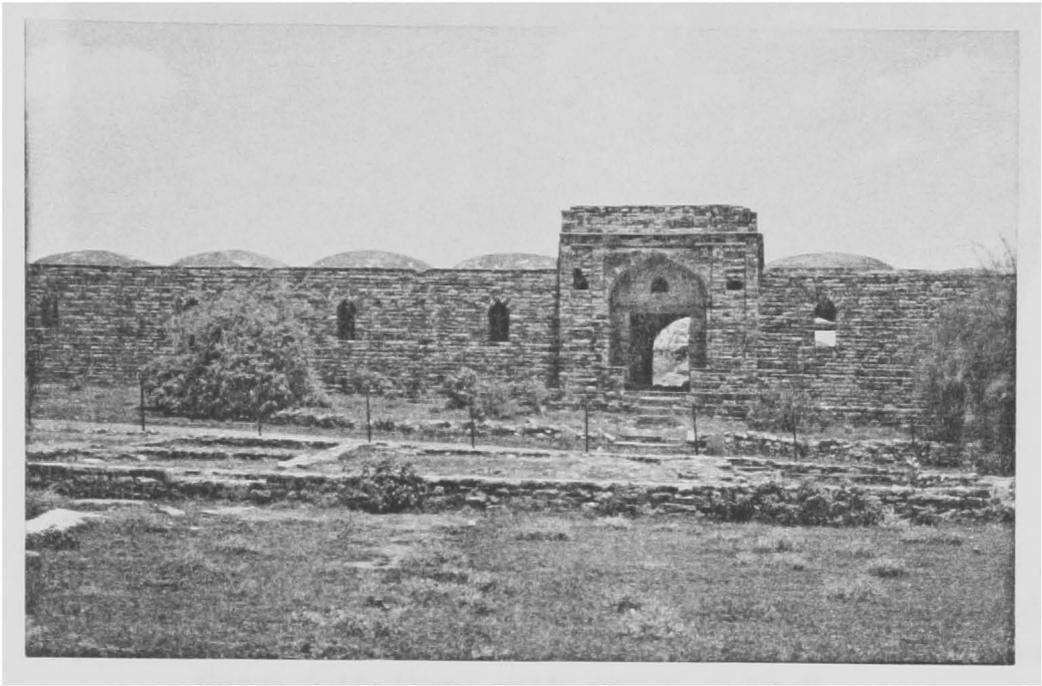
Figure 6-13: Horse stable (Fatehpur Sikri)
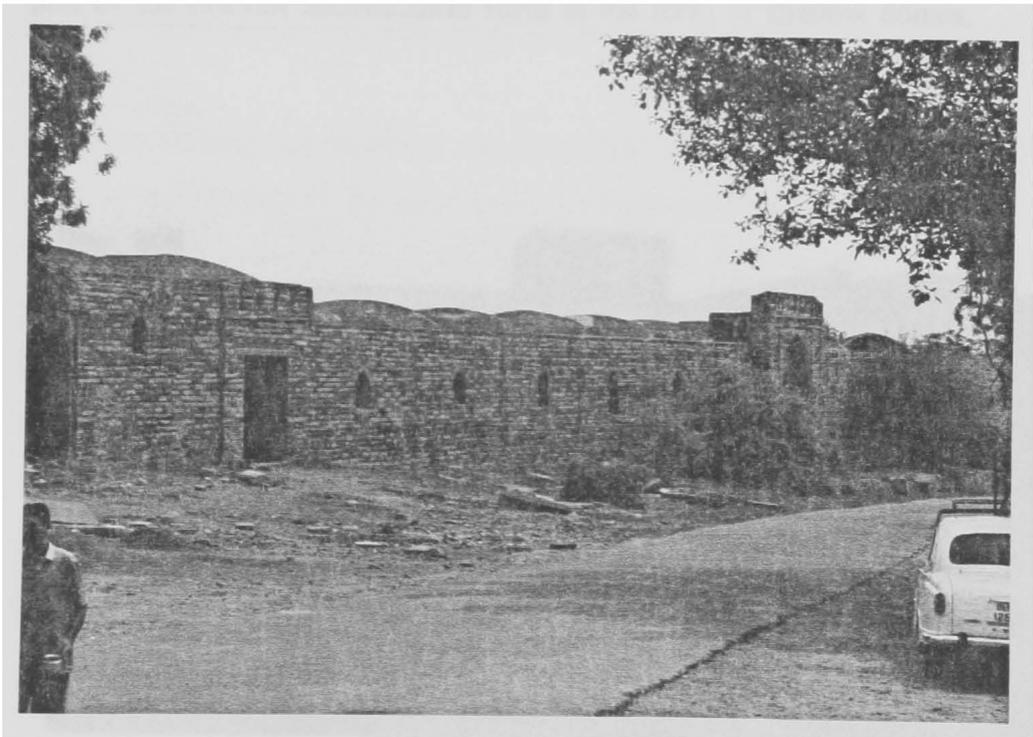
Figure 6-14: Horse stable (Fatehpur Sikri)
Shallow domes at the roof level provide rhythm in the facade.

6. SPATIAL DESIGN PRINCIPLES
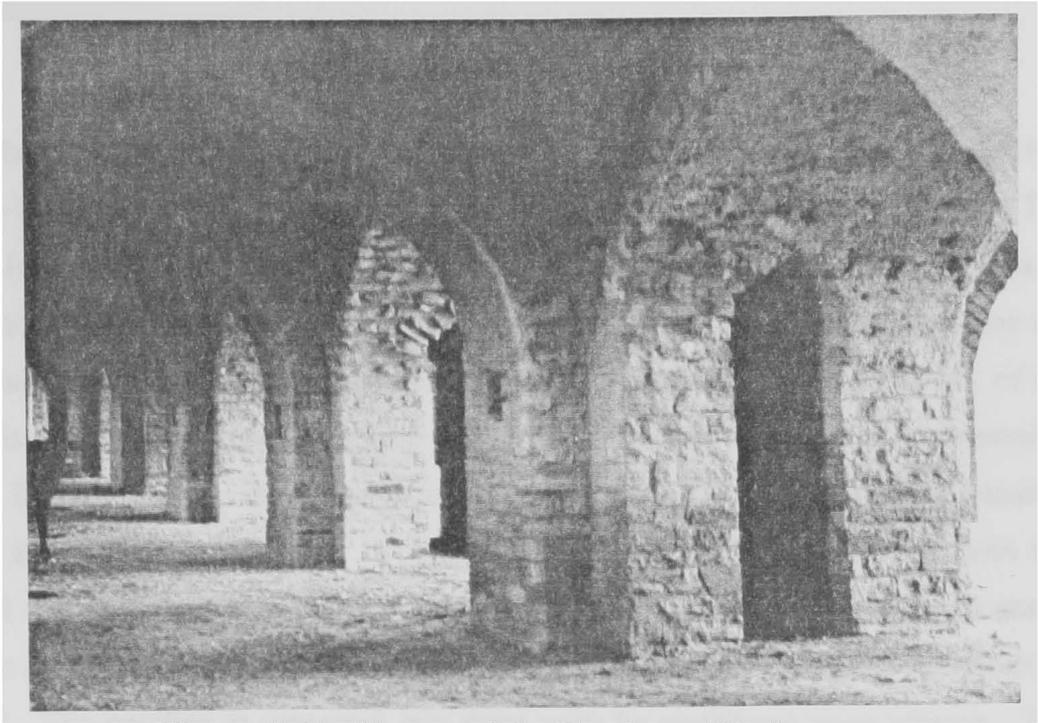
Figure 6-15: Horse stable (Fatehpur Sikri)
The interior space is created by arches and vaults. The interior vaults are
part of the exterior architectural form in the form of shallow domes.
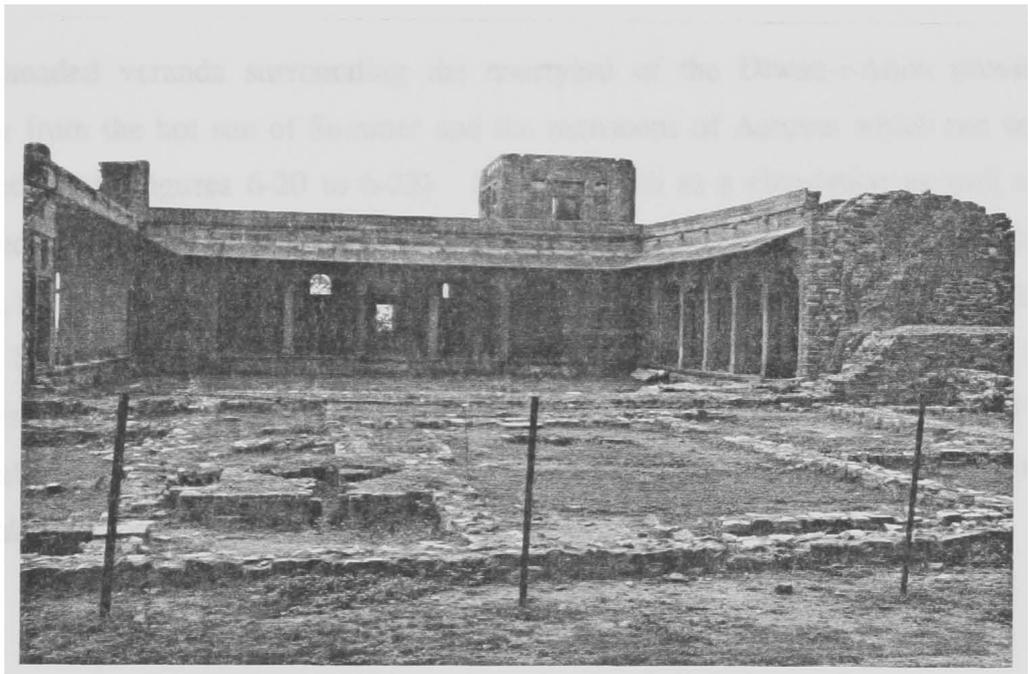
**Figure: 6-16: Residence for security personnel or for
the caretaker of horses (Fatehpur Sikri)**
The photograph depicts the courtyard which was an important part of
the interior space planning.

6. SPATIAL DESIGN PRINCIPLES

Finally, the road leads directly into the public space known as the Diwan-i-Amm (cf. Figures 6-17 and 6-18). This space is defined through the creation of an enclosure. The structure is comprised of a pavilion and a rectangular enclosed colonnaded courtyard. The pavilion which is located against the western wall of the courtyard was used by the emperor and provided a focal point in the courtyard. The architectural hierarchy of the pavilion is created by positioning and projecting it in the center of the colonnaded corridor. It is also placed on a high platform which is connected with the colonnaded space by steps on its north side. Its double-pitched low roof is in harmony with the horizontal effect of the whole unit of the Diwan-i-Amm and gives it an intimate scale. Its front is in the form of an open archway which provides a framed view of the enclosed courtyard. The pavilion is separated into three units by perforated stone screens. The emperor sat in the middle portion of the pavilion and presided over the activities in the courtyard. The queen sat on one side and the courtiers on another (cf. Figure 6-19).

The colonnaded veranda surrounding the courtyard of the Diwan-i-Amm provided protection from the hot sun of Summer and the monsoons of Autumn which can burst unexpectedly (cf. Figures 6-20 to 6-23). It served both as a circulation as well as a sitting space. The central space also served as an arena for different activities, such as wrestling, acrobatics and animal fights. The space seems symmetrical, but the symmetry is broken by the provision of asymmetrical entries into the space. The facade of this building is created through a repetition of columns[8]. The spacing and the height of the columns also provide scale to the building. The columns and the projected roof line over the capitals of the columns create an interplay of light and shade.

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[8] The enclosed space running around the central courtyard has columns embedded in the wall; these are known as engaged columns.

6. SPATIAL DESIGN PRINCIPLES

**Figure 6-17: Diwan-i-Amm, the Hall of Public Audience
(Fatehpur Sikri)**

This was used as a multipurpose space during Akbar's era. Prayers were recited here and festivals were celebrated. At present, the Diwan-i-Amm is planted with lawn and hedges to define its circulation space. They may have not existed during Akbar's era.
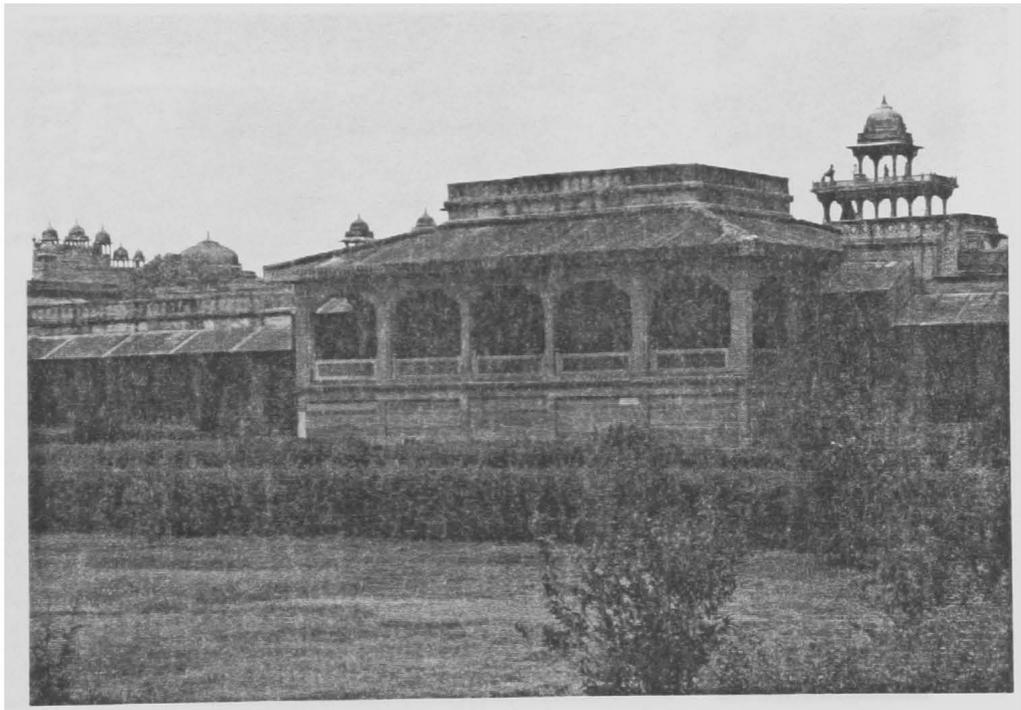
**Figure 6-18: The emperor's pavilion in the Diwan-i-Amm
(Fatehpur Sikri)**

In the backdrop, the Buland Darwaza (on the left) and the Panch Mahal (on the right) can be seen.

6. SPATIAL DESIGN PRINCIPLES
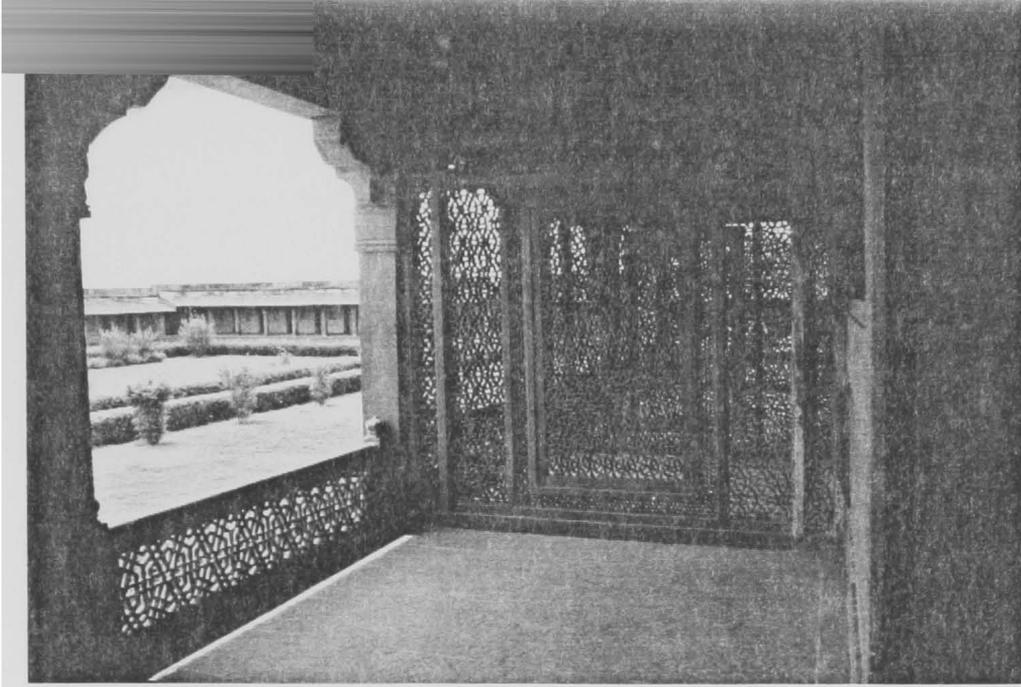
Figure 6-19: The emperor's pavilion in the Diwan-i-Amm,
or the Hall of Public Audience (Fatehpur Sikri)

The emperor's pavilion is divided by perforated stone screens which separated the space for the courtiers and the harem ladies. The archway provides a framed view of the courtyard from the pavilion.
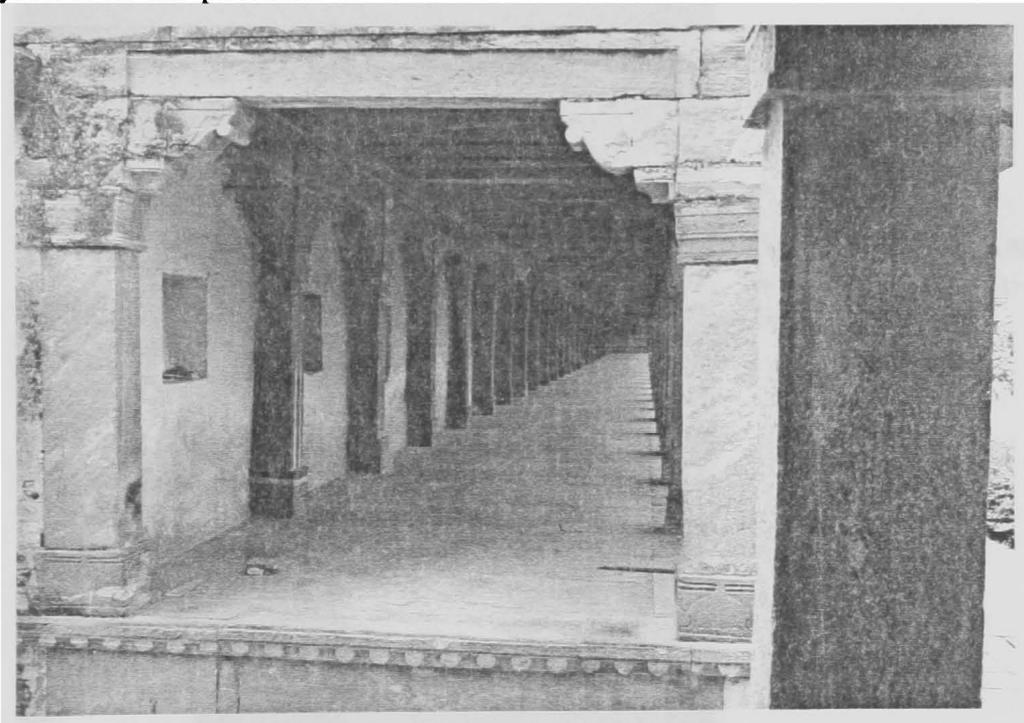
Figure 6-20: Diwan-i-Amm, the Hall of Public Audience
(Fatehpur Sikri)
Engaged columns were used in the enclosed space
around the central courtyard.
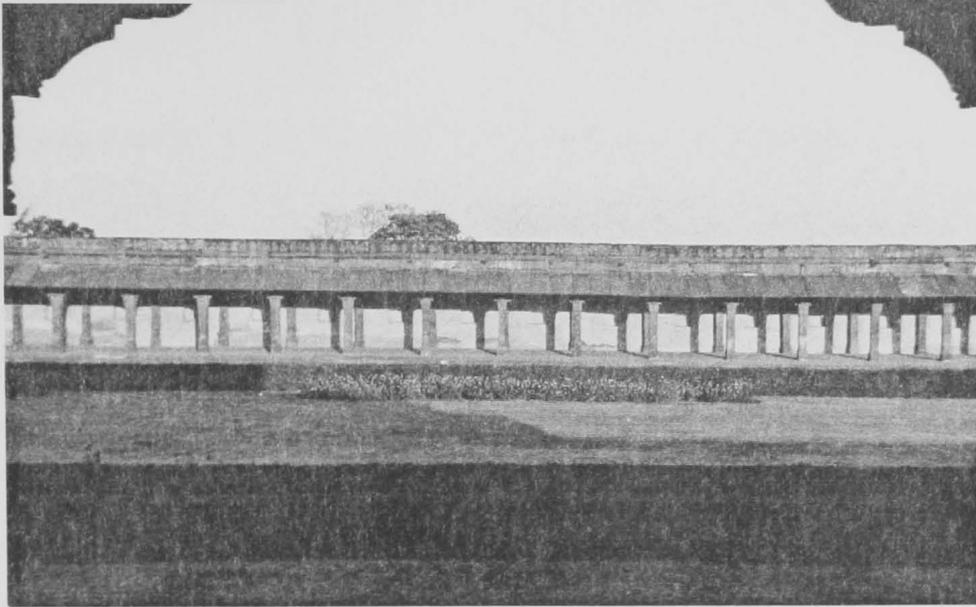
Figure 6-21: Diwan-i-Amm, the Hall of Public Audience
(Fatehpur Sikri)
Rhythm is created through the repetition of columns
around the central courtyard.
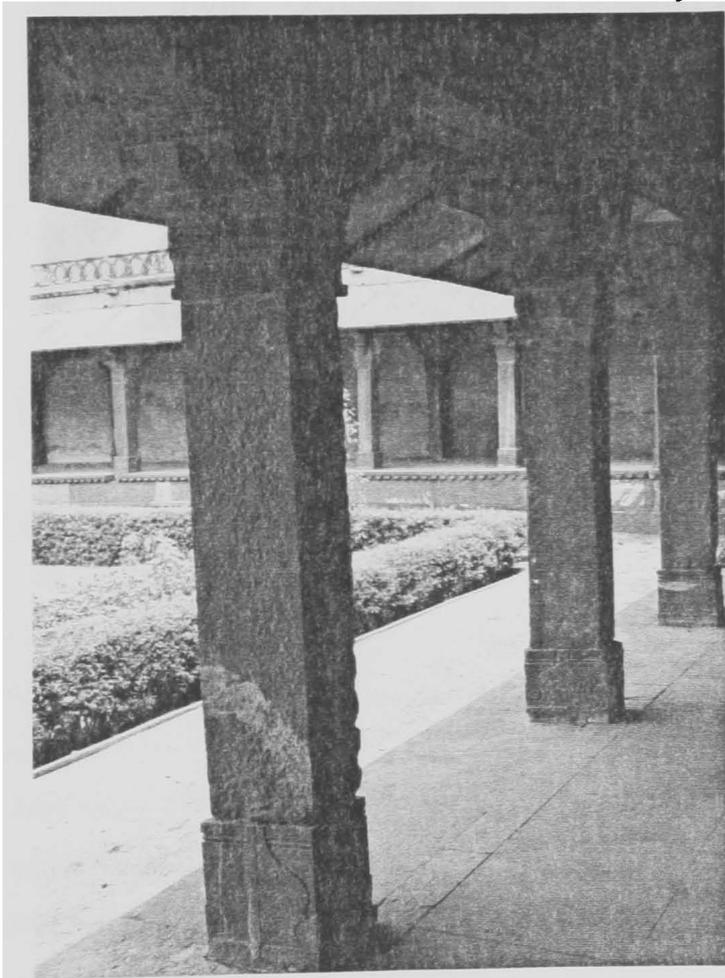
Figure 6-22: Column detail in the Diwan-i-Amm (Fatehpur Sikri).

6. SPATIAL DESIGN PRINCIPLES
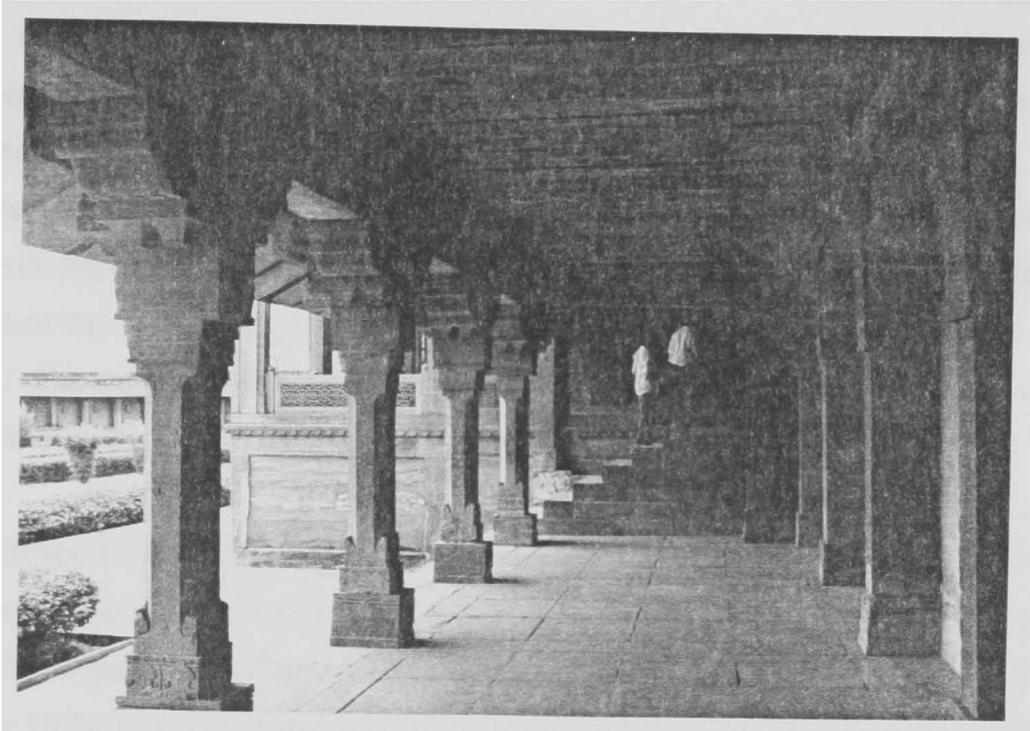
Figure 6-23: Diwan-i-Amm (Fatehpur Sikri)
The connection between the enclosed space and the emperor's space
is provided through steps.

The Diwan-i-Amm, in the Agra Fort, is also placed in close proximity to the bazaar street (cf. chapter 3). Here the public space is defined by creating a strong sense of an enclosure based on symmetry. The colonnaded veranda also runs all around the space. The emperor along with his courtiers used to sit in the pavilion which is the focal point of the enclosed courtyard. Its spatial structure is based on the concept of mandala in the form of a nine square grid with three, nine square grids placed side by side (cf. Appendix). In contrast to the red sandstone of Fatehpur Sikri, the Diwan-i-Amm of Agra is constructed of white marble and the interior space is defined by decorated foliated arches. In other words, there is a more conservative approach in the definition of the space through the use of the traditional arches found in Islamic architecture. The visual effect of the building is horizontal with eaves and decorative elements at the cornice level. The separation between the interior and the outside space is defined by a double row of columns.

The Diwan-i-Amm structures of the Delhi Red Fort and the Agra Fort are comparable to one another. They display similar types of space defining elements (cf. Figures 6-24 to 6-25) though they differ in terms of building material. The Diwan-i-Amm structures of the Delhi Red Fort and Fatehpur Sikri are made out of red sandstone whereas the Diwan-i-Amm of the Agra Fort is of white marble.

In Fatehpur Sikri, access is provided to the Diwan-i-Khas courtyard from the Diwan-i-Amm through a garden which acts as a transition zone or a buffer between the spatial zones of these two structures (cf. Figures 6-26 and 6-30). This transition zone is created through a level change. During Akbar's reign this area was used only by him and his close associates. The garden space is created by paths and water channels. The pathways provide movement which results in a dramatic visual experience. They invite the observer to turn and look in different directions. From the emperor's pavilion, the visitor enters the semi public courtyard near the Pachisi court. The emperor's pavilion
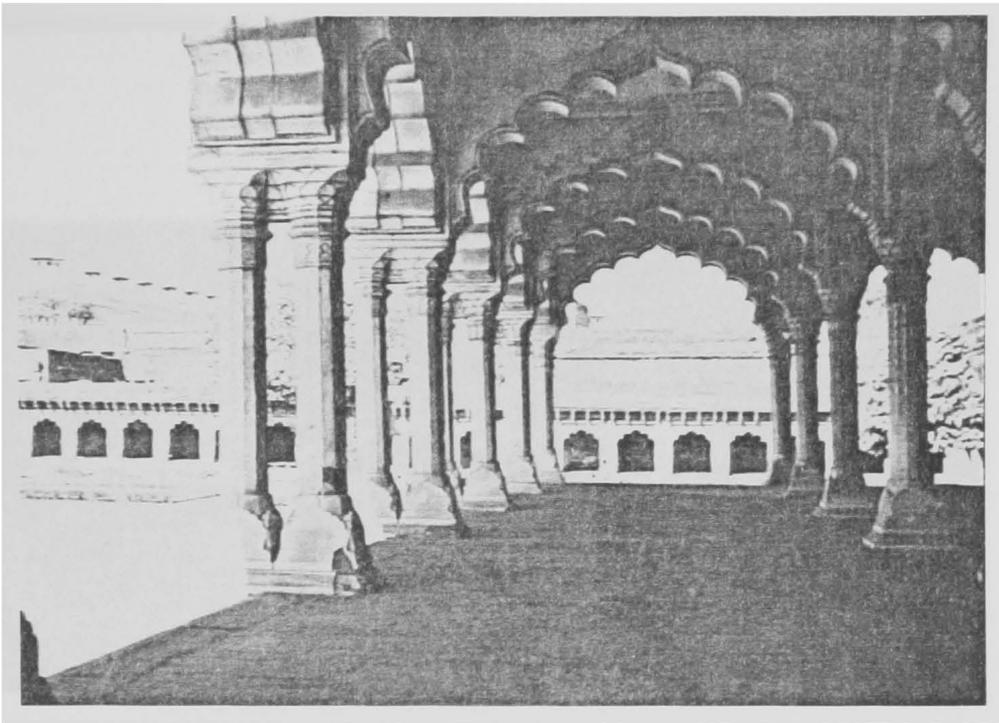
Figure 6-24: Diwan-i-Amm (Agra Fort)
The enclosed space of the Diwan-i-Amm flows outside and vice versa.
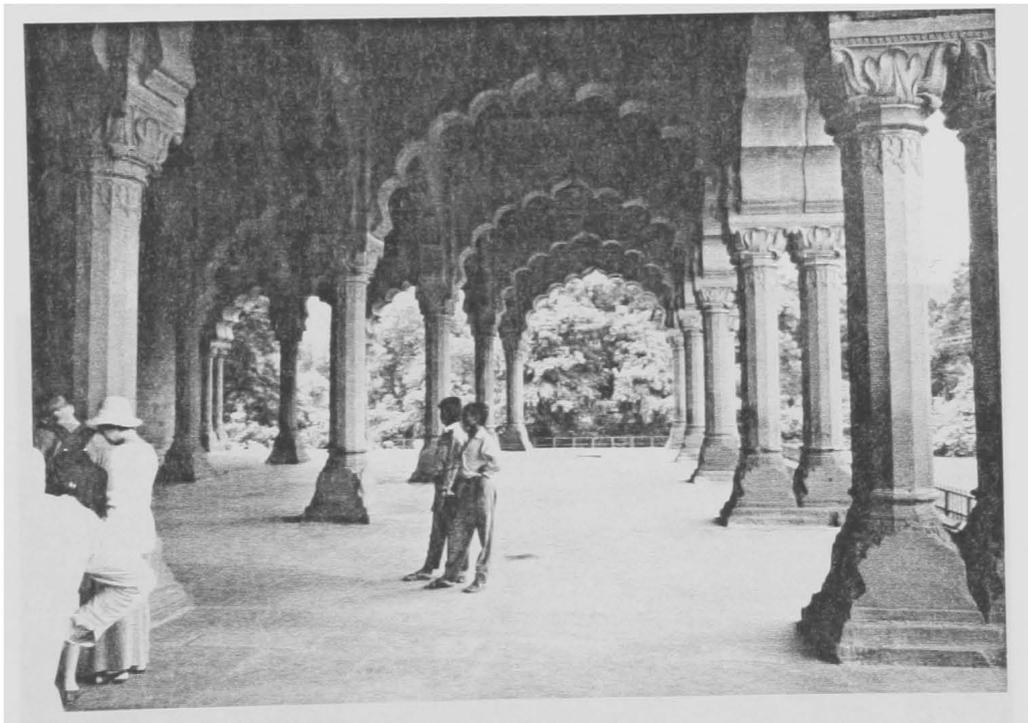
Figure 6-25: Diwan-i-Amm
(Delhi Red Fort)
This is an other example where interior space is connected with the outside space.
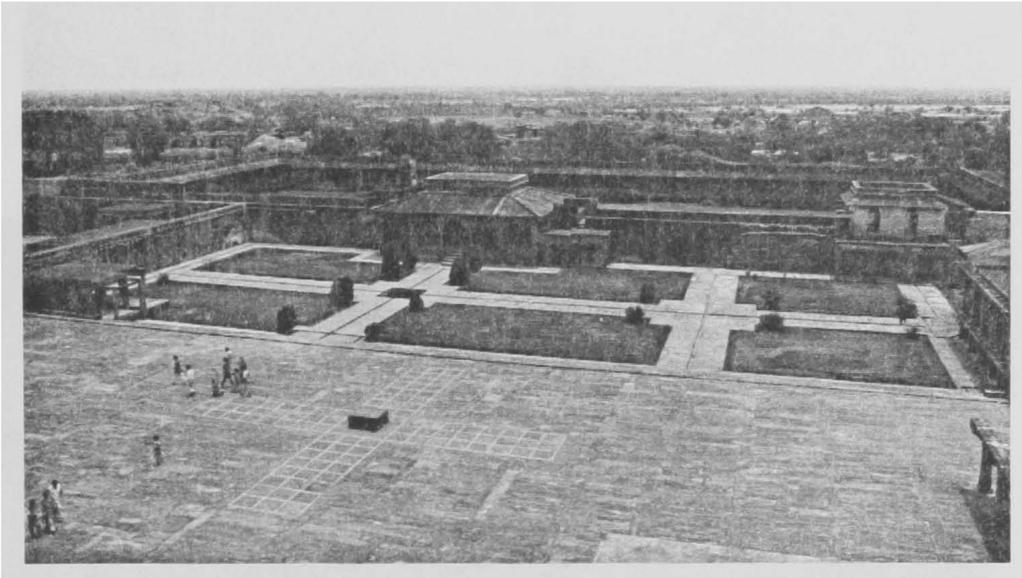
Figure 6-26: Harem Garden (Fatehpur Sikri).
This garden space acts as a transition space between the emperor's pavilion
of the Diwan-i- Amm and the Diwan-i-Khas courtyard.
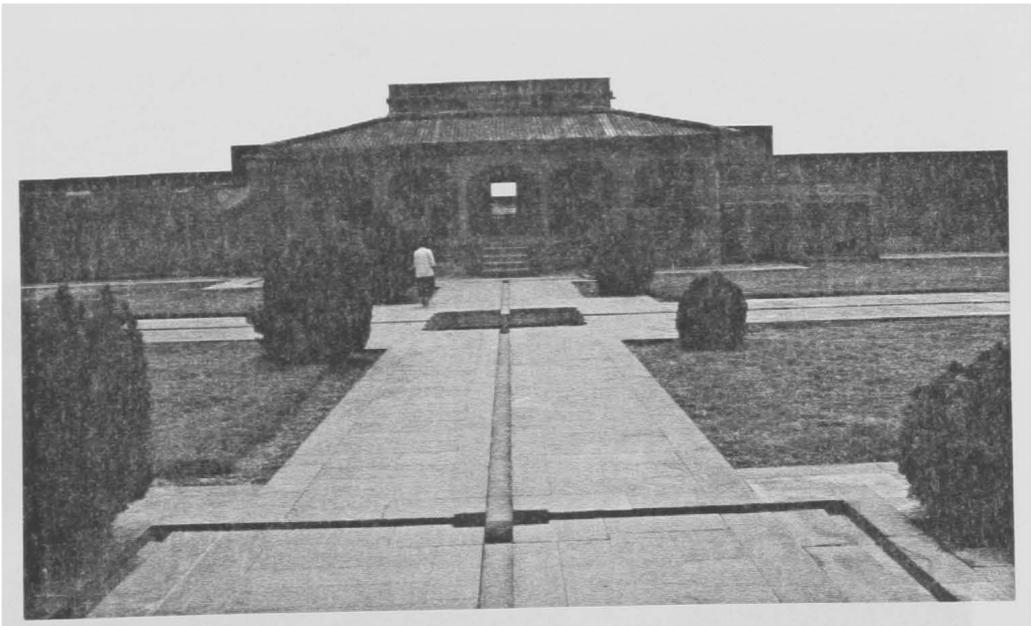
**Figure 6-27: The emperor's pavilion in the garden
of the imperial complex (Fatehpur Sikri).**
The paths and water channels provide movement and a sense of direction.

6. SPATIAL DESIGN PRINCIPLES
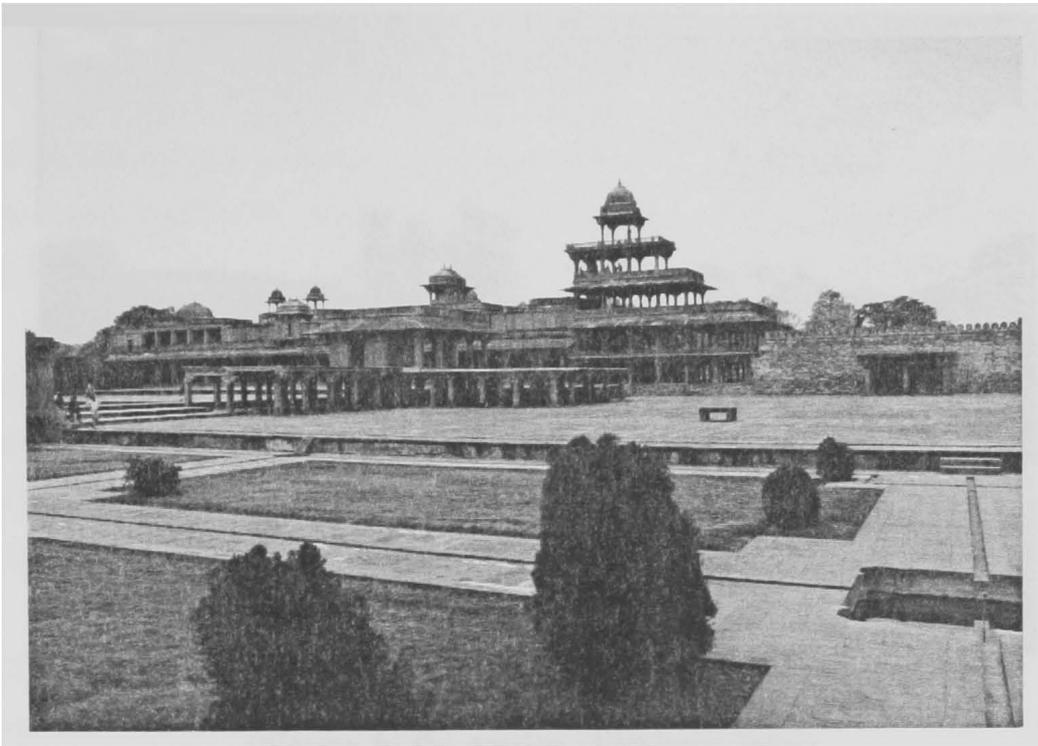
Figure 6-28: The garden in the imperial complex
(Fatehpur Sikri)
In the background, the Panch Mahal provides a visual focus.
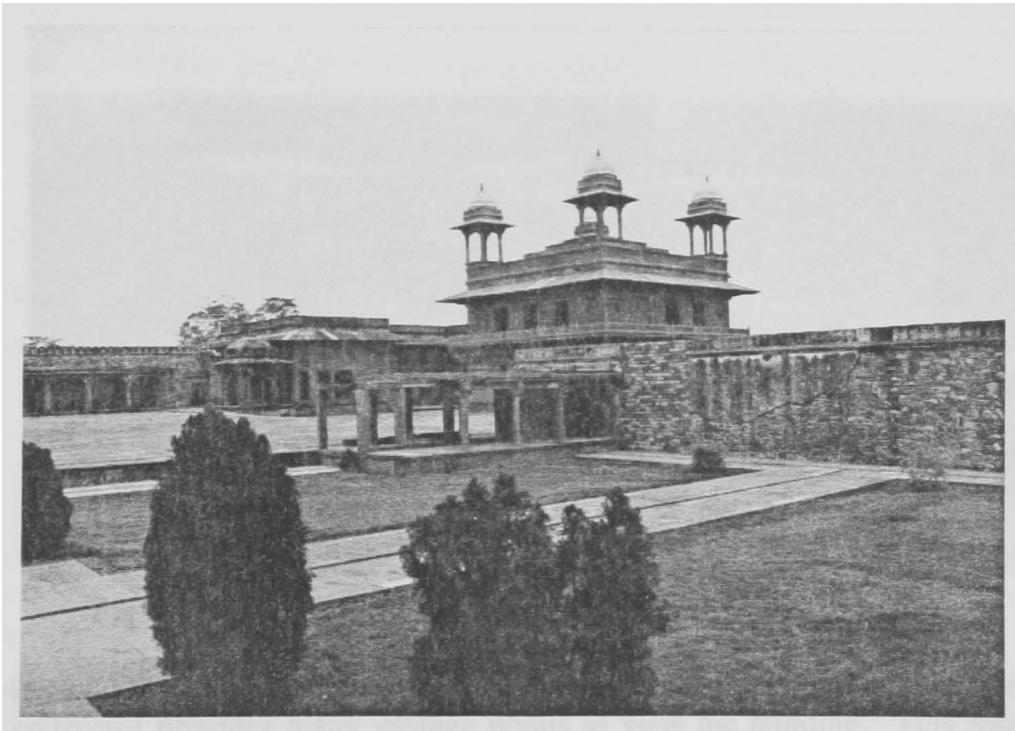
Figure 6-29: Diwan-i-Khas, the Hall of Private Audience,
in relation to the garden (Fatehpur Sikri).

6. SPATIAL DESIGN PRINCIPLES
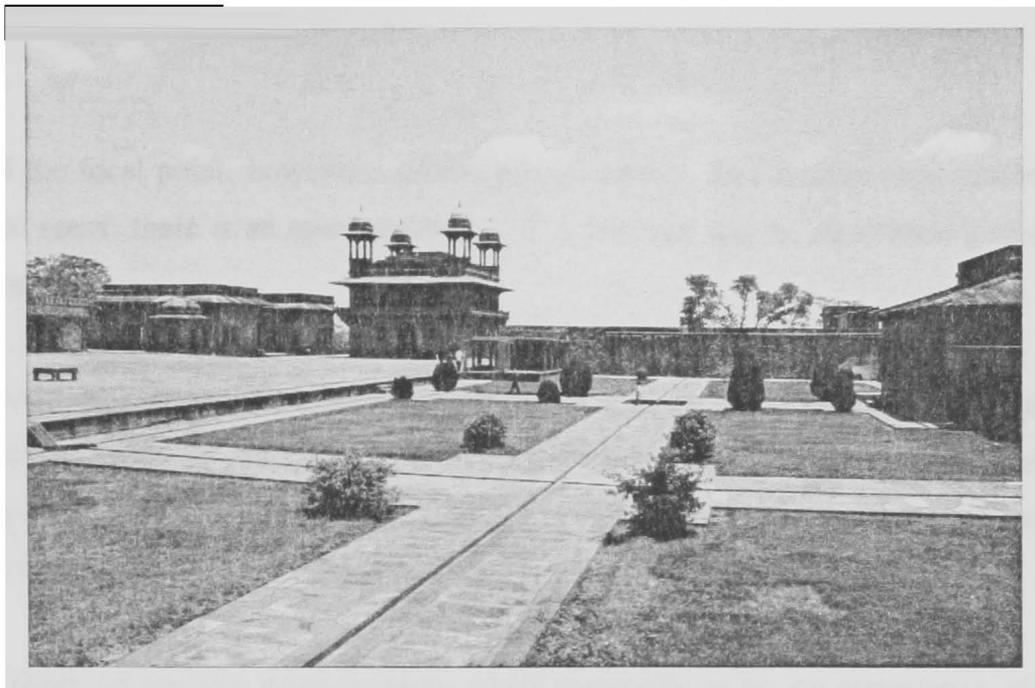
Figure 6-30: Diwan-i-Khas, the Hall of Private Audience, in
relation to the garden (Fatehpur Sikri)
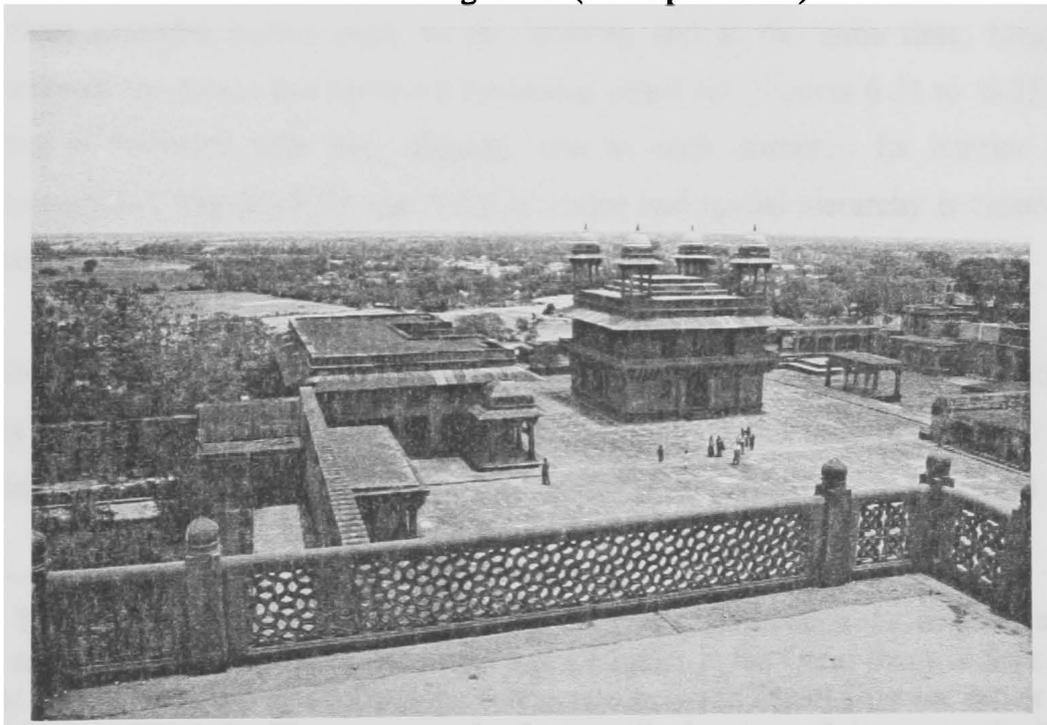
Figure 6-31: Diwan-i-Khas, the Hall of Private Audience
(Fatehpur Sikri)

This view is taken from the top of the Panch Mahal. The location of the Diwan-i-Khas
in the courtyard provides many vantage points to view the building. This results in a
very dynamic visual experience. Every move in the space provides an ever changing
view.

6. SPATIAL DESIGN PRINCIPLES

is still the focal point, however, of this garden space. At the north-west corner of the Pachisi court, there is an open pavilion with a flat roof and no significant architectural features.

The north-east courtyard between the Diwan-i-Amm and the Diwan-i-Khas also acted as a transition space. It is defined by a level change. In this space, another entrance to the Diwan-i-Khas which was used by the courtiers was provided through the north-west wall of the Diwan-i-Amm (cf. Figure 6-26). This entrance is closed at present.

The Diwan-i-Khas is a small building which outwardly gives the appearance of having two stories. The balcony runs at the first floor level. The roof eave and balcony at the first floor provides human scale to the building and at the same time, breaks the verticality of the facade and creates a horizontal effect (cf. Figures 6-31 to 6-33). The building is crowned with four chattris, one at each corner. Its interior spatial arrangement (cf. Figures 6-34 and 6-35) is unique and spatial hierarchy is created by a profusely carved monolithic pillar[9] (cf. Figure 6-36).

The Diwan-i-Khas has a square plan and is symmetrical in design. The conceptualization of this building is based on a module which runs through the floor plan as well as the building facade (cf. in Appendix). The building is placed in the courtyard and it

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[9] This pillar or mundi which served as the connection between the emperor and the earth can be traced to the Buddhist stupa. For example, in the Great Stupa at Sanchi, the axis at its truncated top symbolizes the connection between Buddha (as the center of the Universe) to the earth. The gates on the four cardinal points of the stupa signify that people from the four quarters of the world were welcome to Buddhism. In the Diwan-i-Khas of Fatehpur Sikri, four bridges form the connection between the pillar and the balcony surrounding it. This meant that Akbar was the ruler of the four directions and his central seat symbolized that he was the center of the Universe, the founder of Din-i ilahi, the "Religion of God".
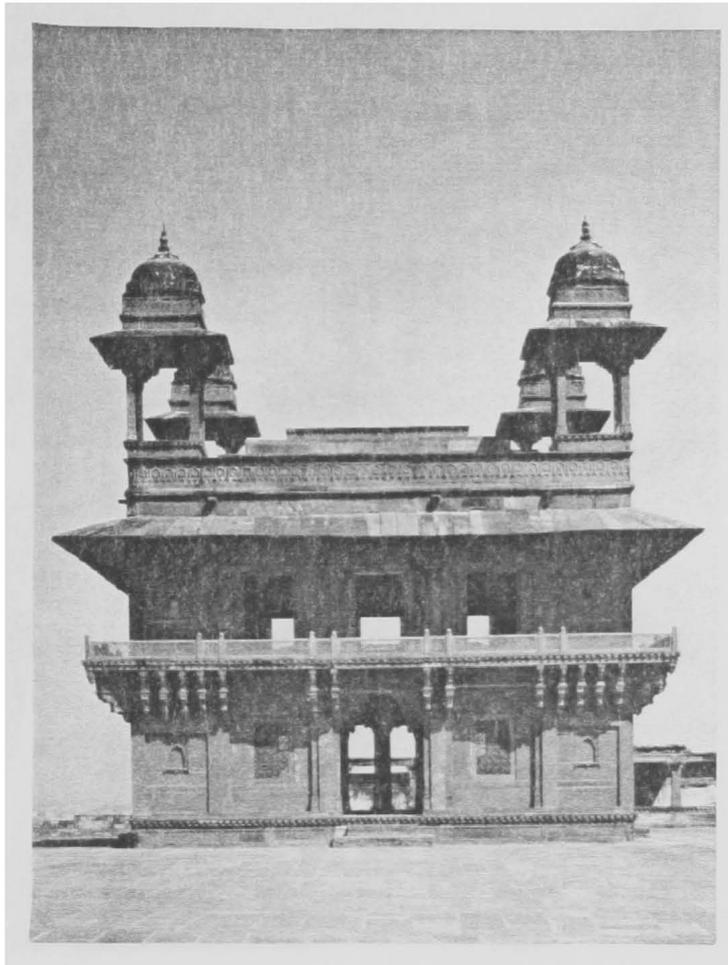
**Figure 6-32: Facade of the Diwan-i-Khas,
the Hall of Private Audience
(Fatehpur Sikri)**

The Diwan-i-Khas is a small building which outwardly gives the appearance of having
two stories. The balcony runs at the first floor level. The roof eave and balcony at the
first floor provide human scale to the building and at the same time, break the
verticality of the facade and creates a horizontal effect.
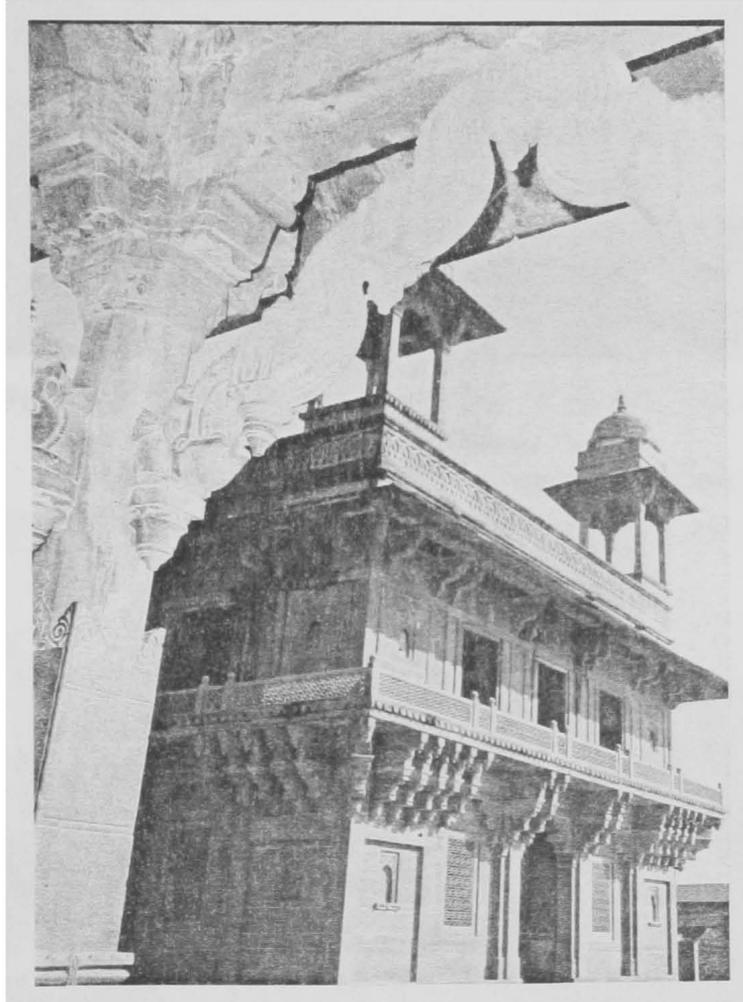
**Figure 6-33: Diwan-i-Khas, the Hall of
Private Audience (Fatehpur Sikri)**
This view is from the astrologer's pavilion located on
the west of the Diwan-i-Khas building.
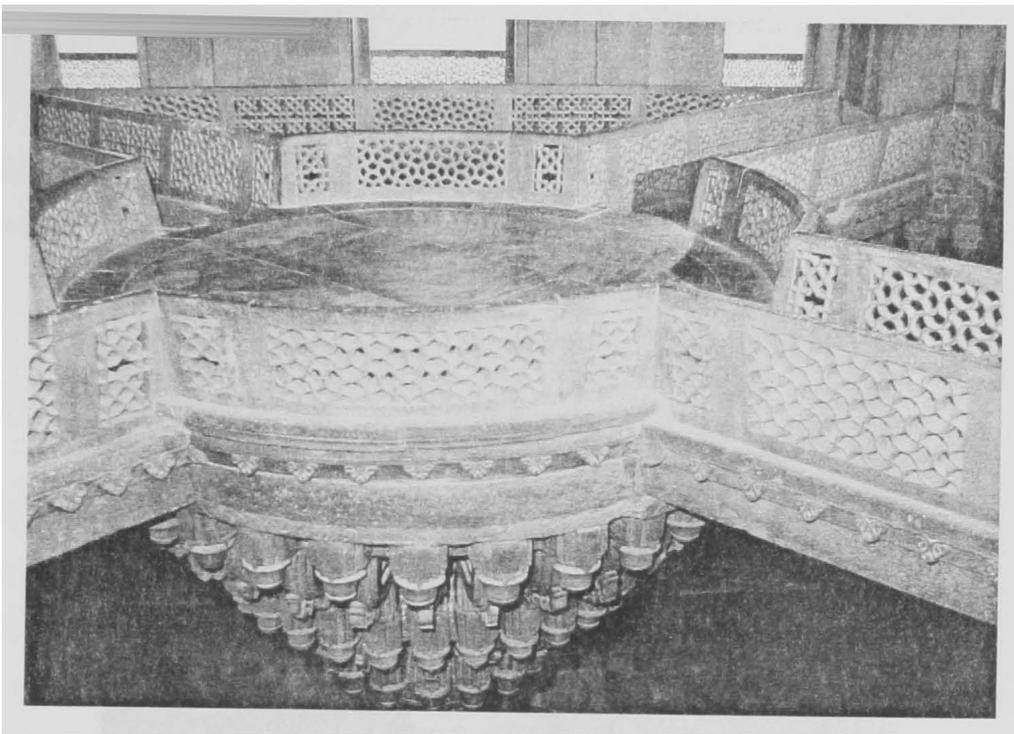
Figure 6-34: Interior arrangement of the Diwan-i-Khas
(Fatehpur Sikri)
The central space was for the emperor's throne.
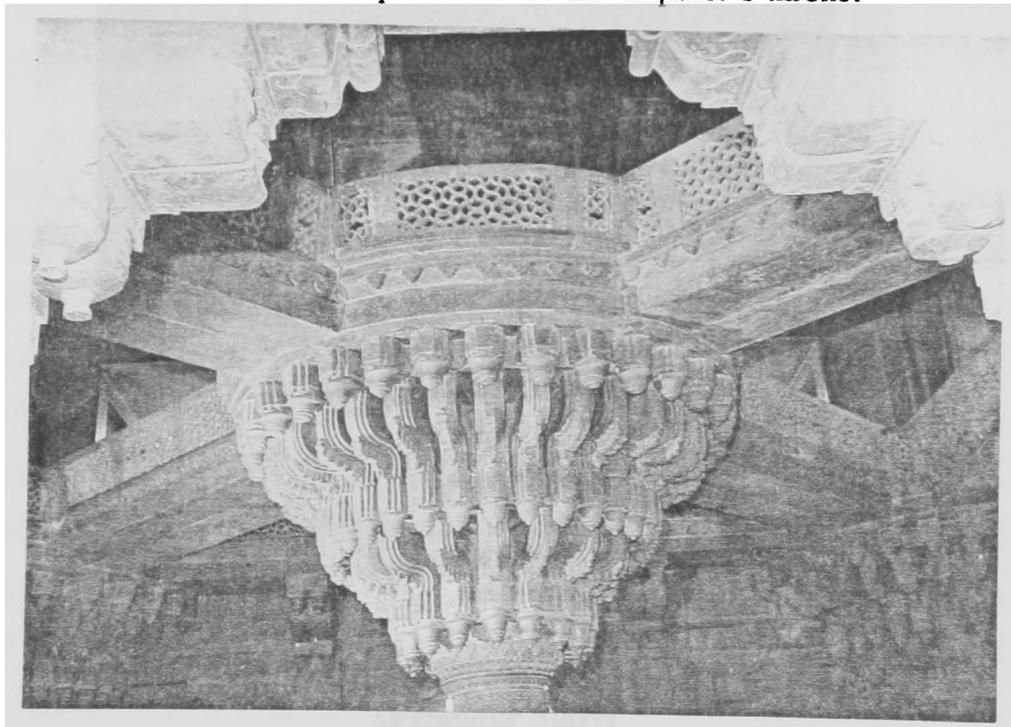
Figure 6-35: Interior space of the Diwan-i-Khas
(Fatehpur Sikri)
The architectural hierarchy of this space is marked by the profusely carved pillar.

6. SPATIAL DESIGN PRINCIPLES
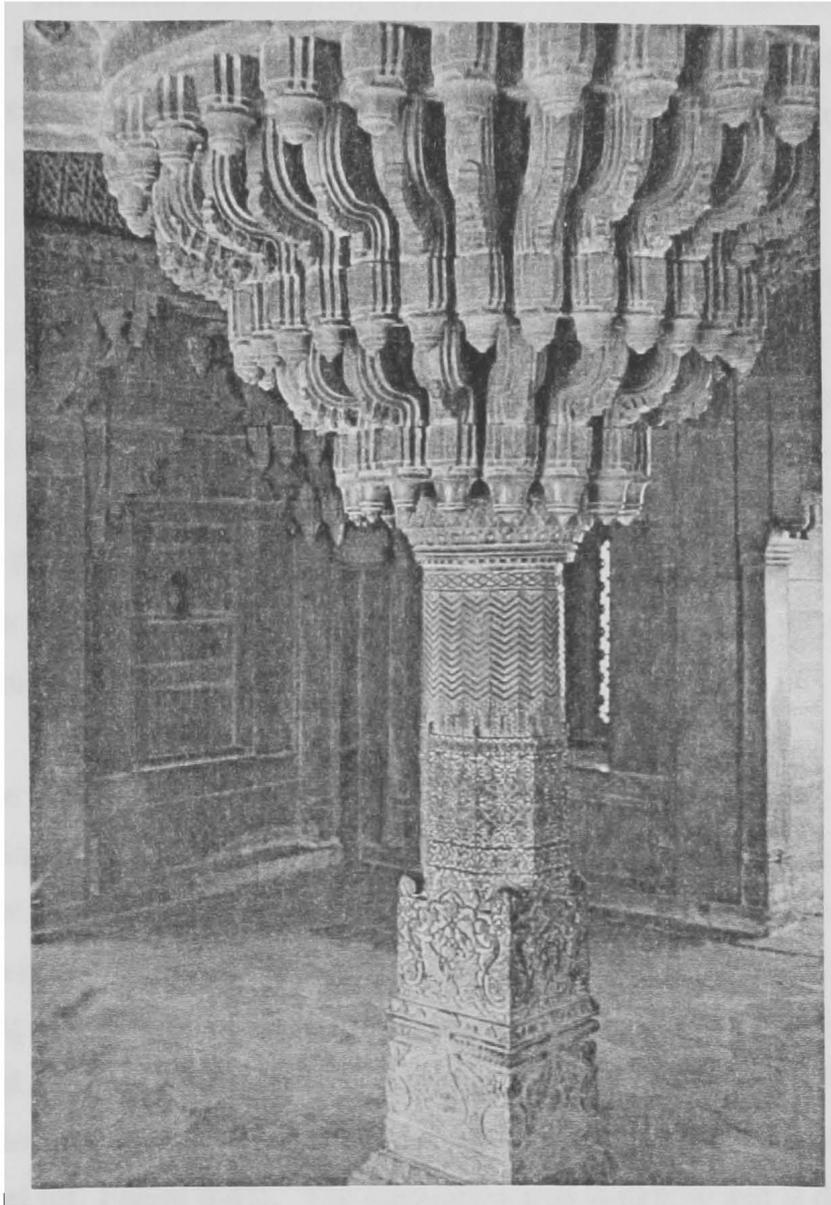
Figure 6-36: Monolithic column of the Diwan-i-Khas (Fatehpur Sikri)

This signifies the axis from which Akbar
ruled his empire.

provides a unique stage setting for observers to go around. It can be entered from all four sides. The interior space flows through the building and becomes part of the outer space. To the east and north of the Diwan-i-Khas, there are a number of small pavilions which were used for holding discussions during the hot Summers since they provided shade from the sun.

The Diwan-i-Khas buildings of the Red Fort at Delhi and the Agra Fort are similar to one another, but they both contrast with the Diwan-i-Khas of Fatehpur Sikri. Both these buildings are built with white marble which create an impression of lightness (cf. Figures 6-37 and 6-38). Their facades also show a similarity in form. Both have five foliated arches and a similar type of eave. The major difference is that the Diwan-i-Khas of the Delhi Red Fort is crowned by four chattris, one at each corner while the other has a flat roof. Their immediate surroundings are also similar since they are both set on the banks of the Yumuna river.

West of the Diwan-i-Khas at Fatehpur Sikri is the treasury (cf. Figures 6-39 and 6-40). This building appears to be symmetrical in design but here the symmetry is broken by the addition of a pavilion known as the Astrologer's Seat on the south east corner. The treasury building has rectangular openings. The eave at the roof level projects around the building and provides a line of continuity to the structure. The eave is supported by ornamented brackets which guide the eye of the observer all around. The interior of the building also has very interesting details: there are richly ornamented brackets at the ceiling level (cf. Figure 6-41). The circulation area is narrow and is defined by closely spaced rectangular columns[10] (cf. Figure 6-42). The astrologer's seat has highly

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[10] Visually these columns give an impression of modern design: they are simple and sleek.

6. SPATIAL DESIGN PRINCIPLES
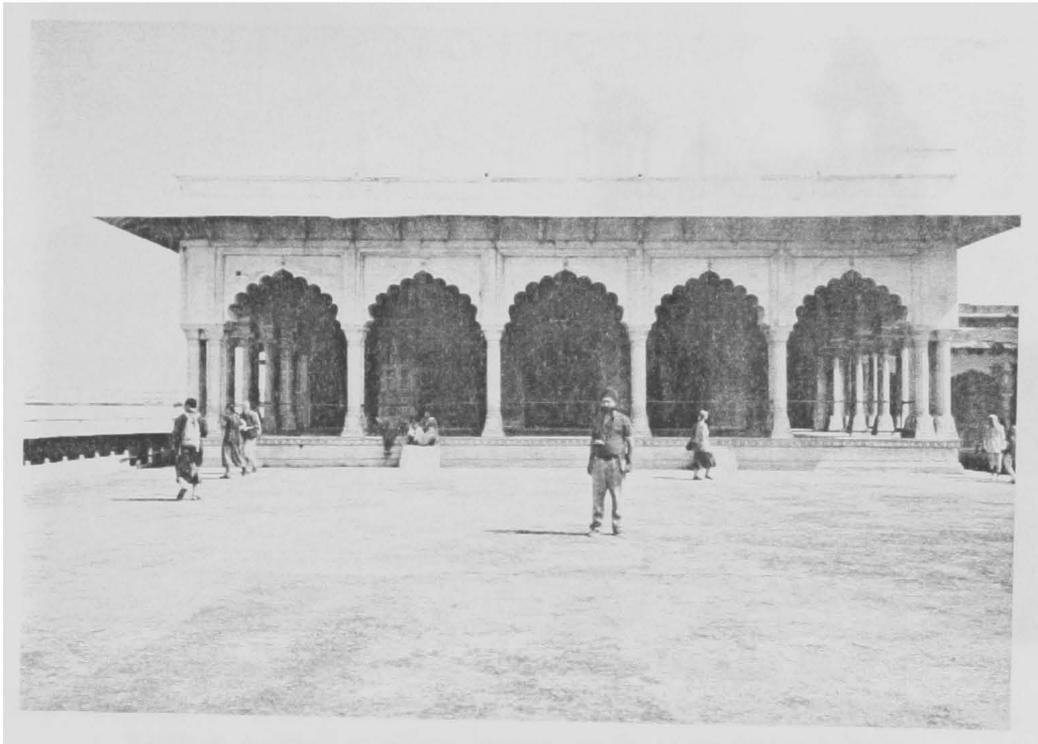
Figure 6-37: Diwan-i-Khas (Agra Fort)
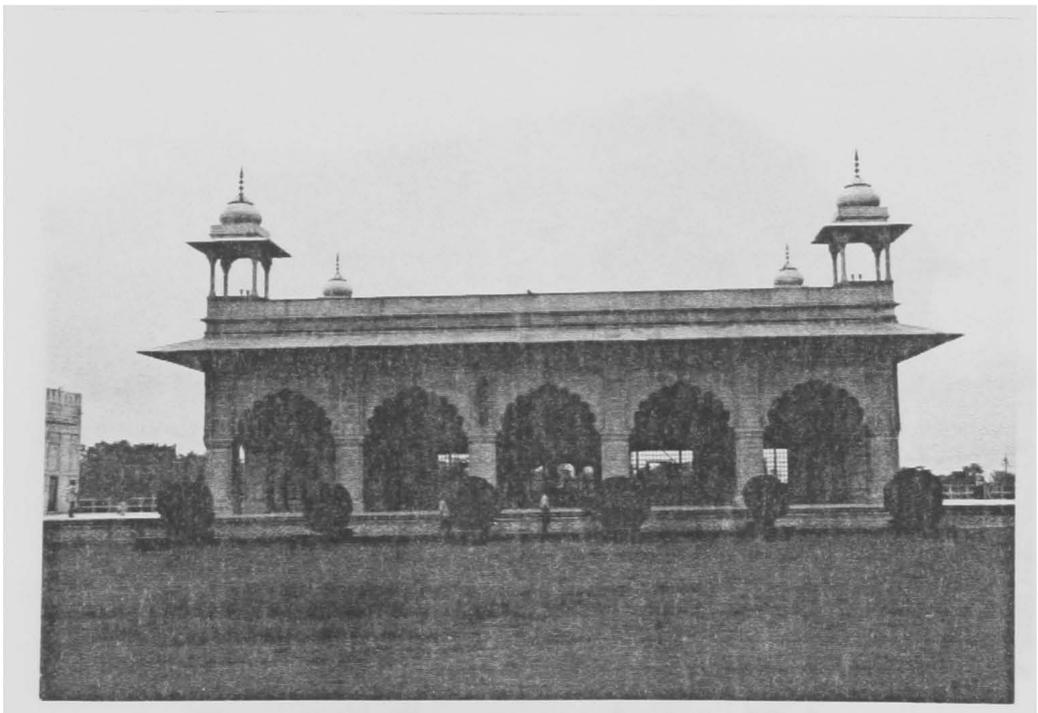
Figure 6-38: Diwan-i-Khas (Delhi Red Fort)

These buildings are similar in design and in their setting on the Yumuna River. The only difference is that the Diwan-i-Khas at the Delhi Red Fort has pavilions at the roof level.

6. SPATIAL DESIGN PRINCIPLES

178

Figure 6-39: Treasury building (Fatehpur Sikri)
This building is located on the west of the Diwan-i-Amm and at its front,
there is a small pavilion known as the Astrologer's Seat.
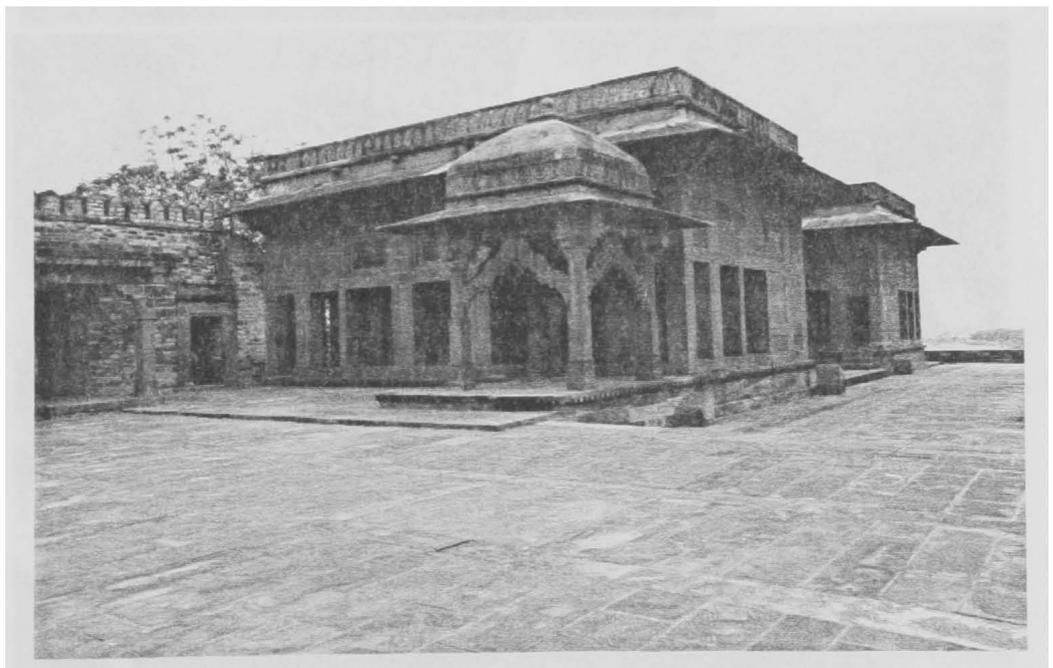
Figure 6-40: The treasury (Fatehpur Sikri)
The eave at the roof level projects around the building. This projected
portion provides a line of continuity to the structure.

6. SPATIAL DESIGN PRINCIPLES
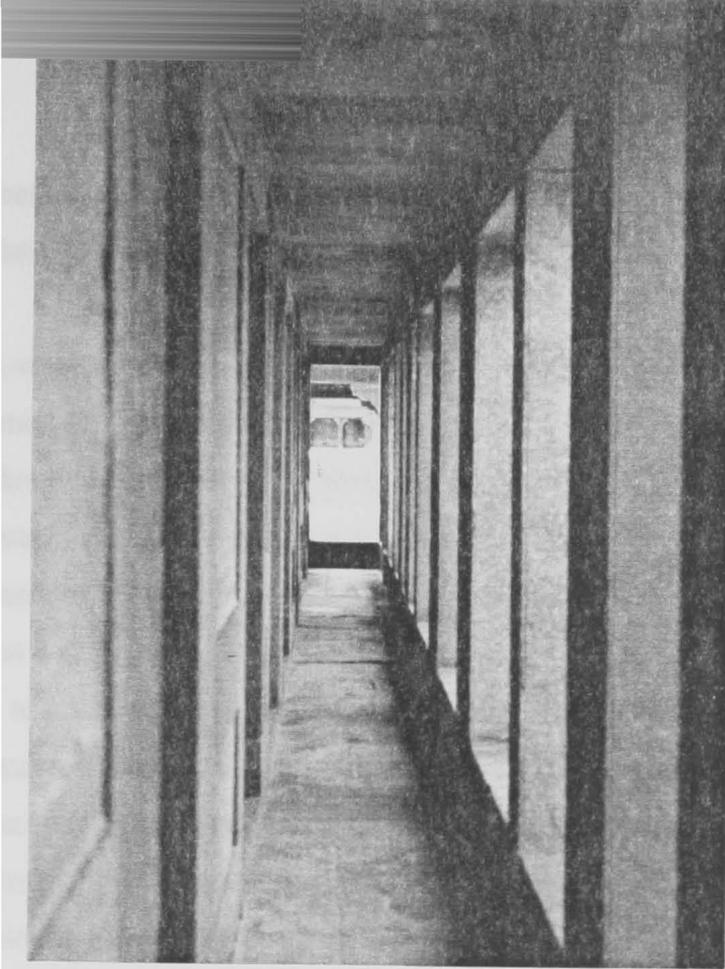
Figure 6-41: The treasury (Fatehpur Sikri)

This narrow circulation space, in the form of a narrow corridor is located at the west end of the building. Visually these columns give an impression of modern design: they are simple and sleek.
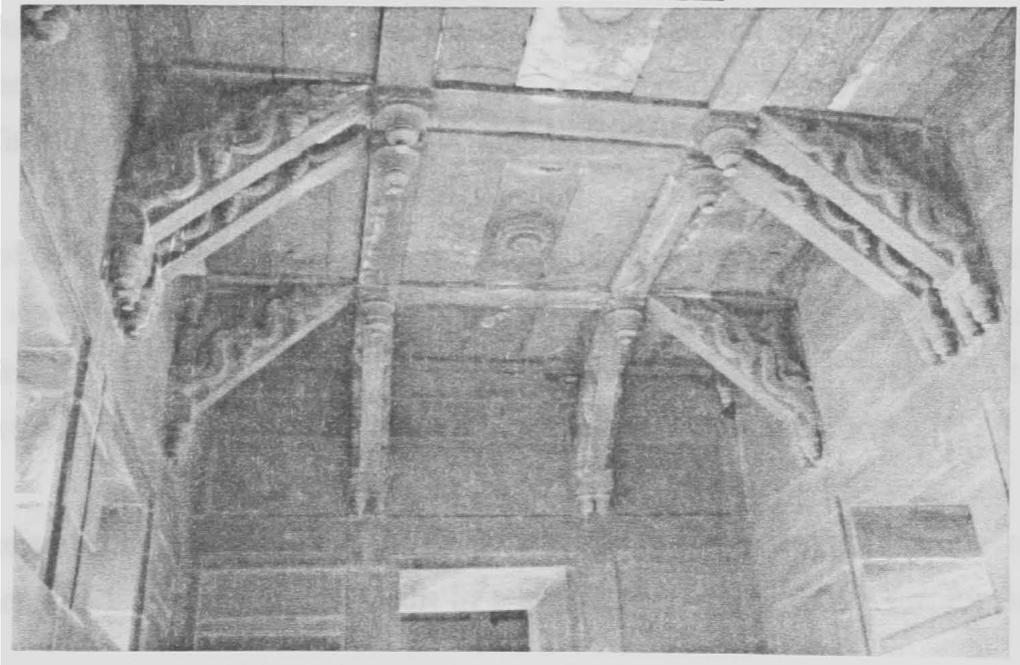
Figure 6-42: An interior detail of the treasury building
The building has interesting ornamentation
details on its ceiling.

6. SPATIAL DESIGN PRINCIPLES

ornamental arches which capture the viewer's attention (cf. Figure 6-32). This pavilion may have been used by the emperor to watch activities in the courtyard.

South-west of the Diwan-i-Khas is the Panch Mahal which is an elegant five story asymmetrical building in the form of a pyramid (cf. Figures 6-43 to 6-45). It is open on all sides and demonstrates trabeate construction. The high visibility of the Panch Mahal punctuates the horizontal facade of the west side. It momentarily stops the horizontal progression of the eye and turns it upwards. It increases not only visual diversity and interest in this semi-public space but marks the symbolic importance of the building. It helps to create an interesting skyline. The sculptural quality and the ornamentation of the exterior facade hold the attention of the observer and it is an outstanding landmark of Fatehpur Sikri. The building also employs profusely carved columns[11] of different designs (cf. Figures 6-46 to 6-49). Its design is based on climate while its human scale is achieved through low ceiling levels and horizontal bands at each tier. The top level of the Panch Mahal provides dramatic views of the buildings all around and may very well have served as a security watchtower. North of this building is the Harem Garden which is defined by a low wall enclosure (cf. Figures 6-50 to 6-52).

East of the Panch Mahal is a two story building known as the Madarasa which may have been used as a school for the children of the harem. This building is similar in architectural form to the other buildings in the complex. Its open courtyard and projected eave line are dictated by the climate of the region (cf. Figure 6-53).

On the southern side of the Pachisi Court is the emperor's courtyard (cf. Figure 6-54). It is separated from the Pachisi Court by a level change of three steps (cf. Figure 6-55).

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[11] The columns are ornamented for decoration. According to Leon Battista Alberti, ornamentation is important in the creation of beauty and can be applied to surfaces (Rykwert, Leach and Travernor, 1988, p. 156).

6. SPATIAL DESIGN PRINCIPLES
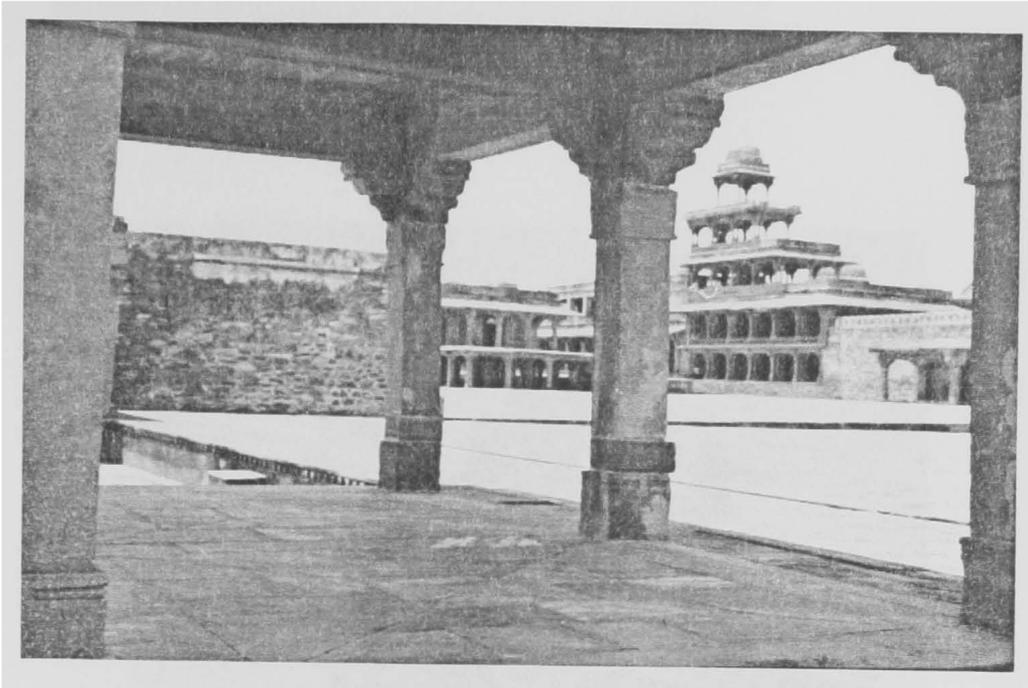
Figure 6-43: Panch Mahal (Fatehpur Sikri)
The Panch Mahal is a landmark of Fatehpur Sikri. It is visible from a number of corners of the Diwan-i-Khas courtyard and the emperor's private courtyard. Doorways and arches frame the views.
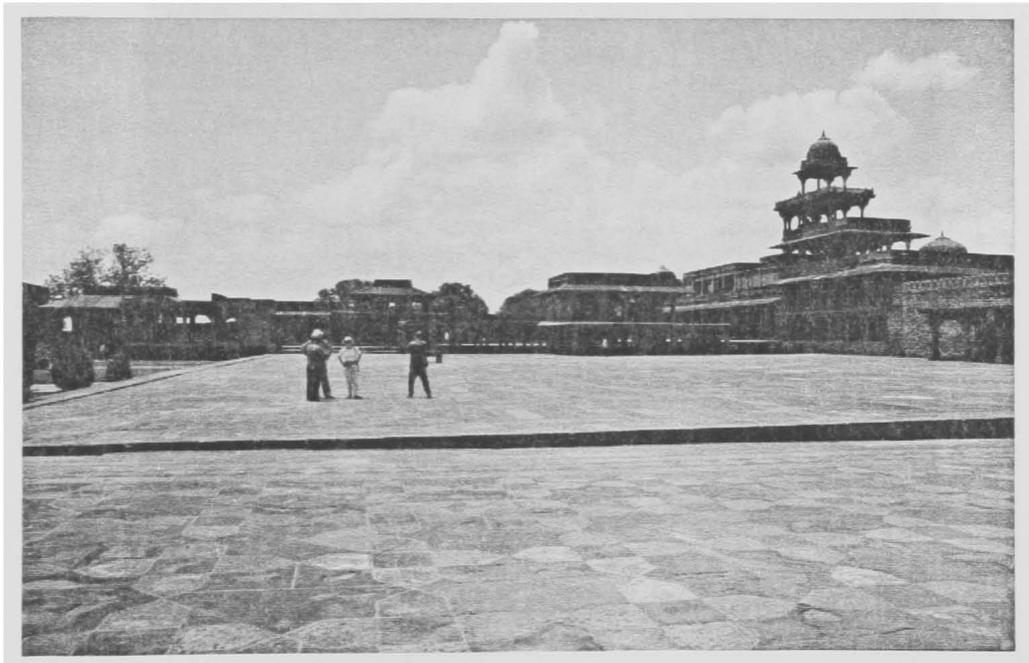
Figure 6-44: Panch Mahal (Fatehpur Sikri).
The Panch Mahal punctuates the horizontal facade of its
adjoining buildings.
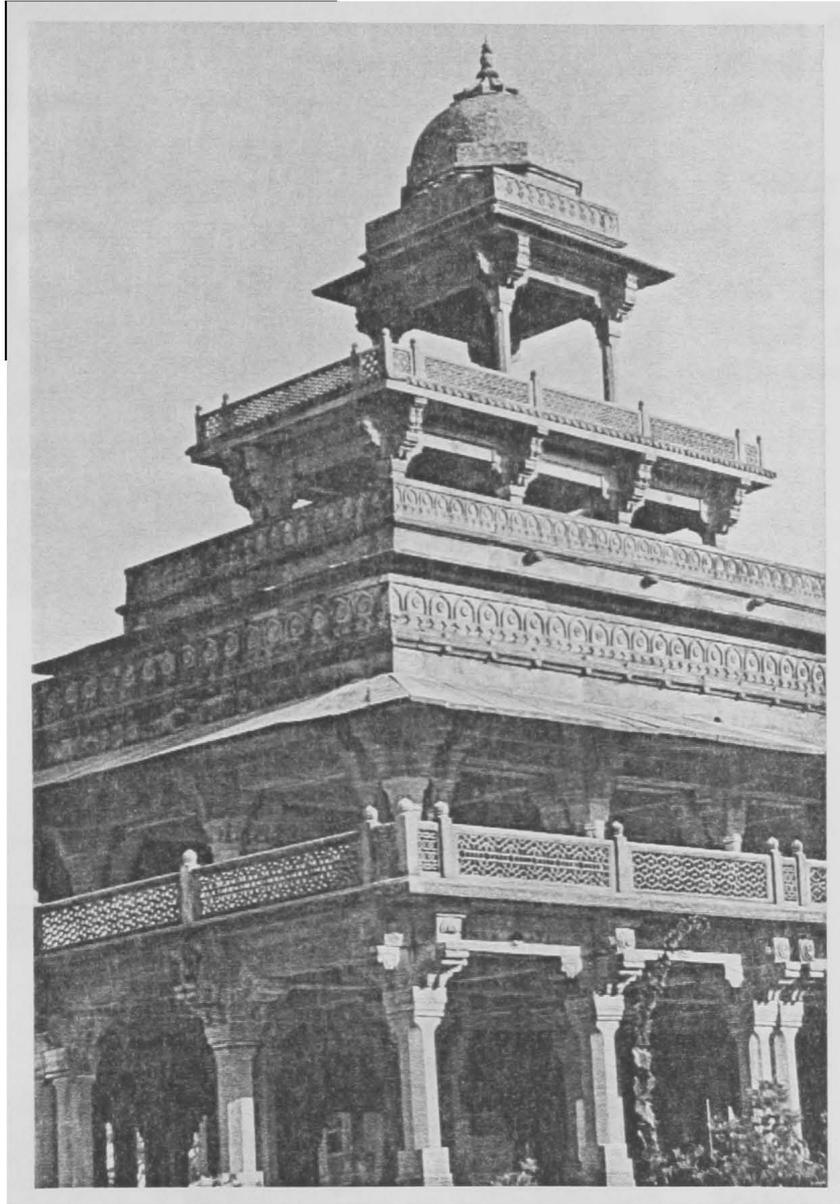
Figure 6-45: Panch Mahal (Fatehpur Sikri).

This five story building has a sculptural quality. The second, third and fifth floor cornices are celebrated with ornamentation. Its unusual form provides an interesting skyline.
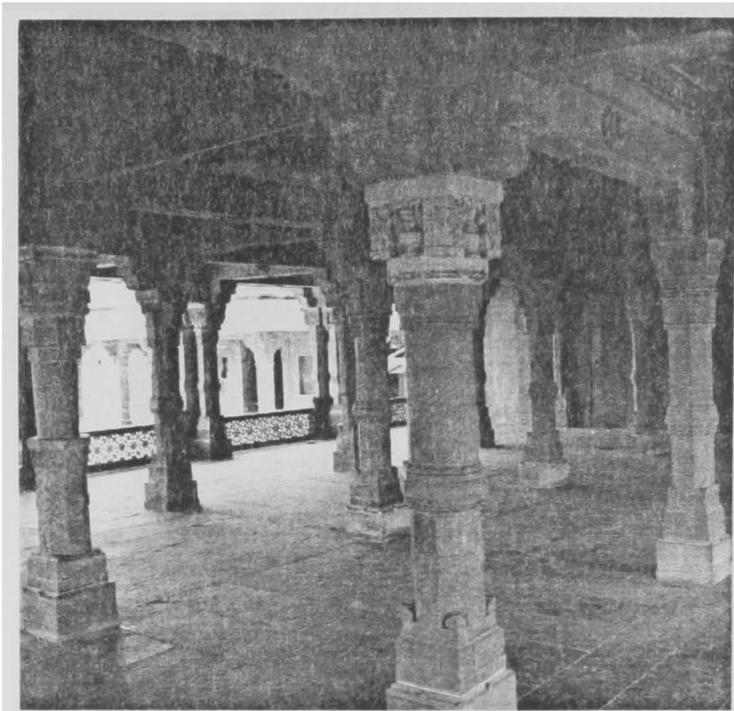
Figure 6-46: Panch Mahal (Fatehpur Sikri):

A variety of columns is used on every floor. The pavilion is open on all sides. Indoor and outdoor spaces are connected.
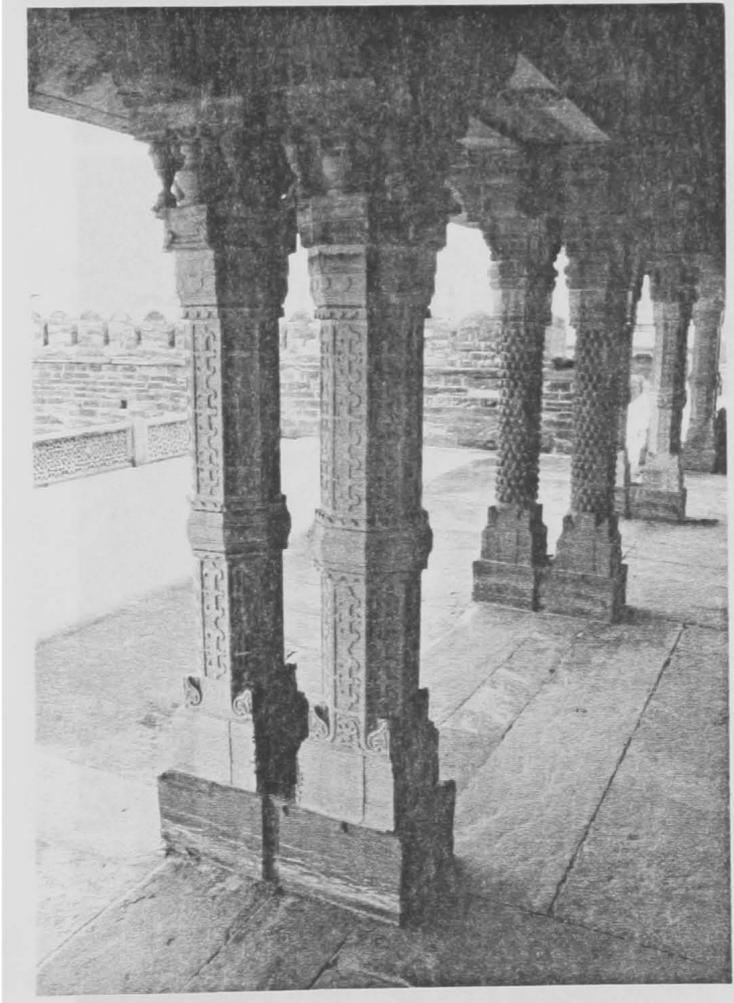
Figure 6-47: Panch Mahal (Fatehpur Sikri):

The columns on every floor are profusely carved.
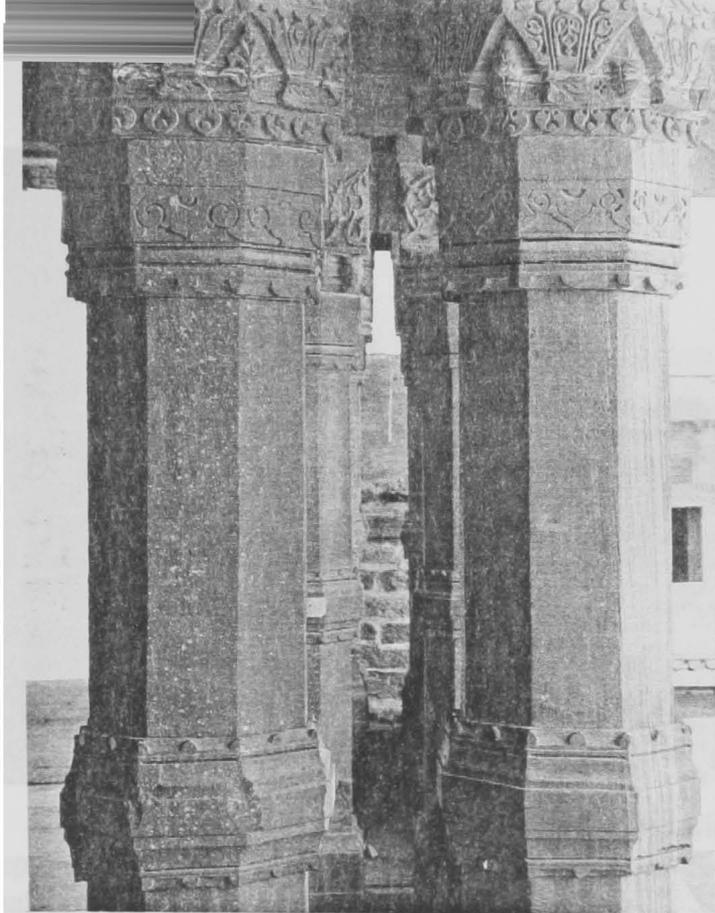
Figure 6-48: Panch Mahal (Fatehpur Sikri): column details
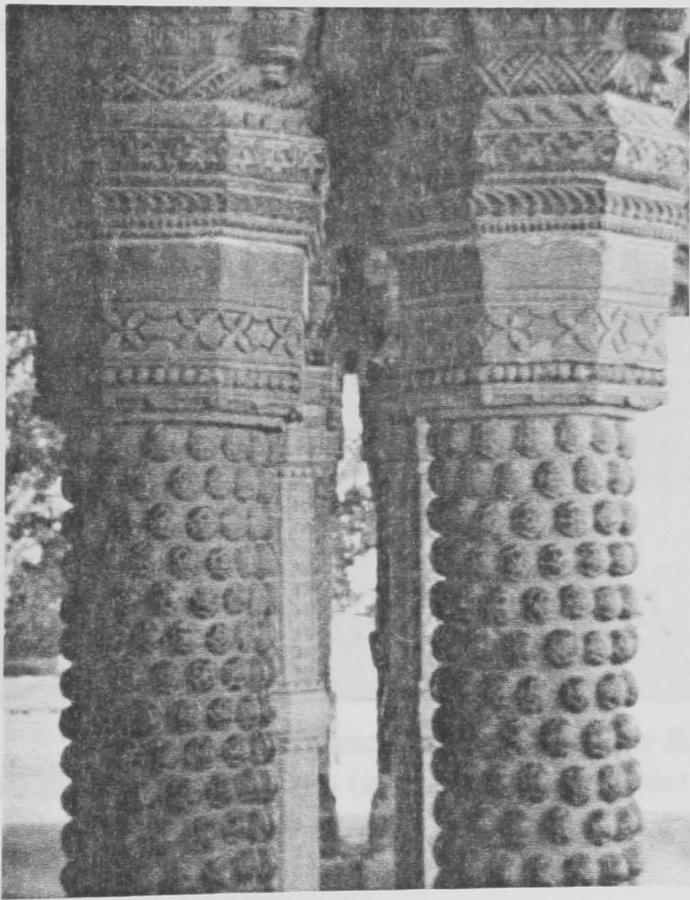
Figure 6-49: Panch Mahal (Fatehpur Sikri): column details

Figure 6-50: Panch Mahal (Fatehpur Sikri)
The wall separates the Diwan-i-Khas (semi public space) from the Harem Garden. The Panch Mahal provides a focal point in the garden space.
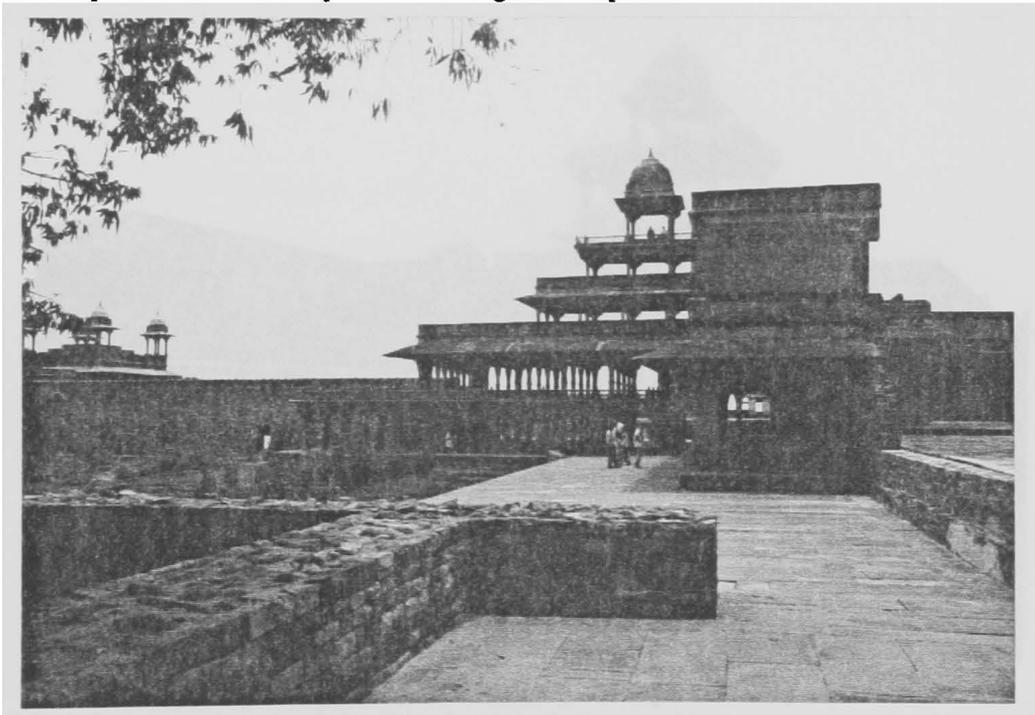
Figure 6-51: Panch Mahal (Fatehpur Sikri)
The wall separates the Diwan-i-Khas (semi public space) from the Harem Garden. The roofs of the Diwan-i-Khas and the treasury building can be seen in the background.

6. SPATIAL DESIGN PRINCIPLES
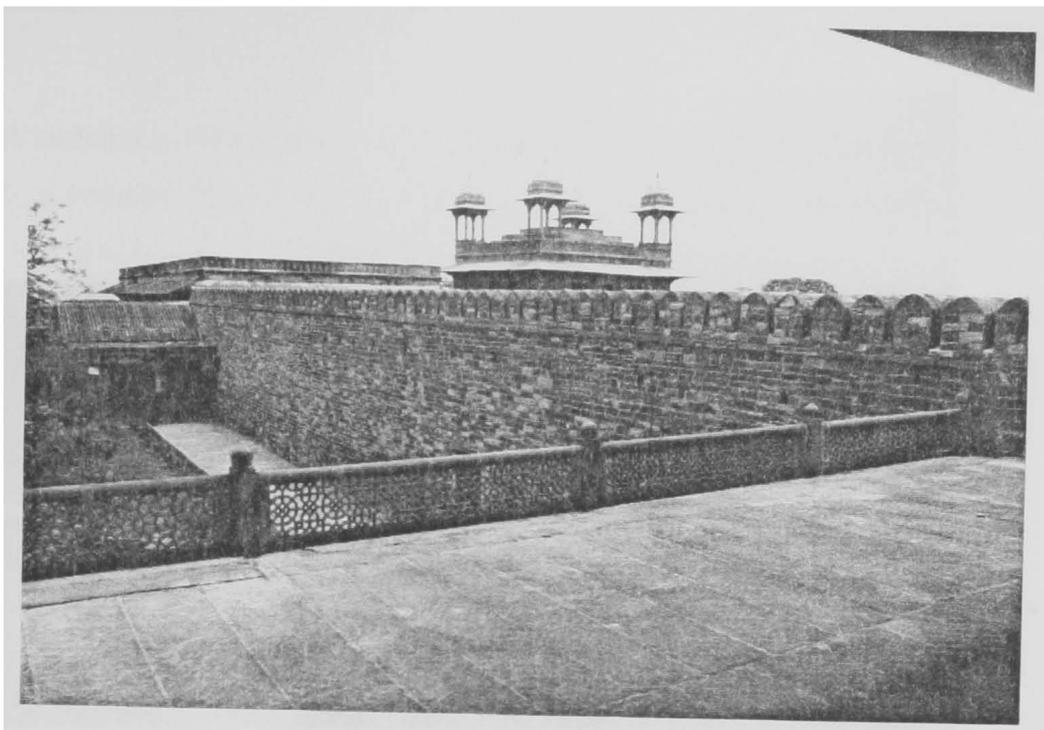
Figure 6-52: Panch Mahal (Fatehpur Sikri)
Small walls and levels separate different spaces.

Figure 6-53: Madarasa (Fatehpur Sikri)
This building is located east of the Panch Mahal. It may have served as the Madarasa or school for harem children. It follows the architectural form and style of the other buildings.

6. SPATIAL DESIGN PRINCIPLES

Figure 6-54: The emperor's private area (Fatehpur Sikri)
The Turkish Sultana is located on the left corner. The water tank in the middle of the courtyard is known as the Anup Talao. The emperor's residence is in the two story building.
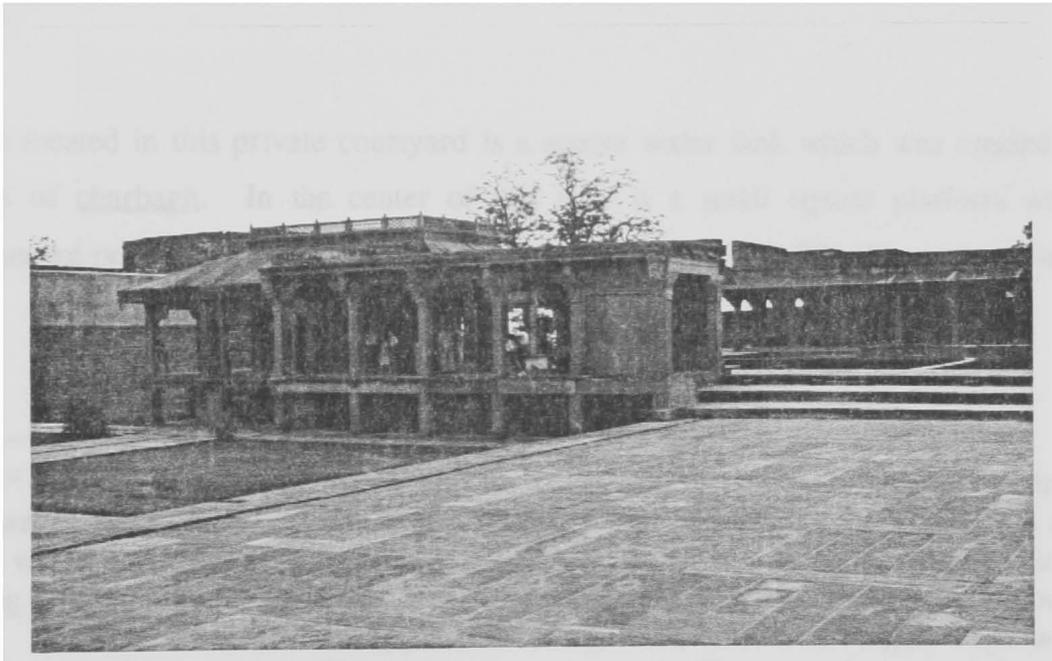
Figure 6-55: The emperor's private area (Fatehpur Sikri)
The steps separate the emperor's private area from the semi public area. The Turkish Sultana can be seen on the extreme left.

6. SPATIAL DESIGN PRINCIPLES

This court includes a small highly ornamented room known as the Turkish Sultana and on its left, a covered colonnaded corridor. The Turkish Sultana meeting space has a separate low pitched horizontal type of roof (cf. Figure 6-56) and its spatial and architectural hierarchy is created by the rich ornamental surface treatment of this roof and the columns (cf. Figure 6-57 and 6-58). The colonnaded corridors which served as movement channels during Akbar's reign provide a framed view of the structures all around.

The courtyard also includes the emperor's private residence which is a two story structure with a small pavilion on the rooftop (cf. Figure 6-59). This building breaks the horizontal effect of the facade and provides a visual focus. The rooftop pavilion which is open on all sides is the dominant feature of the facade. The ground floor of the emperor's residence has a low ceiling and a colonnaded circulation space (cf. Figures 6-60 and 6-61). This was done to keep the area cool and to avoid the direct rays of the sun[12].

Also located in this private courtyard is a square water tank which was created in the form of charbagh. In the center of this tank is a small square platform which is connected on four sides by four narrow bridges (cf. Figure 6-62). Steps were placed in

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[12] In contrast to the Agra Fort, the royal bed chamber is found in the building known as Khas Mahal, which means special palace. In front of this palace is a large pool with fountains and built-in seats. The Khas Mahal is open on all sides. In Summer, string-pulled fans hung overhead from the ceiling were pulled by servants sitting outside.

In front of the bed chamber there is a garden, known as Anguri Bagh which is divided into four quarters. This is based on charbagh. The space is again defined by an enclosure created by walls and the interior space design is based on the design and planning principles of axial symmetry and level change. At the entrance, foliated arches frame the view.

6. SPATIAL DESIGN PRINCIPLES

Figure 6-56: Turkish Sultana (Fatehpur Sikri)
The interiors and exteriors are connected with one another.
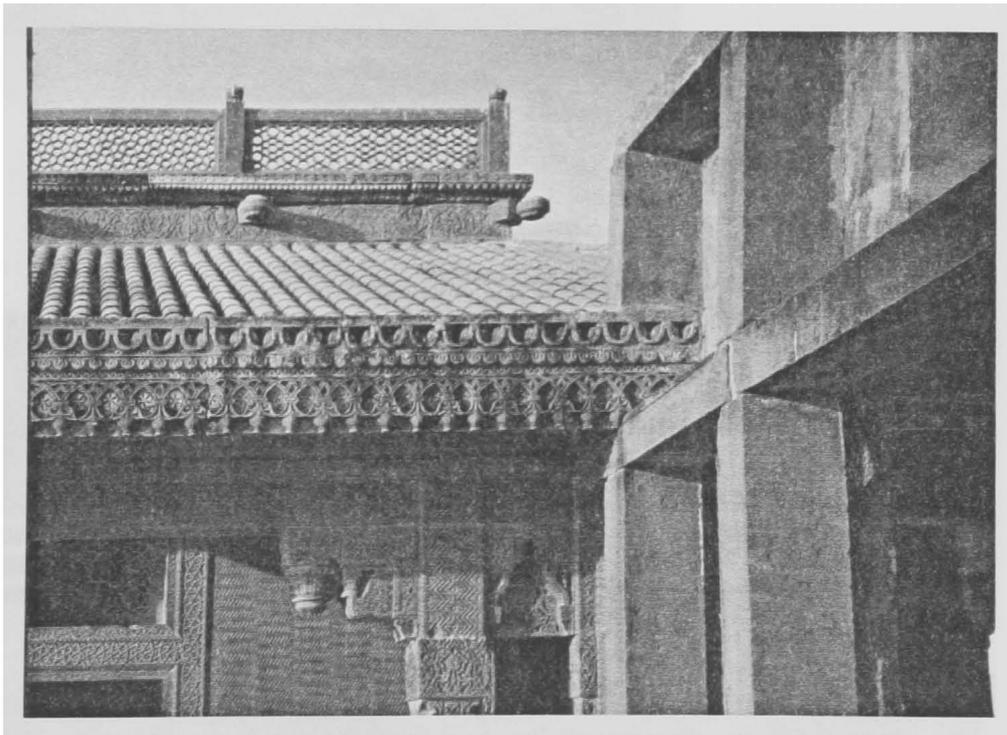
Figure 6-57: Turkish Sultana (Fatehpur Sikri)
The eave is celebrated with an ornamental band.
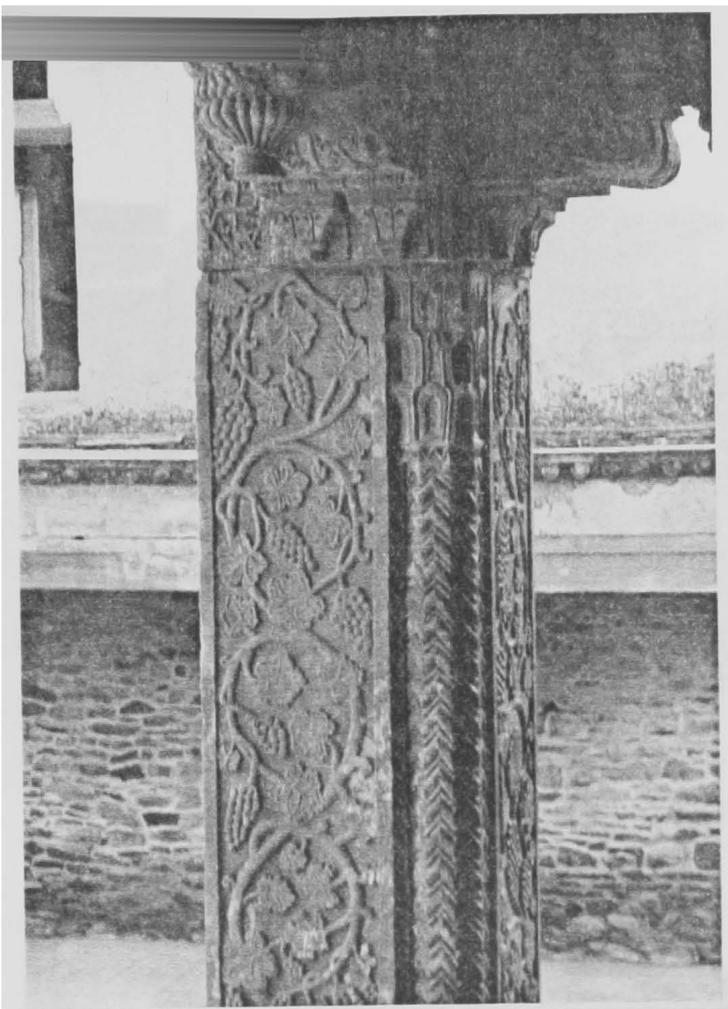
Figure 6-58: Turkish Sultana (Fatehpur Sikri)

The columns are profusely carved with vegetative motifs.
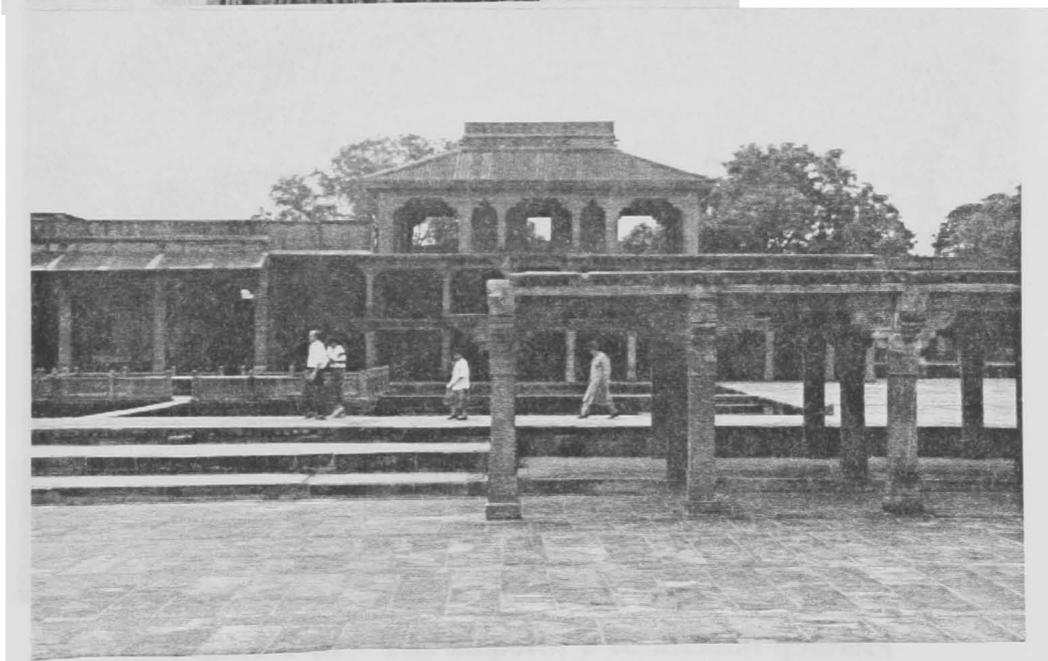
Figure 6-59: The emperor's residential quarters
(Fatehpur Sikri)

6. SPATIAL DESIGN PRINCIPLES
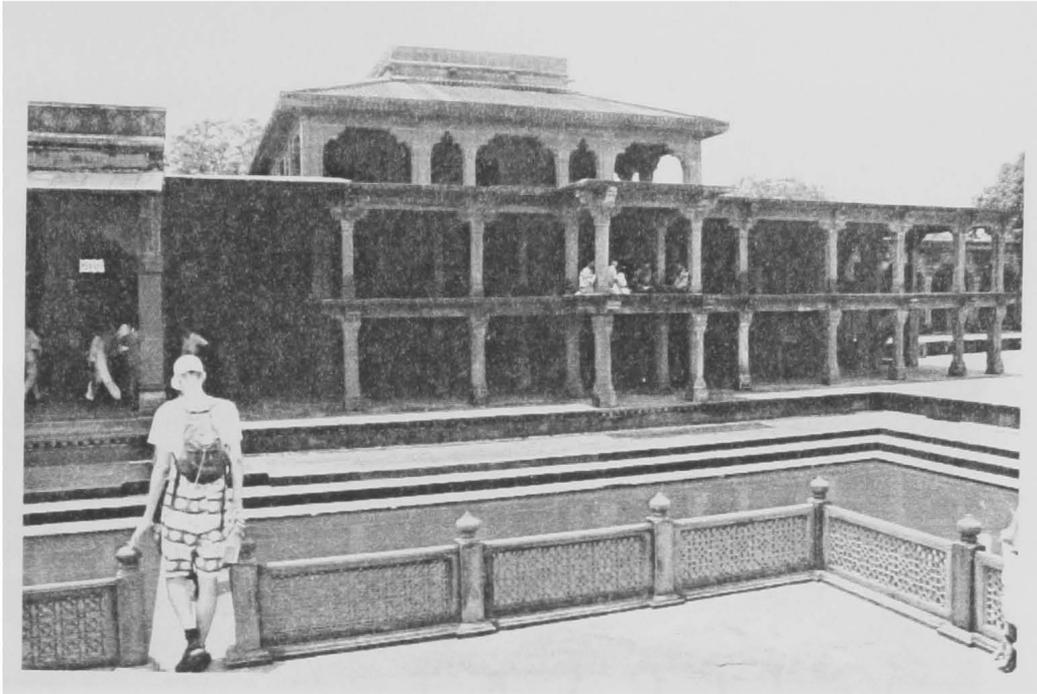
Figure 6-60: The emperor's residential quarters
(Fatehpur Sikri)
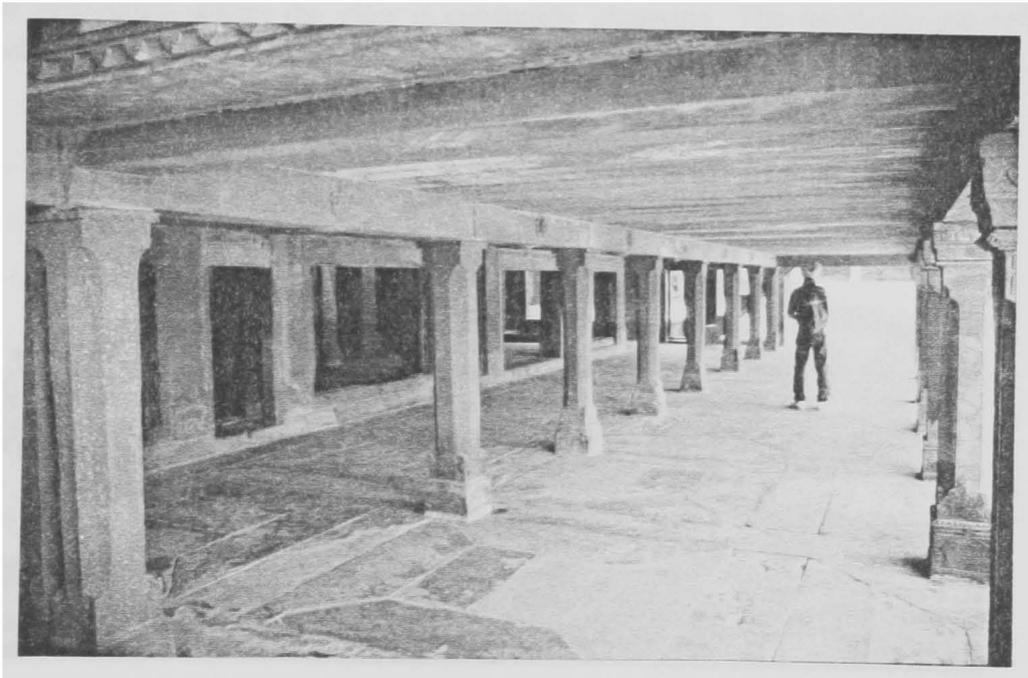
Figure 6-61: The emperor's residential quarters
(Fatehpur Sikri)
The ground floor circulation area is provided with a low ceiling.

6. SPATIAL DESIGN PRINCIPLES
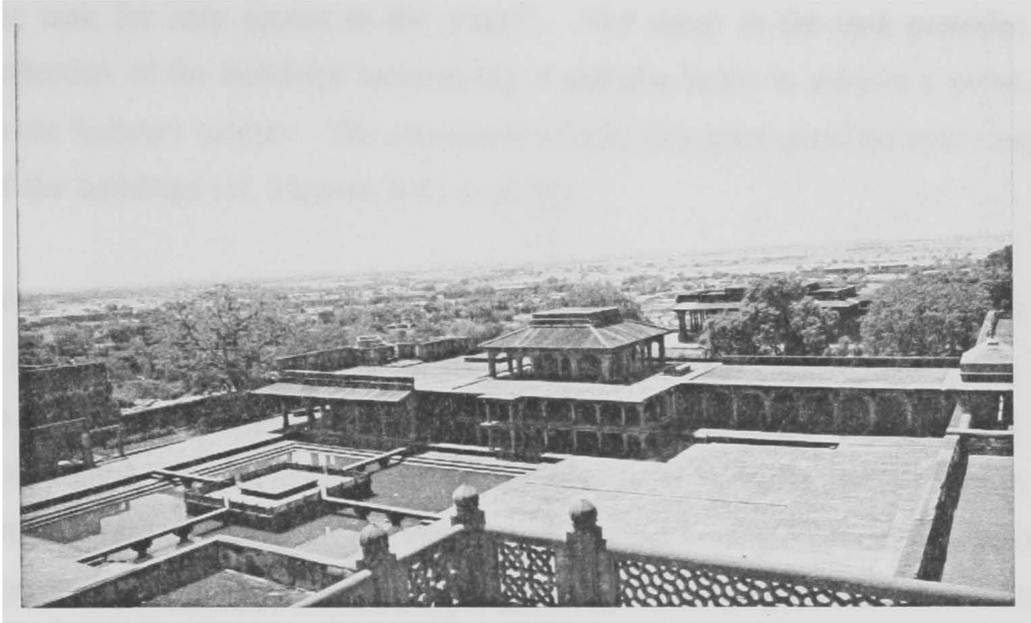
Figure 6-62: The emperor's residential area
(Fatehpur Sikri)

The Anup Talao is on the left. Movement around this water tank provides a diverse visual experience where the view is constantly changing. The buildings are reflected in the water of the Anup Talao.
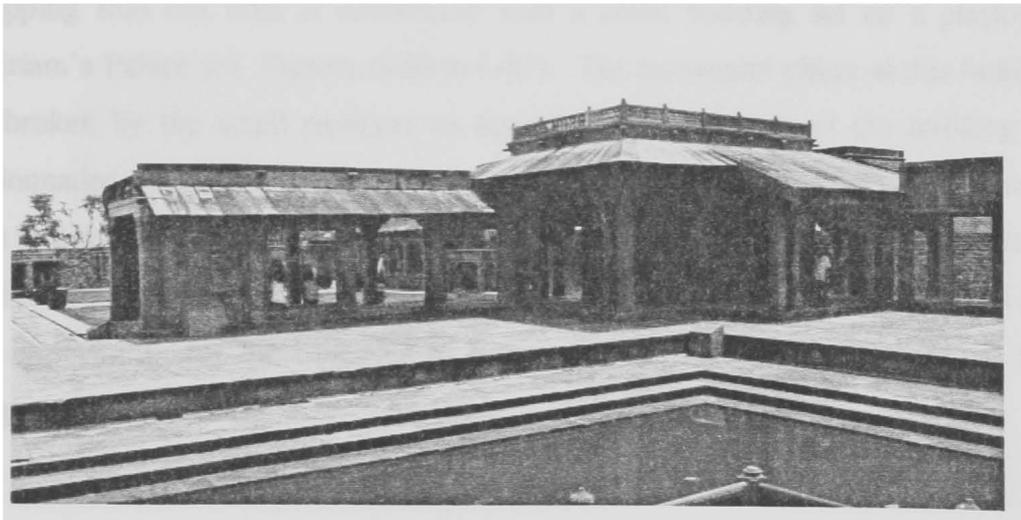
Figure 6-63: The emperor's residential area
(Fatehpur Sikri)

The illustration shows the Turkish Sultana located close to the Anup Talao.

6. SPATIAL DESIGN PRINCIPLES 193

the tank for easy access to the water[13]. The water in the tank provides a dramatic reflection of the buildings surrounding it and also helps to achieve a sense of coolness in the Summer months. The movement around this space provides ever changing views of the buildings (cf. Figures 6-63 to 6-70).

West of the emperor's residential area and connected to it by a colonnaded corridor is a horizontal two story facade (cf. Figures 6-71 to 6-76) behind which lies the harem. In this area, circulation spaces are defined by level changes. The ground floor has a colonnaded veranda in the middle of which lies an entrance into the harem area. The architectural hierarchy of the entrance is marked by a unique pavilion above the gate opening on the first floor. The entrance on the ground floor is demarcated by two columns and steps (cf. Figures 6-77 to 6-79). Although the entrance is through a small opening, these two columns communicate very effectively that this is a place to pause before entry into another zone.

The small size of the harem entrance also provides a sense of surprise. An observer stepping into this area is confronted with a small building set on a platform; this is Miriam's Palace (cf. Figures 6-80 to 6-81). The horizontal effect of this building facade is broken by the small pavilion on top of it. In the front of the building there is a colonnaded veranda or porch. At the top of the columns, a projected eave runs around the building. This provides continuity and gives the structure a horizontal effect. In this building indoor and outdoor spaces are again connected and the space around it provides an opportunity for the observer to experience the building from different angles (cf. Figures 6-82 to 6-84).

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[13] Many historic Hindu and Sikh temples have sacred tanks attached to them. These tanks are also provided with similar type of steps running around the borders.
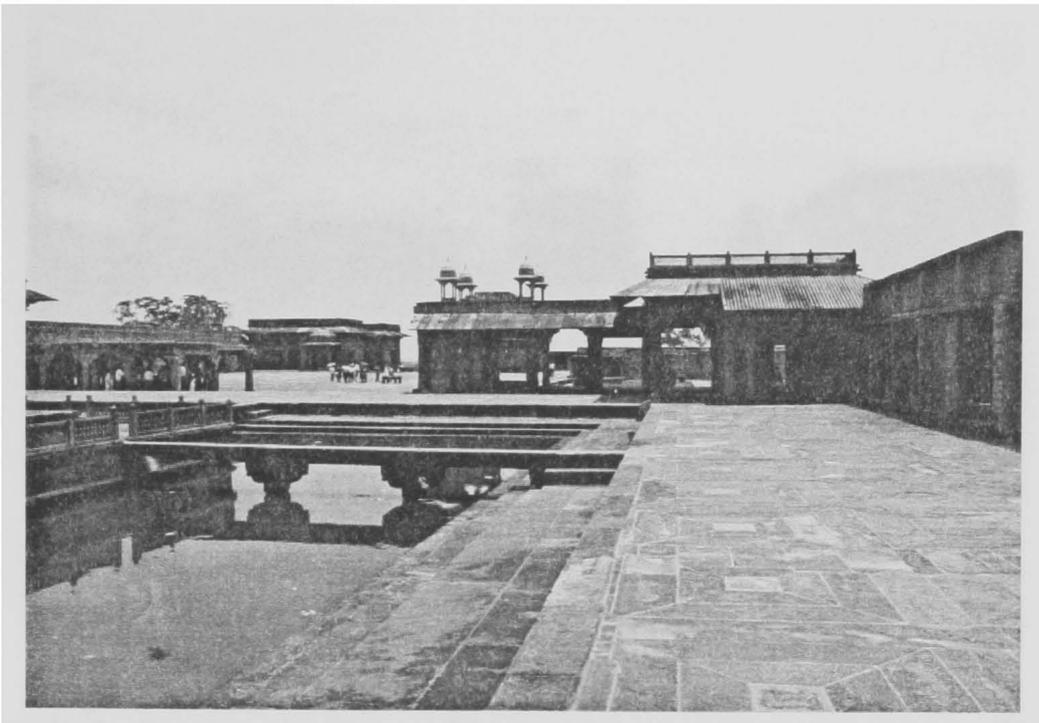
Figure 6-64: The emperor's residential area
(Fatehpur Sikri)

Figure 6-65: The emperor's residential area
(Fatehpur Sikri)

6. SPATIAL DESIGN PRINCIPLES

Figure 6-66: The emperor's residential area (Fatehpur Sikri)
In the northerly direction, the Diwan-i-Khas building provides the focal point. The axis of the Diwan-i-Khas does not pass through the Anup Talao.
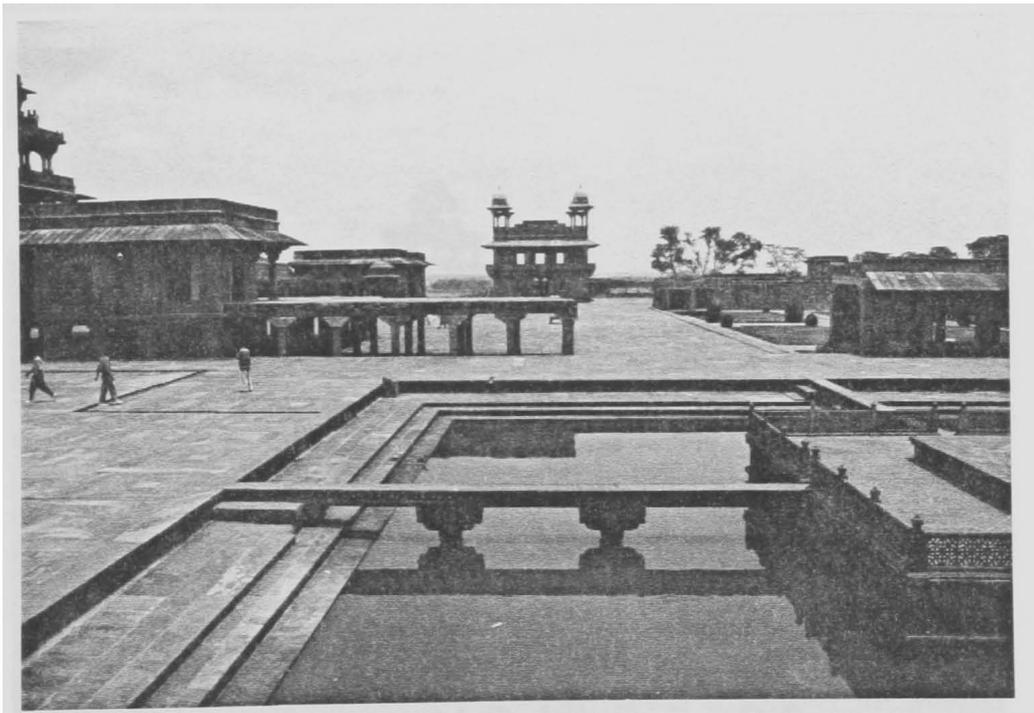
Figure 6-67: The emperor's residential area (Fatehpur Sikri)
There is a sense of separation between the Diwan-i-Khas courtyard and the emperor's private area, but visually they are connected.

6. SPATIAL DESIGN PRINCIPLES

Figure 6-68: The emperor's residential area (Fatehpur Sikri)
The Panch Mahal and the Madarasa can be seen on the left side and the Diwan-i-Khas in the middle. Visual tension between the Panch Mahal and the Diwan-i-Khas is created
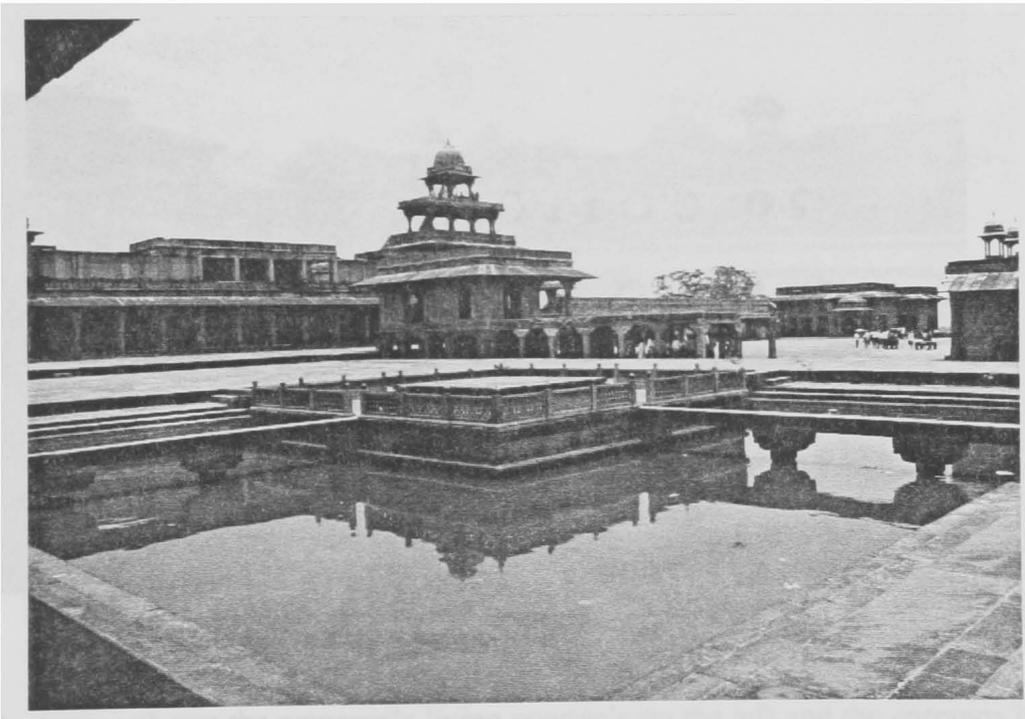
Figure 6-69: The emperor's residential area (Fatehpur Sikri).
The illustration shows the Panch Mahal and the harem on the left.

6. SPATIAL DESIGN PRINCIPLES
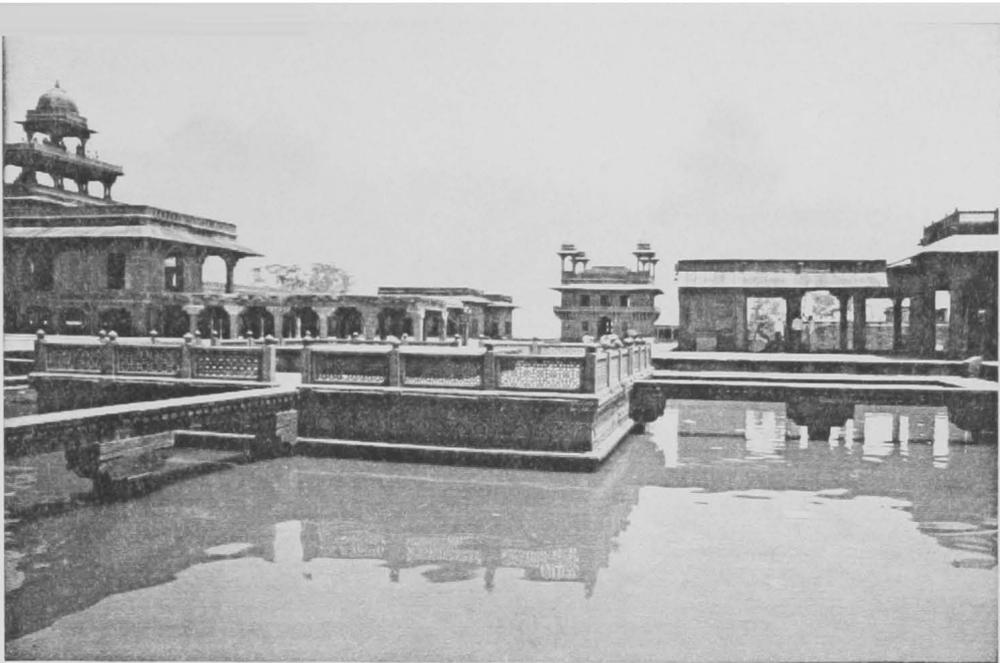
**Figure 6-70: The emperor's residential area
(Fatehpur Sikri)**

The illustration shows a new scene and the water in the Anup Talao adds more interest.
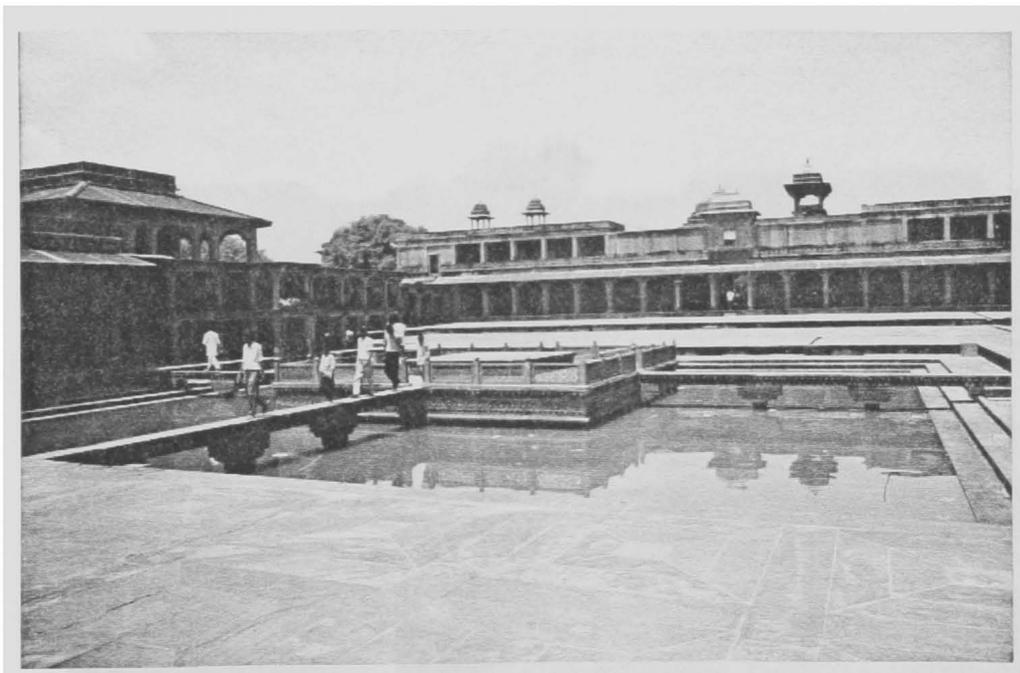
**Figure 6-71: The emperor's residential area
(Fatehpur Sikri)**

The illustration shows the emperor's living quarter's on the left and the entrance into the harem area in front.
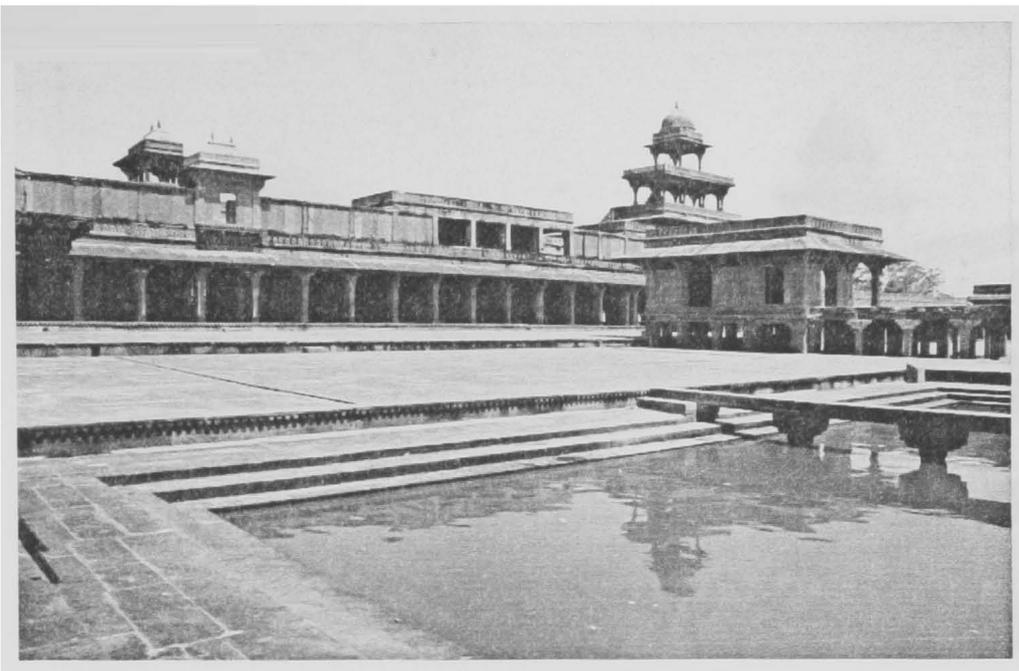
Figure 6-72: The emperor's residential area
(Fatehpur Sikri)

Another view of the harem entrance on the left and the Panch Mahal and the Madarasa on the right.

Figure 6-73: Harem entrance
(Fatehpur Sikri)

Looking from inside the Anup Talao, the harem entrance is in front. The dome of the Jodhabai palace can be observed on the left and the roof pavilion of Miriam's palace on the right.

6. SPATIAL DESIGN PRINCIPLES

Figure 6-74: Harem entrance (Fatehpur Sikri)
The illustration shows the harem entrance in relation to the Panch Mahal and the Madarasa. Spaces are defined by level changes.
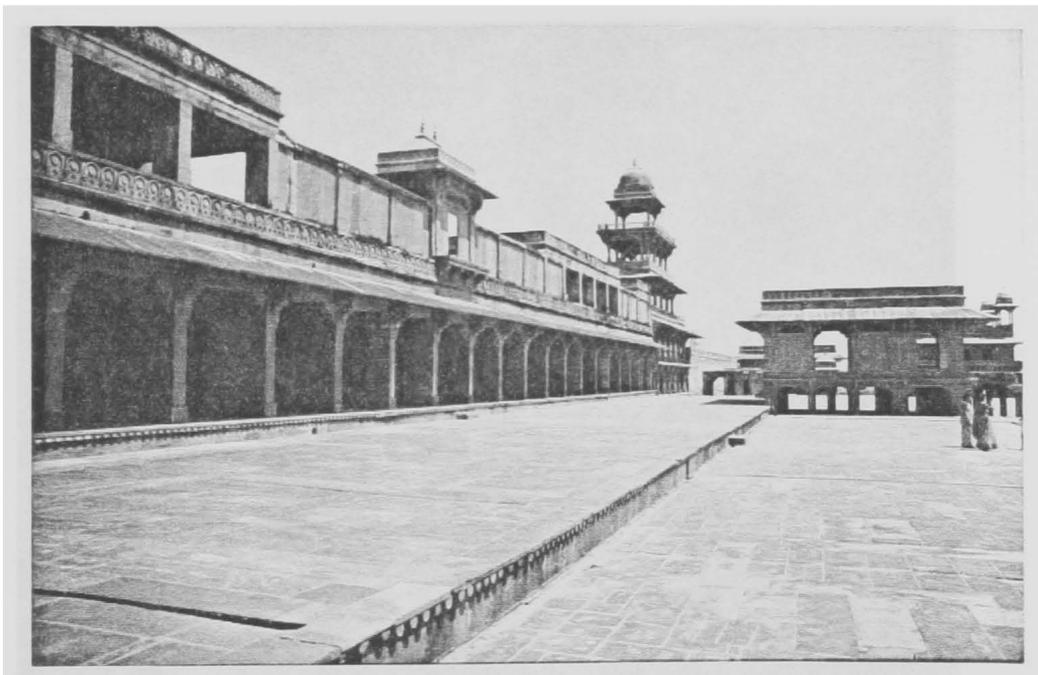
Figure 6-75: Harem entrance (Fatehpur Sikri)
Open courtyards provide a number of vantage points to view buildings. This is a different view of the entrance.

6. SPATIAL DESIGN PRINCIPLES
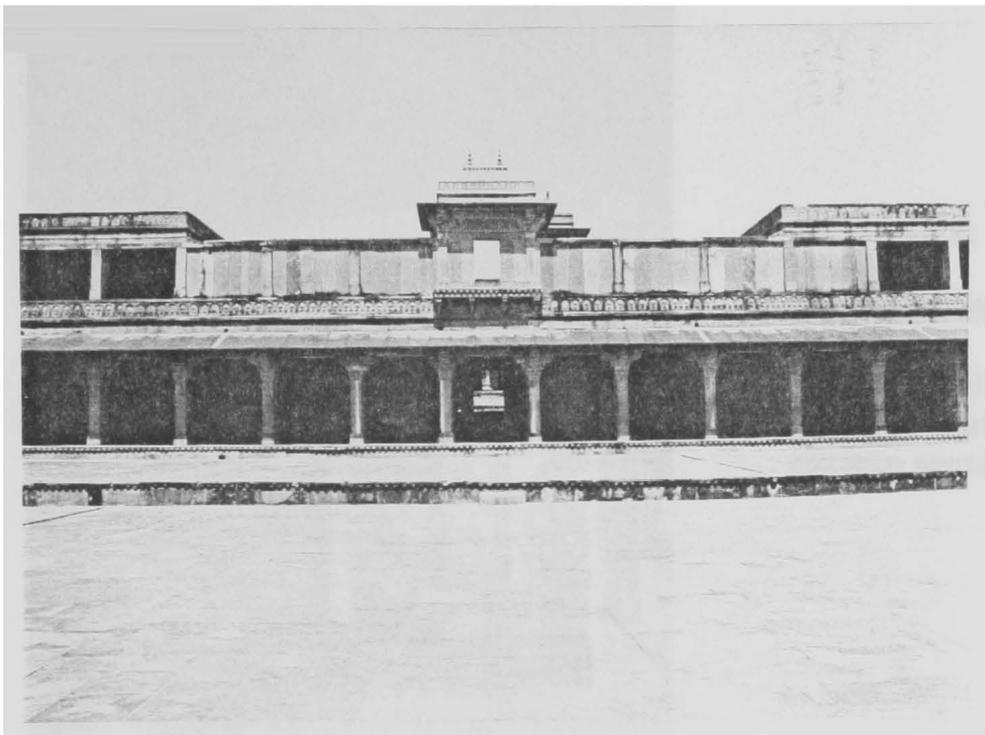
Figure 6-76: Harem entrance facade (Fatehpur Sikri)
The illustration shows the front facade of the entrance. The entrance opening is very small. The opening at the top floor is for security reasons.
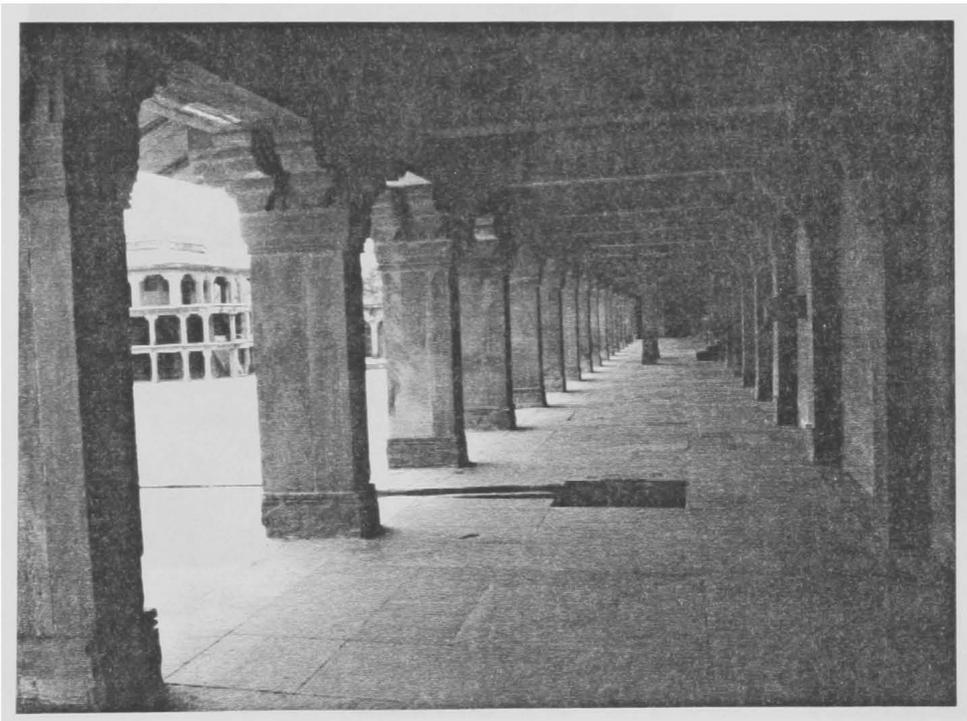
Figure 6-77: Harem entrance (Fatehpur Sikri)
The colonnaded space in the facade defines the entrance into the harem area by placing two columns in the middle of the circulation space.

6. SPATIAL DESIGN PRINCIPLES
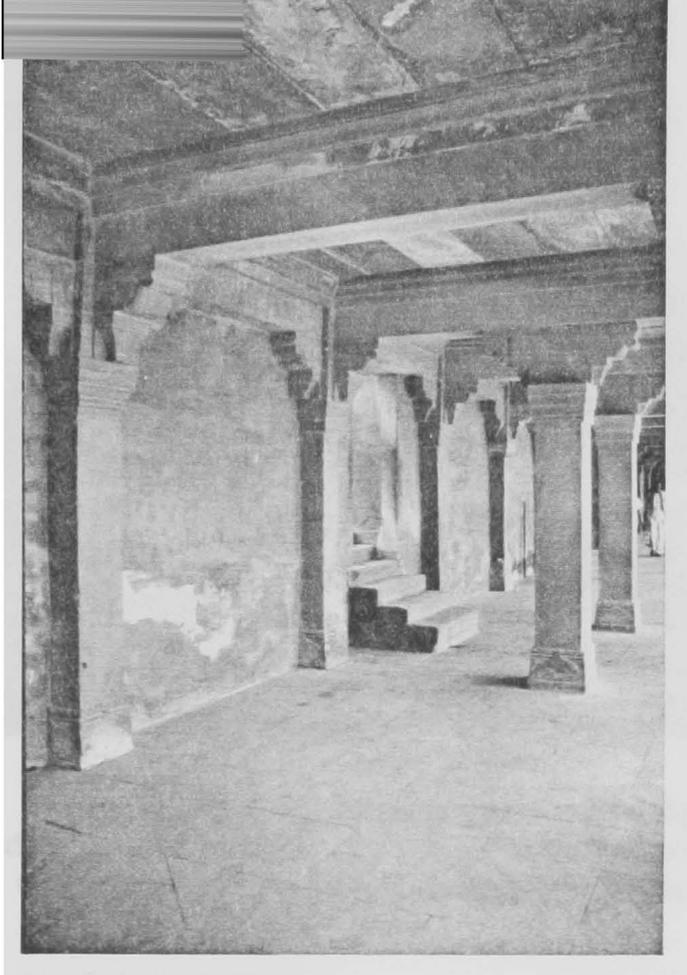
Figure 6-78: Harem entrance (Fatehpur Sikri)

Steps and two columns mark the entrance opening.
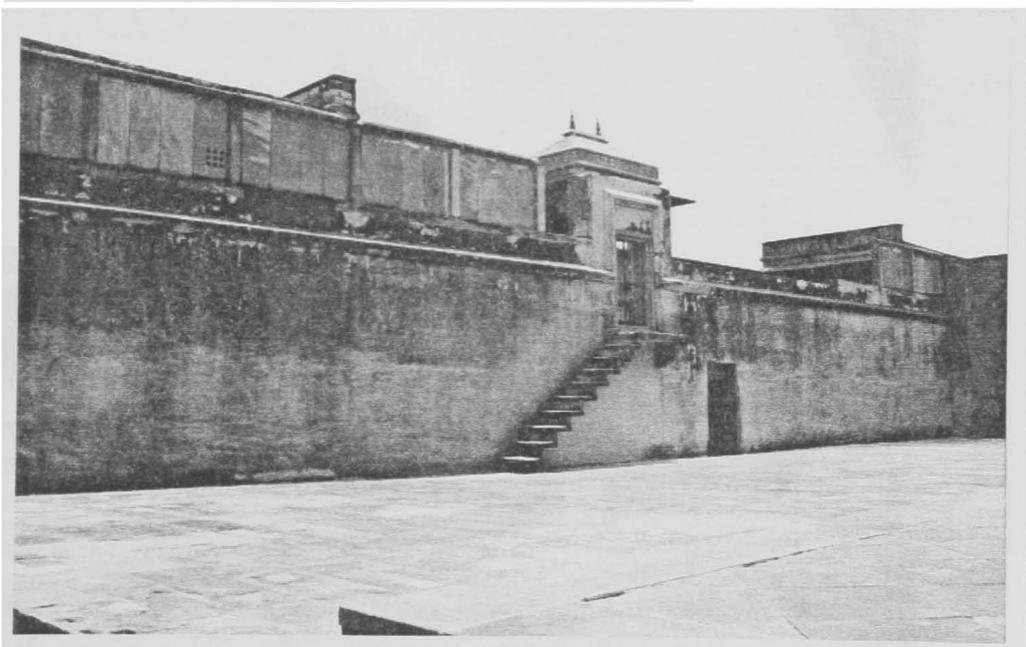
Figure 6-79: Harem entrance (Fatehpur Sikri)

This is the rear side of the harem entrance. The top floor is connected by steps. This side of the entrance is very plain.
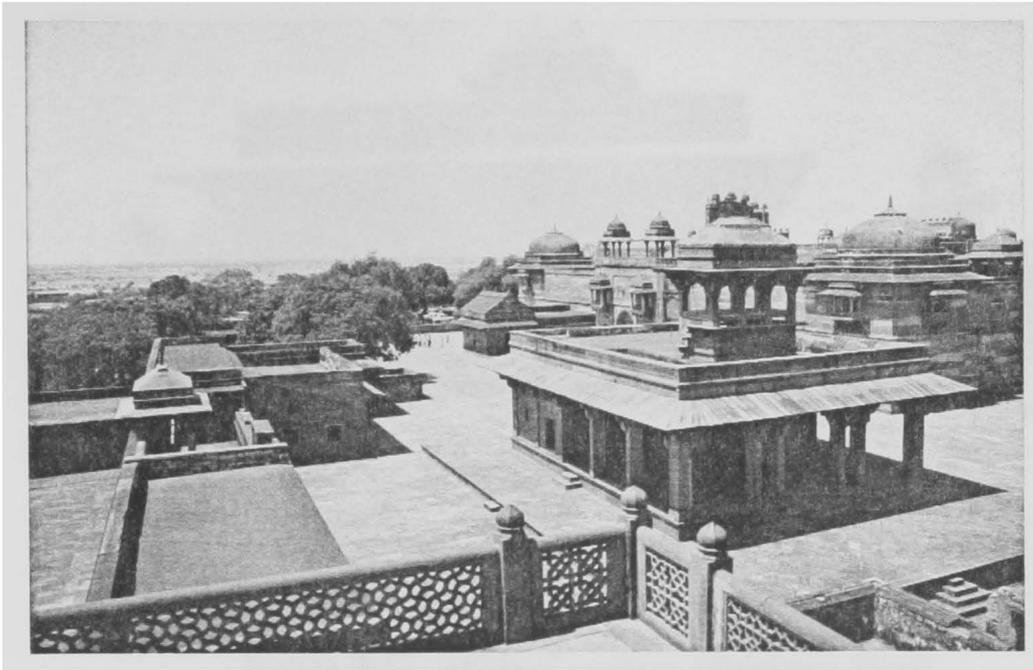
Figure 6-80: Miriam's palace (Fatehpur Sikri)
The building is on a platform. Its roof is celebrated with a pavilion and steps are provided to enter into this pavilion. This view is from the top of the Panch Mahal.
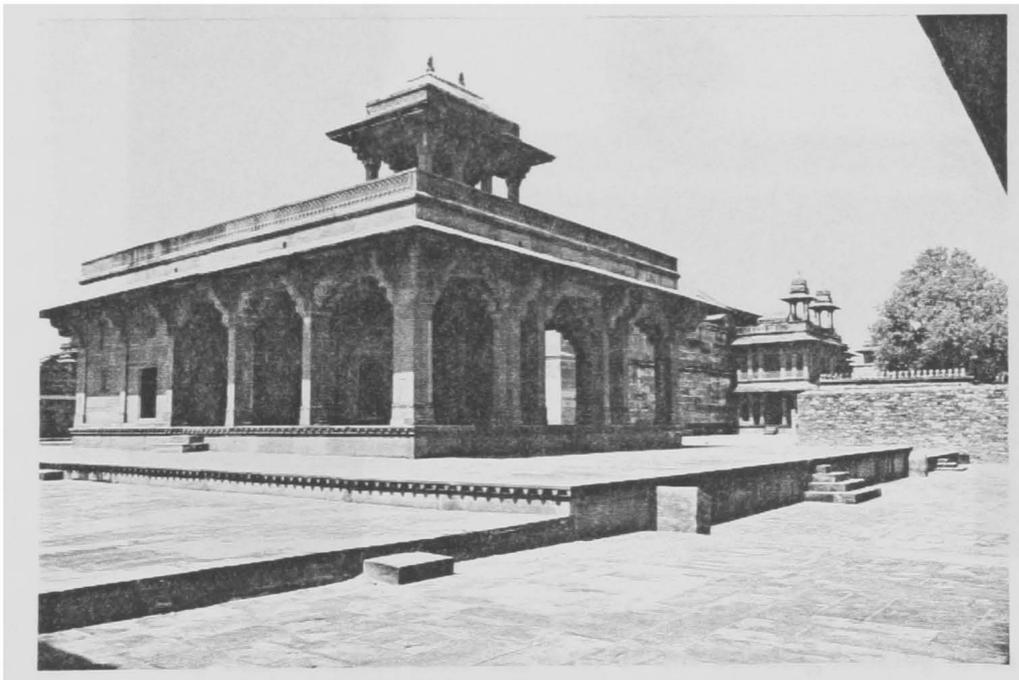
Figure 6-81: Miriam's palace (Fatehpur Sikri)
This shows the use of level change to define different spaces.

6. SPATIAL DESIGN PRINCIPLES

Figure 6-82: Miriam's palace (Fatehpur Sikri)
This view is from the south of Miriam's palace. The Panch Mahal on
the right provides an interesting visual backdrop.
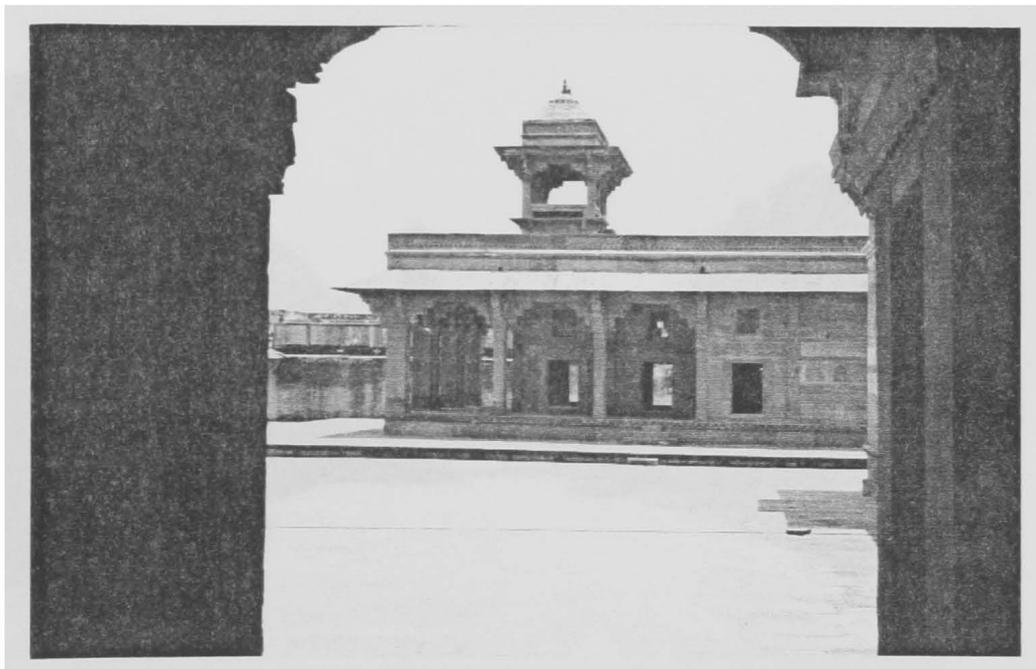
Figure 6-83: Miriam's palace (Fatehpur Sikri)
This view is taken from the west of this building looking in an
easterly direction. The columns which frame the
building provide a visual focus.
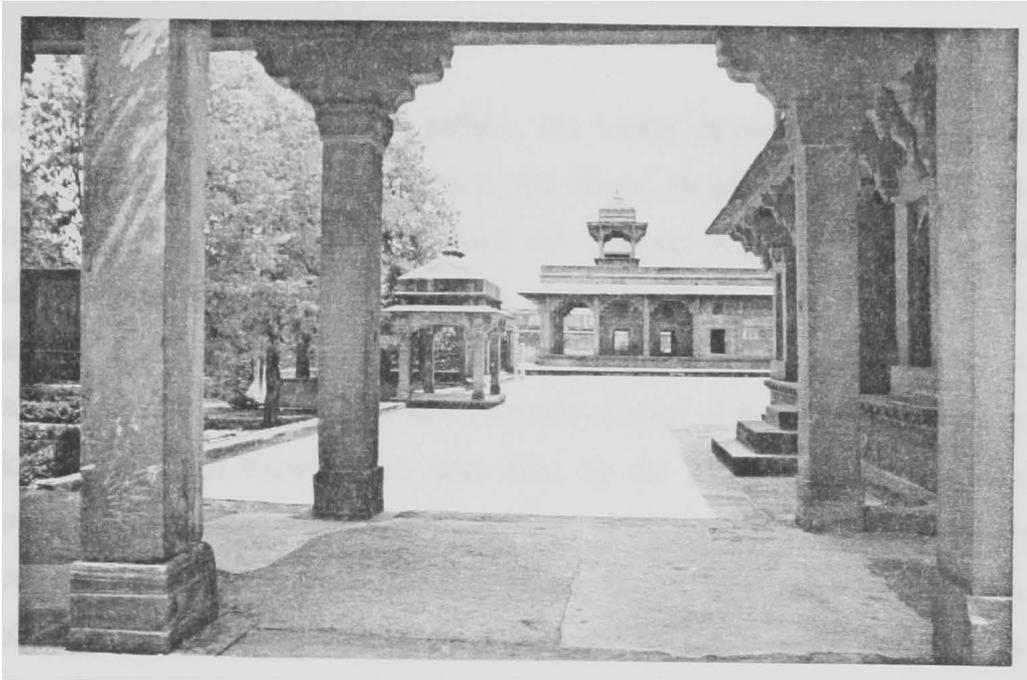
Figure 6-84: Miriam's palace (Fatehpur Sikri)
This view is also taken from the west of this building, through the
viaduct and looking in an easterly direction
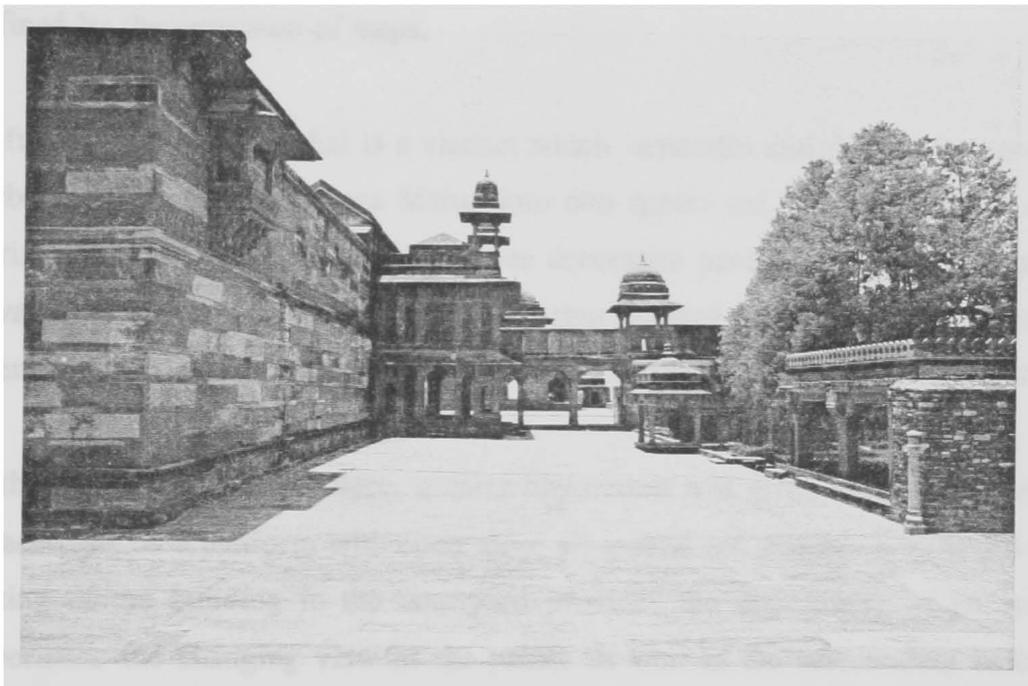
Figure 6-85: Path to Birbal's house (Fatehpur Sikri)
On the right of the circulation path is an ablution tank and on the left is the Hawa Mahal.
The small rest pavilion is on the right and the viaduct is at the back.

6. SPATIAL DESIGN PRINCIPLES

Proceeding west from Miriam's palace, the visitor passes the Harem Garden on the northern side of the circulation space, the Hawa Mahal and through a water viaduct before finally ending at Birbal's palace (cf. Figures 6-85 to 6-92). The space flows freely from one end to the other. The garden holds an open structure which housed water for ablution (cf. Figure 6-88). Its horizontal roof line is decorated with an ornamental band. Situated in the north-western corner of the garden is the Nagina Masjid which is the small mosque that was used by the harem women (cf. Figure 6-89). Another pavilion located on the northern edge of the circulation space served as a resting place for the women of the harem (cf. Figure 6-87). The mass of the Hawa Mahal is emphasized by projecting it from the facade of Jodhabai's palace (cf. Figures 6-85 and 6-86). This helps to break the horizontal effect of the facade. On the first floor, perforated screens have been added to create privacy and to allow cool air to flow freely through the building. The building is crowned by two pavilions. Entrances have been defined by the provision of steps.

In front of the Hawa Mahal is a viaduct which separates and defines the area between Birbal's palace and the Hawa Mahal into two spaces (cf. Figure 6-90). It creates a horizontal effect and is crowned by three decorative pavilions. This was done in such a way as to maintain a strong visual connection between the two spaces. The colonnaded openings of the viaduct provide framed views of Birbal's palace (cf. Figure 6-91).

In the design of Birbal's palace, greater importance was given to mass than void. This palace rests on a platform with open space all around (cf. Figures 6-92 and 6-93). The setting of the building in the courtyard provides the opportunity to go around and experience the changing view of the palace as well as the surrounding buildings and landscape. Looking westward, one can see the distant views of the landscape of Fatehpur Sikri. Looking northward in a downward direction one encounters the rear
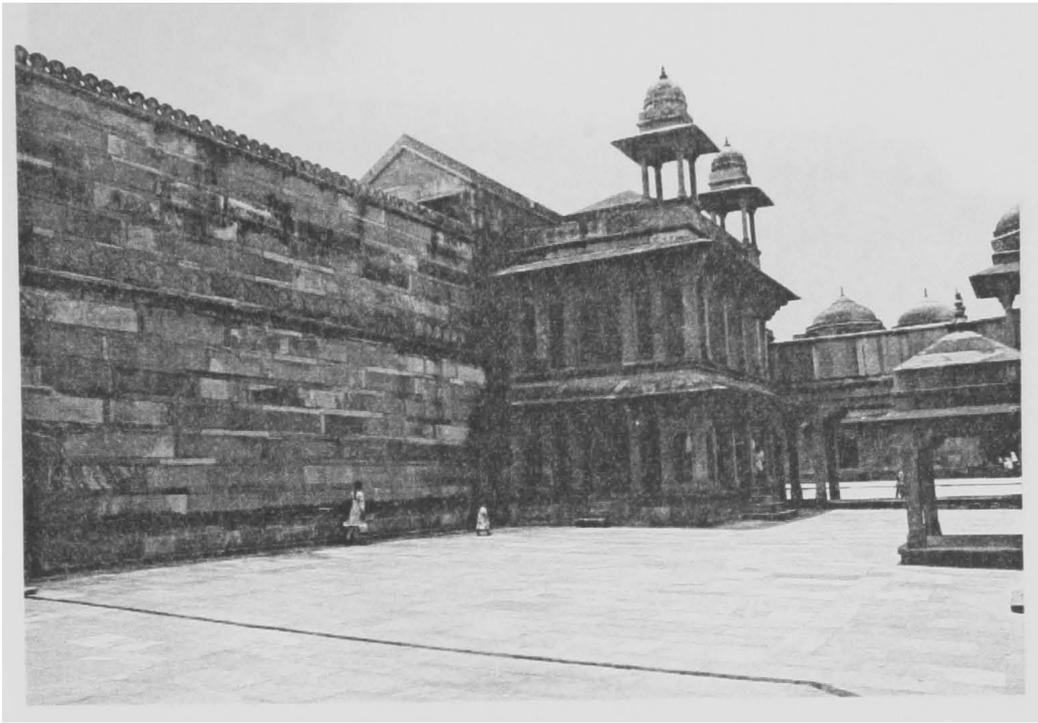
Figure 6-86: Hawa Mahal (Fatehpur Sikri)
The Hawa Mahal projects from the outer facade of Jodhabai's palace
and it is marked with two pavilions at the top.
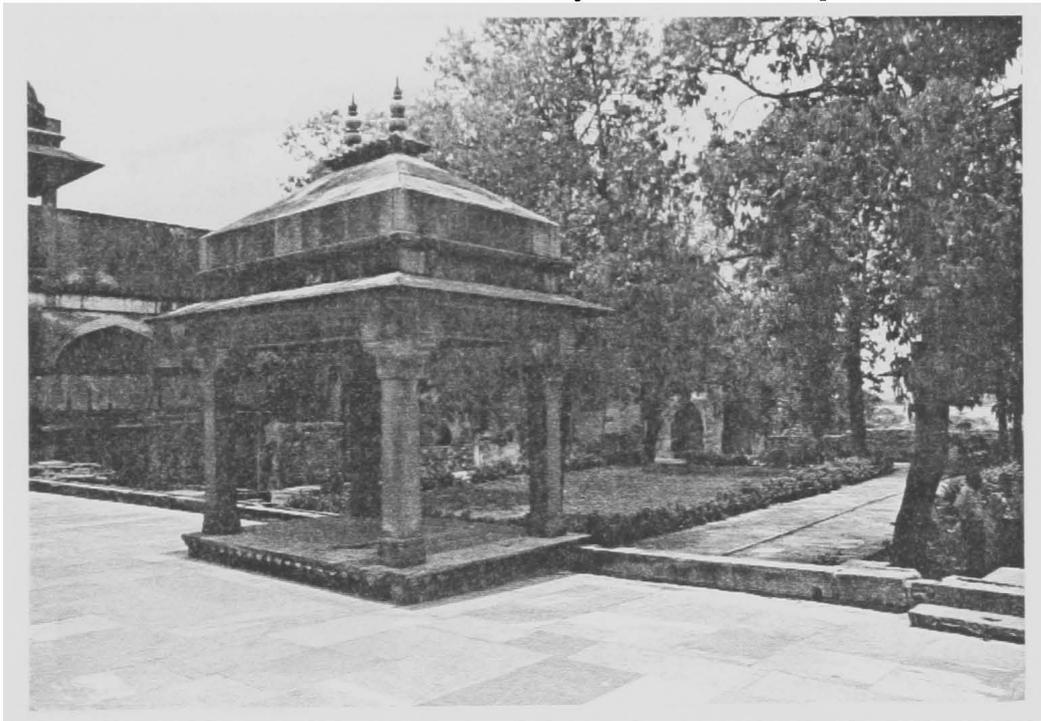
Figure 6-87: The pavilion (Fatehpur Sikri)
This small pavilion is open on all sides. It is located in the circulation space
and was meant as a resting palace for the harem women.

6. SPATIAL DESIGN PRINCIPLES

Figure 6-88: The ablution tank (Fatehpur Sikri)
It also opens on all sides and its roof is ornamented. It was used by the harem women
before going to the Nagina Mosque.
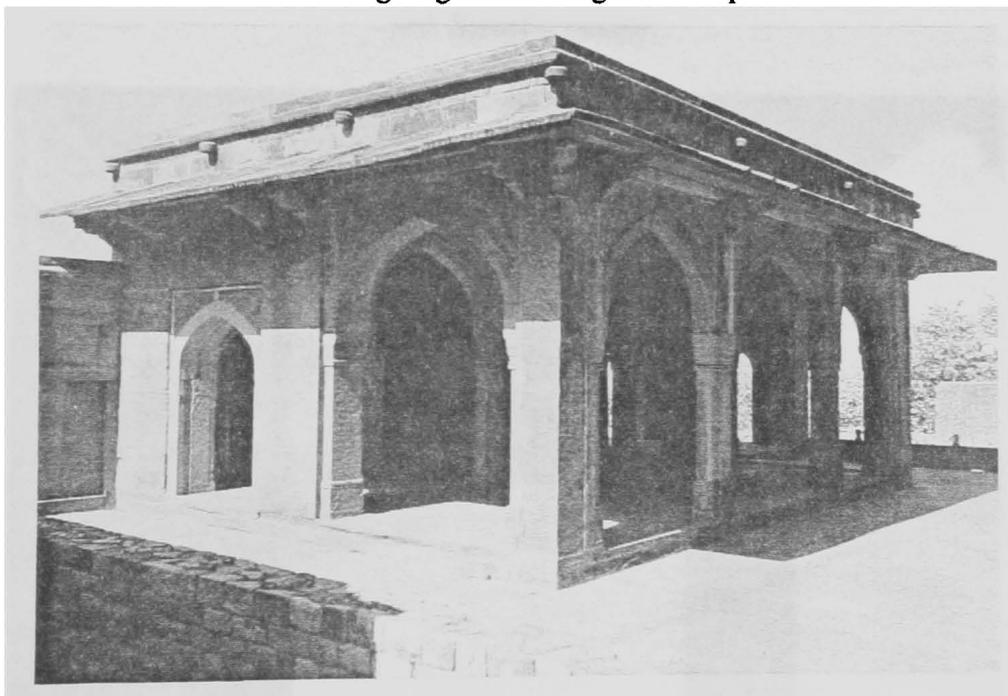
Figure 6-89: Nagina Masjid (Fatehpur Sikri)
This is a small mosque which has no significant architectural features. The mosque uses
true traditional Islamic arches.

Figure 6-90: The water viaduct (Fatehpur Sikri)
The viaduct provides a sense of separation between the Hawa Mahal
and Birbal's palace.
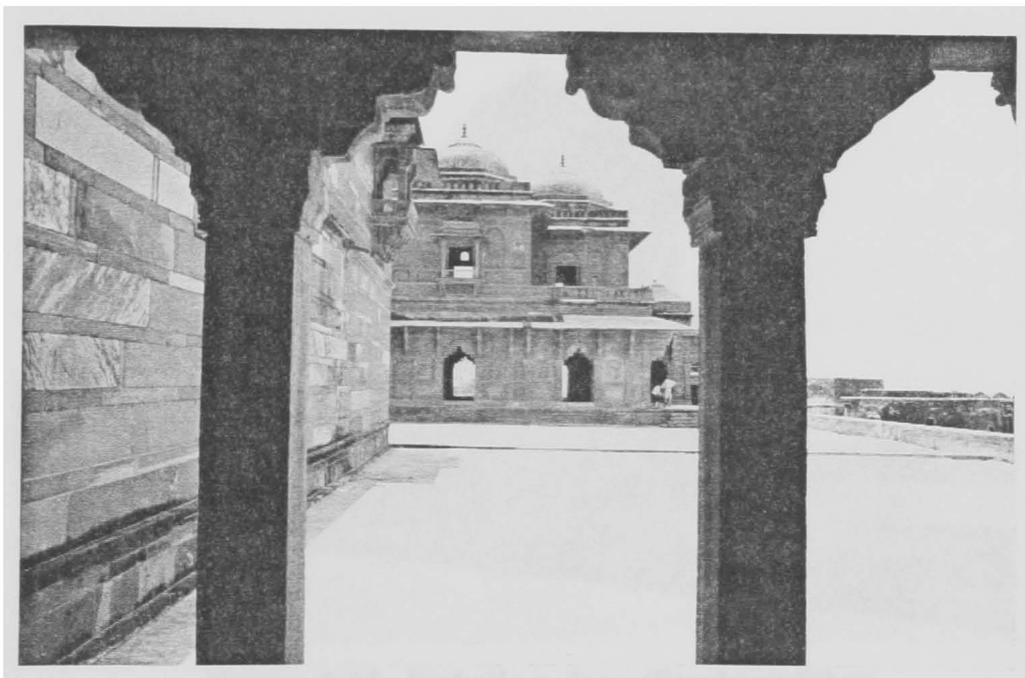
Figure 6-91: Birbal's palace (Fatehpur Sikri)
This framed view is taken from the viaduct.
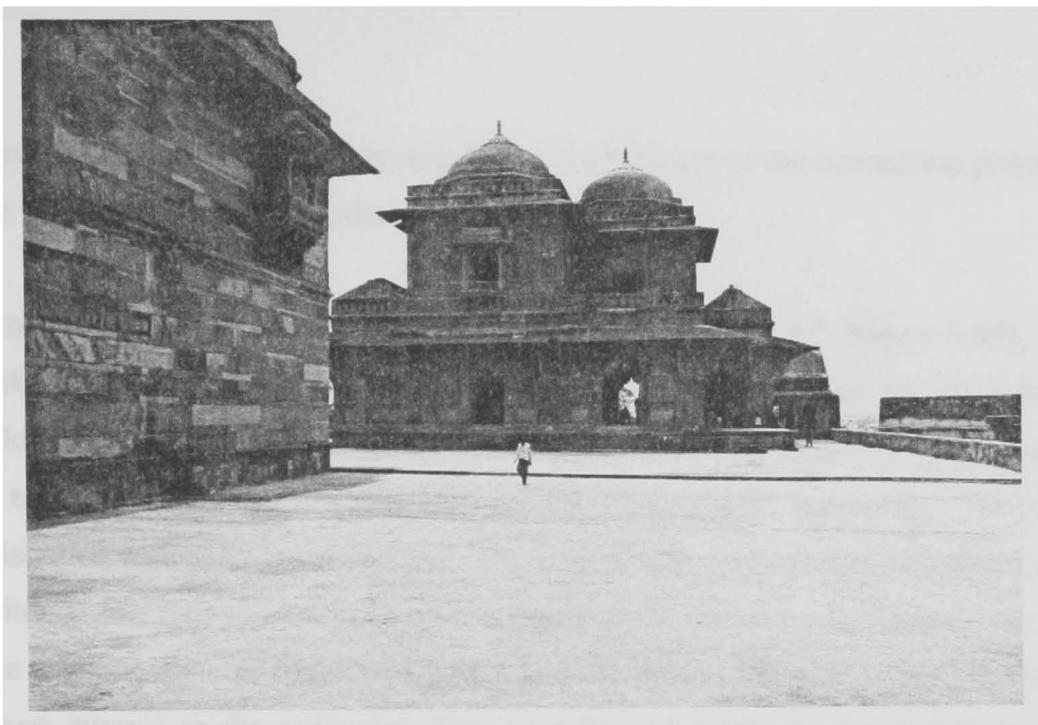
Figure 6-92: Birbal's palace (Fatehpur Sikri)
Birbal's palace is located in the center of a courtyard which is defined by a level change.
In the design of this building more importance was given to mass than void.

Figure 6-93: Birbal's palace (Fatehpur Sikri)
This building is solid and provides a sense of heaviness. It has very few openings in its
walls.

view of the Hathi Pol (cf. Figure 6-95). This was one of the connection points between the city and the imperial palace.

Directly to the east of Birbal's palace is a porter's lodge (cf. Figure 6-94). South of Birbal's house is a building with a central courtyard; this was the royal bazaar. A colonnaded porch runs through the building front while its back wall is made up of pairs of niches separated by engaged columns (cf. Figures 6-96 and 6-97). The roof line is celebrated with an ornamental band. The eave projects outward on the eastern side of the building; this type of eave projection is found in the rest of the buildings in the complex. The shallow dome of Jodhabai's palace and the Buland Darwaza in the background add visual interest to the space (cf. Figures 6-96 and 6-98). In this building, rhythm is created with the repetition of columns. The space inside the building is defined and divided into units with columns and beams. On the back wall, the space between the two engaged columns is divided into two niches. These niches might have been used to display items by the vendors in the royal bazaar.

South of Miriam's Palace is Jodhabai's palace which housed the women of the harem (cf. Figures 6-99). This facade was created in terms of mass and void and its entrance is symmetrical (cf. Figures 6-100 and 6-101). It has two jarokha windows and is also crowned by two pavilions. The entrance opening is defined by an elegant archway in the center with another archway on either side. On the second level, there is a small opening or lookout which was probably used by the security personnel who guarded the palace. On the left side of the entrance facade there is a small unit, a porter's lodge, which is separated from Jodhabai's palace by a level change. Its architectural form is very similar to the porter's lodge at Birbal's palace. The plan of Jodhabai's palace is in the form of a square with a courtyard enclosure which was used for the social activities of the harem. Similarly, the Jahangiri Palace in the Agra Fort was used to house the
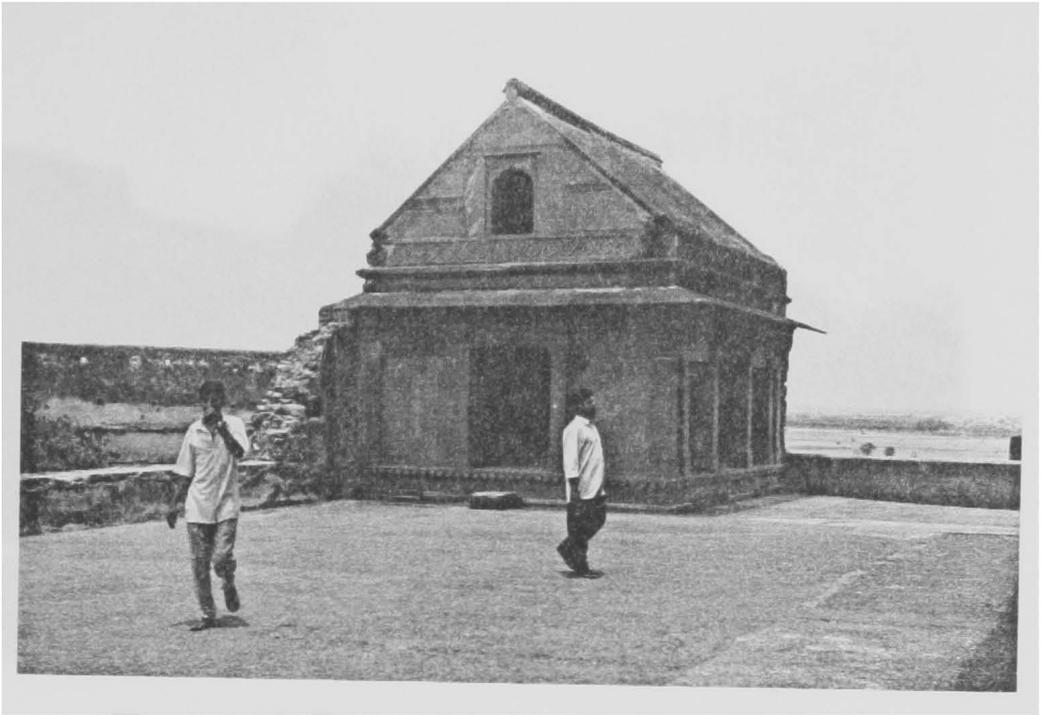
Figure 6-94: The porter's lodge (Fatehpur Sikri)
This is where the person in charge of security lived. Its design is very similar to the porter's lodge at Jodhabai's Palace.
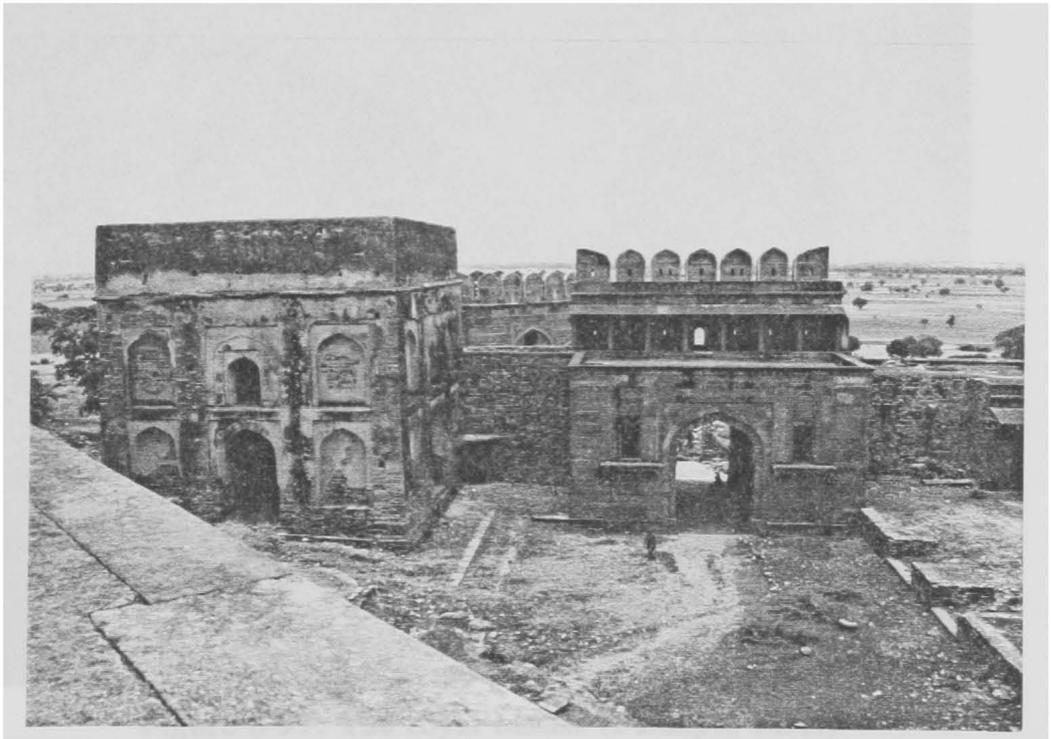
Figure 6-95: Hathi Gate (Fatehpur Sikri)
This structure connected the imperial palace and the city.
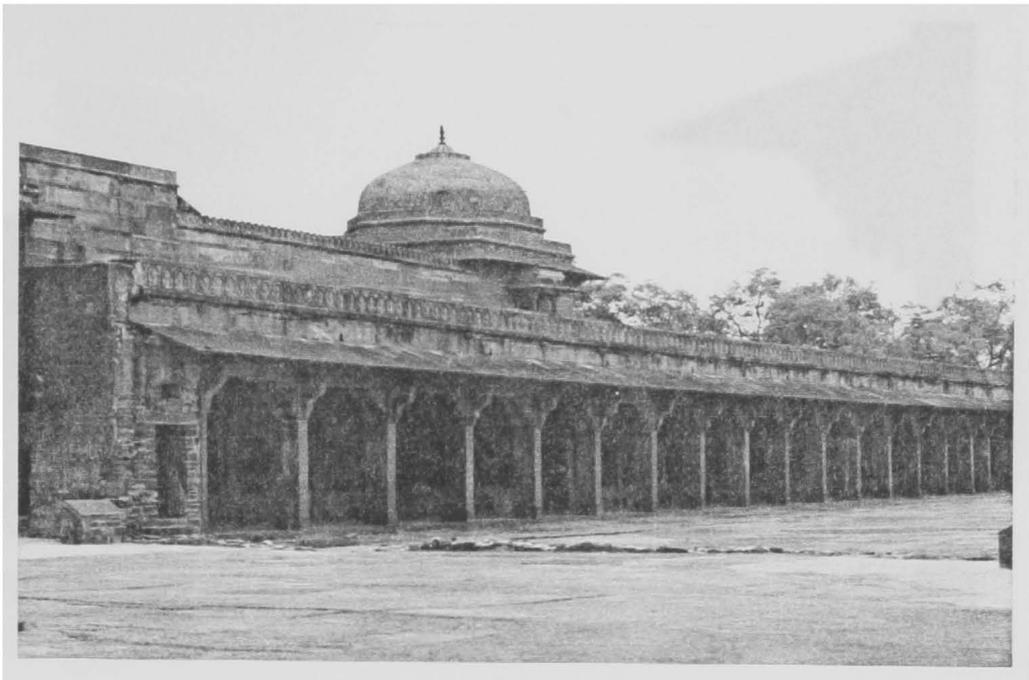
Figure 6-96: The royal bazaar (Fatehpur Sikri)
The colonnaded space runs around the courtyard in the form of the letter "U". In the backdrop is the dome of Jodhabai's palace.
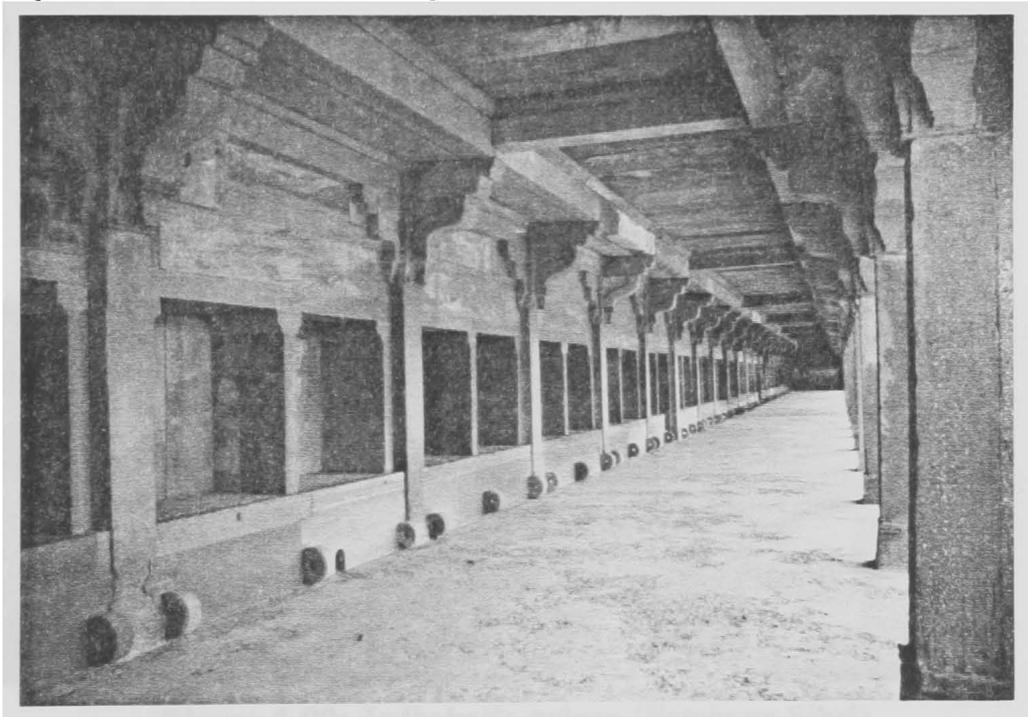
Figure 6-97: The royal bazaar (Fatehpur Sikri)
The niches in the walls may have been used to display articles for sale. The separation of each stall is marked by the engaged columns.

6. SPATIAL DESIGN PRINCIPLES
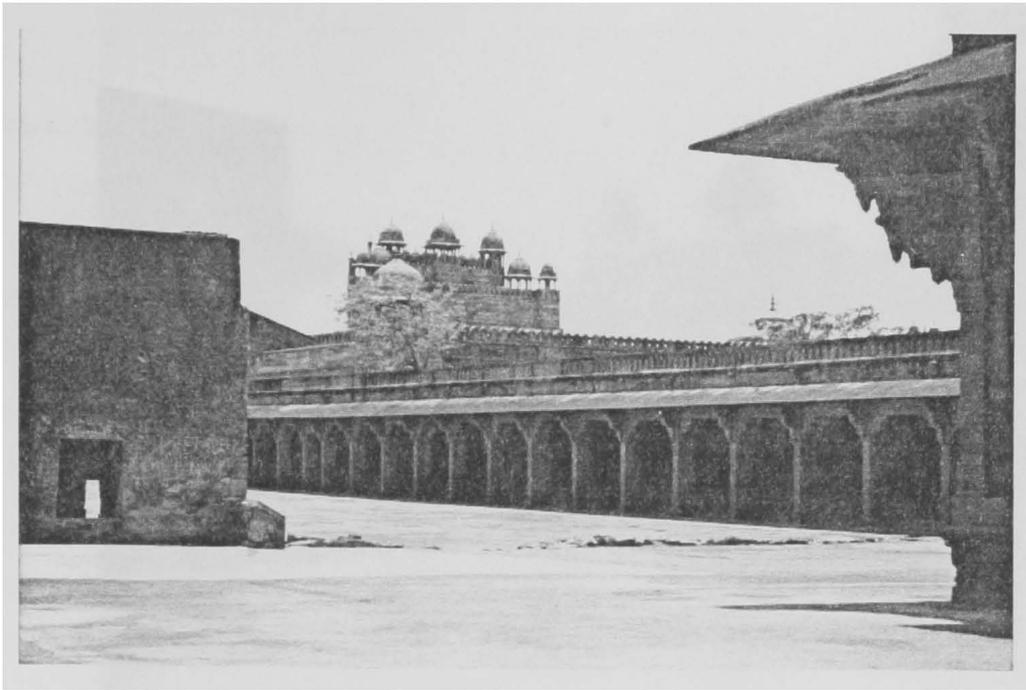
Figure 6-98: The royal bazaar (Fatehpur Sikri)
The Buland Darwaza can be seen in the background.
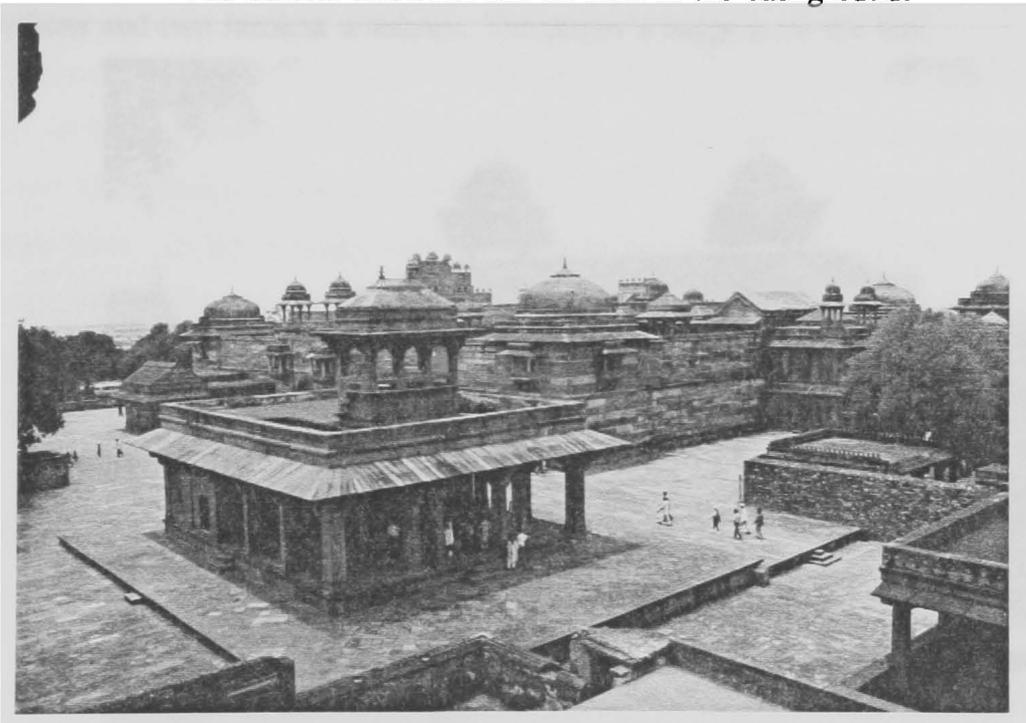
Figure 6-99: Jodhabai's palace (Fatehpur Sikri)
Miriam's palace is located on the left and just behind this structure is Jodhabai's palace.
This view is from the Panch Mahal. It shows a very interesting skyline where a number
of domes and pavilions punctuate the sky.
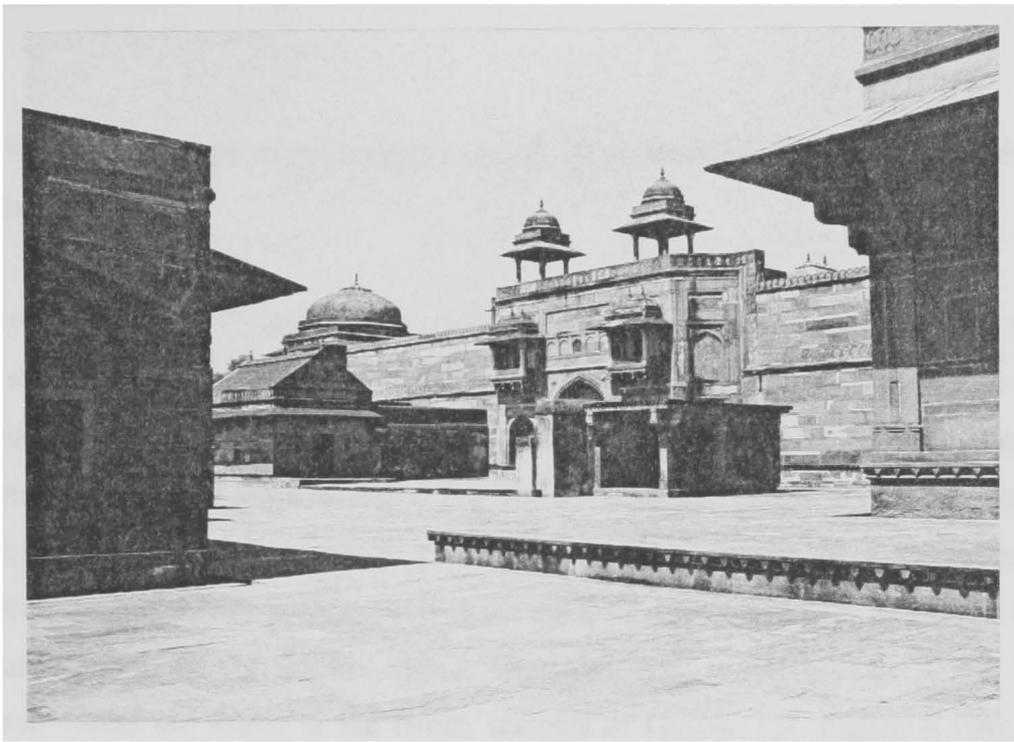
Figure 6-100: Jodhabai's palace (Fatehpur Sikri)
Jodhabai's palace facade is located in the center. The front facade is celebrated with two
pavilions and two Jarokha windows. The porter's lodge is on the left.
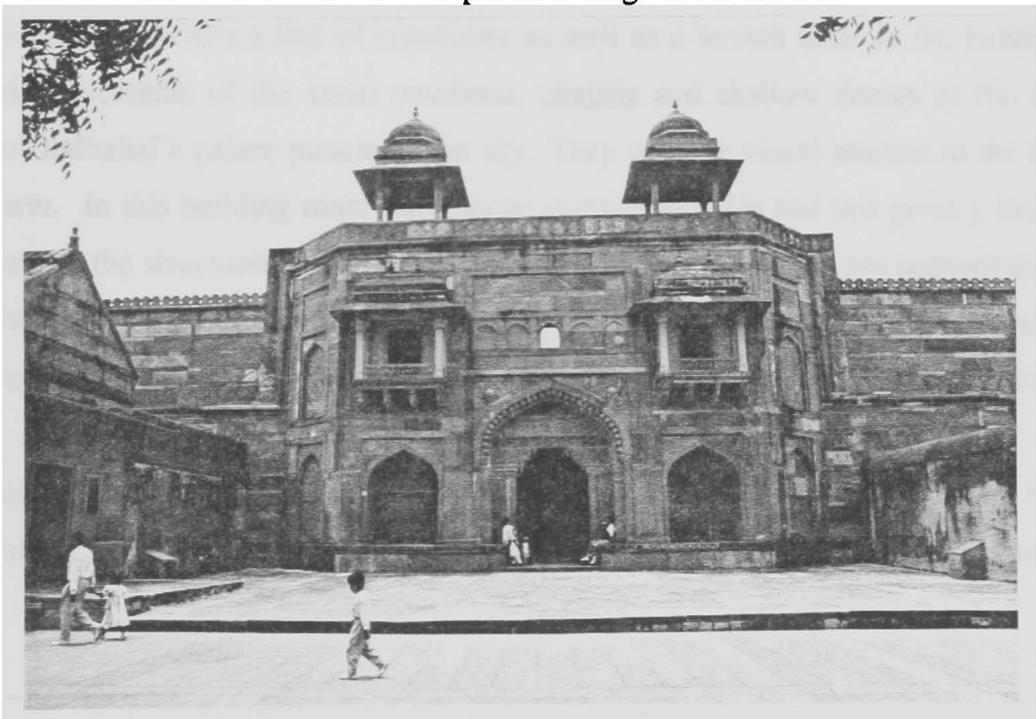
Figure 6-101: Jodhabai's palace (Fatehpur Sikri)
The facade of Jodhabai's palace is symmetrical. The space in front of the
building is defined by a level change.

harem. It also comprises of an enclosed courtyard in the form of a square (cf. Figures 6-105 and 6-106).

The interior courtyard of Jodhabai's palace is an introvert space and its interior facade reflects the principles of symmetry (cf. Figures 6-102 and 6-103). In the center of the courtyard a very small area is defined by low walls. This was the space where the Tulsi[14] tree stood (cf. Figure 6-102). On the western side of the courtyard, opposite the main entrance is the area which was used as a Hindu temple by Jodhabai and the other harem women. The architectural importance of this temple area is created by the rich ornamentation of the interior space. Here the stone is carved like wood. These ornamental forms are found in the Hindu temples of Gujarat (cf. Figure 6-104). The circulation space around the courtyard is again defined by a level change and a projected roof line at the top of the columns. The roof line runs all around the interior of the courtyard and it provides a line of continuity as well as a human scale to the building. The vertical elements of the small pavilions, chattris and shallow domes at the four corners of Jodhabai's palace punctuate the sky. They provide visual interest to the total spatial form. In this building more importance is given to voids and this gives a feeling of lightness to the structures. It also creates more open spaces which are appropriate to the hot Summers of this region in India. At present, the area south of Jodhabai's palace is used to park vehicles. The modern visitor leaves the imperial complex at this point.

South west of the imperial palace complex is the Jami Masjid (cf. Figure 6-107). Like the rest of the imperial palace, it is built of red sandstone. The entrance to the Jami

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[14] The Tulsi is a sacred plant for the Hindus. Its leaves are used in religious rituals and the plant is found in the courtyard of many Hindu homes where it is revered. It was also found in Jodhabai's palace since a large number of the women of the harem was Hindu.

Figure 6-102: Jodhabai's palace: interior courtyard
(Fatehpur Sikri)

An area on the western side was used as a temple by Jodhabai and the harem.

Figure 6-103: Jodhabai's palace: interior courtyard
(Fatehpur Sikri)

The courtyard was used for social activities in the harem and this space displays symmetry.

6. SPATIAL DESIGN PRINCIPLES
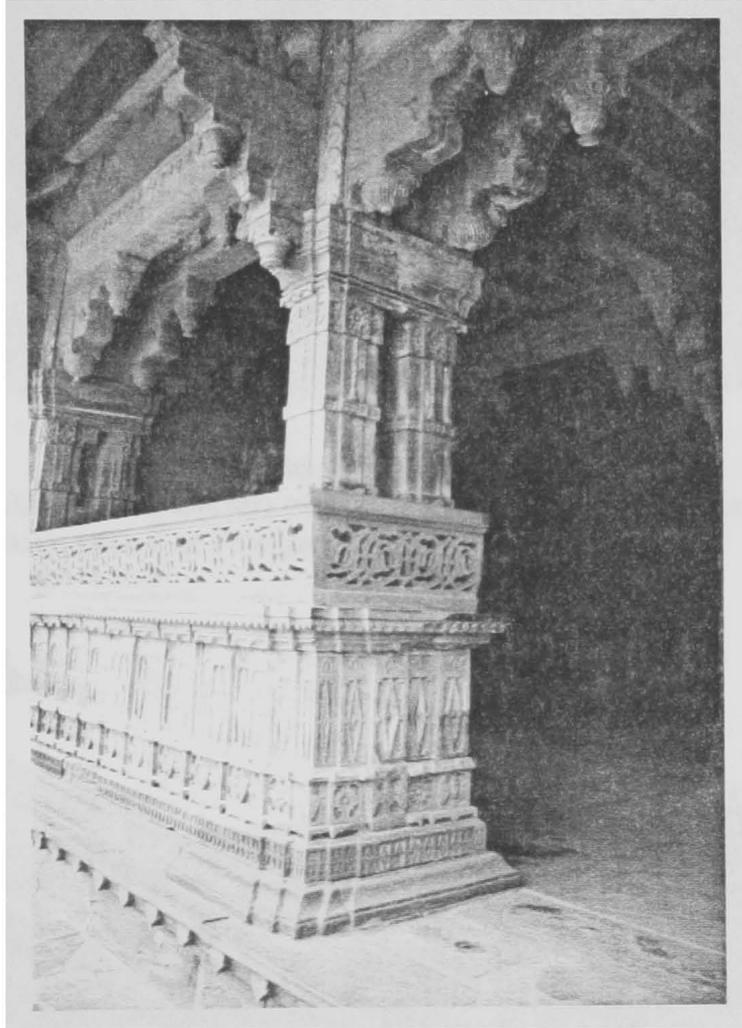
**Figure 6-104: Jodhabai's palace: column detail
(Fatehpur Sikri)**

The interior of the building is carved very profusely. This illustration is from the temple area and its importance is marked by ornamentation.

Figure 6-105: Jahangiri's palace (Agra Fort)
The walls and columns are profusely carved. This palace has an interior courtyard similar
to that of Jodhabai's palace at Fatehpur Sikri.
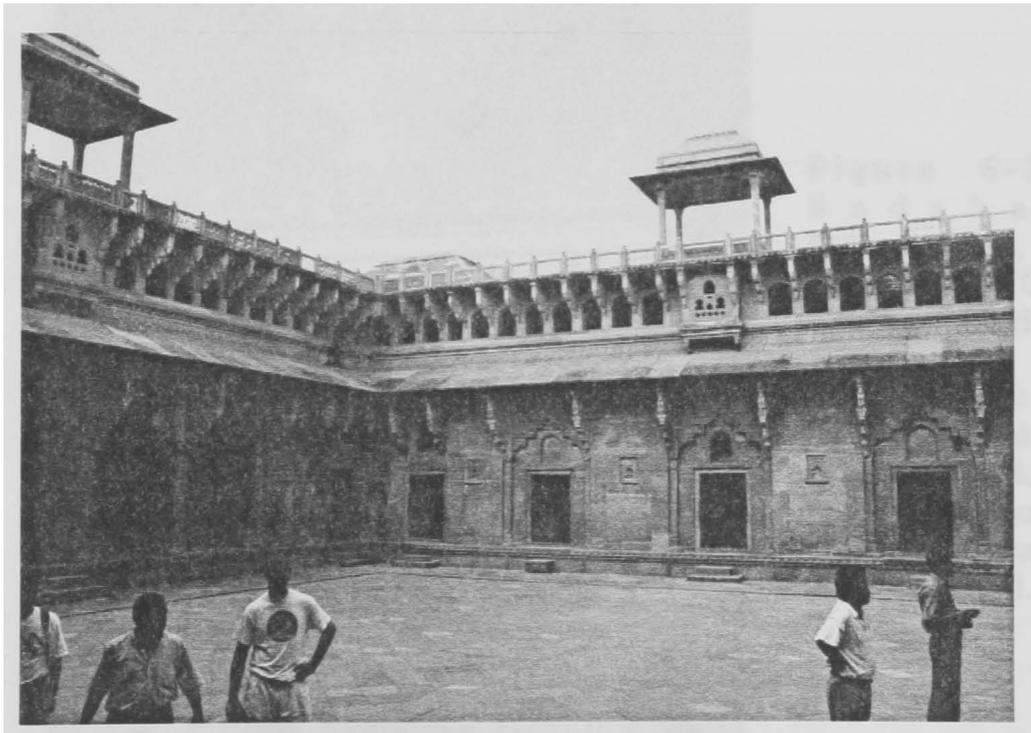
Figure 6-106: Jahangiri's palace (Agra Fort)

6. SPATIAL DESIGN PRINCIPLES
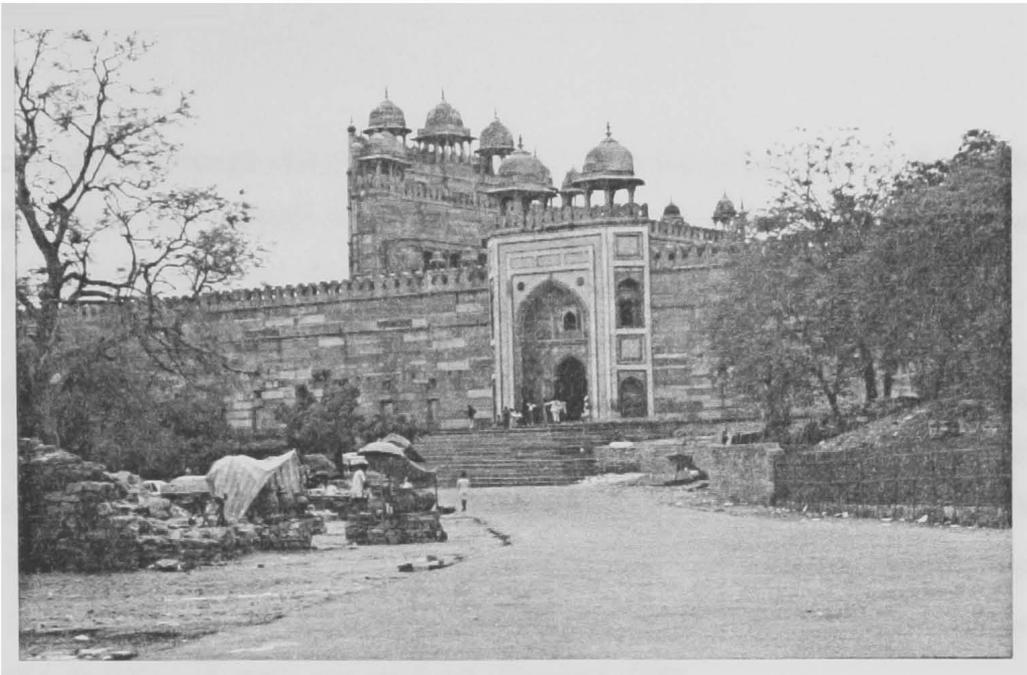
Figure 6-107: The eastern facade of the Jami Masjid
(Fatehpur Sikri)

The entrance to the Jami Masjid complex is through the Badshahi Darwaza which is located at the top of the steps. The Buland Darwaza is in the background.
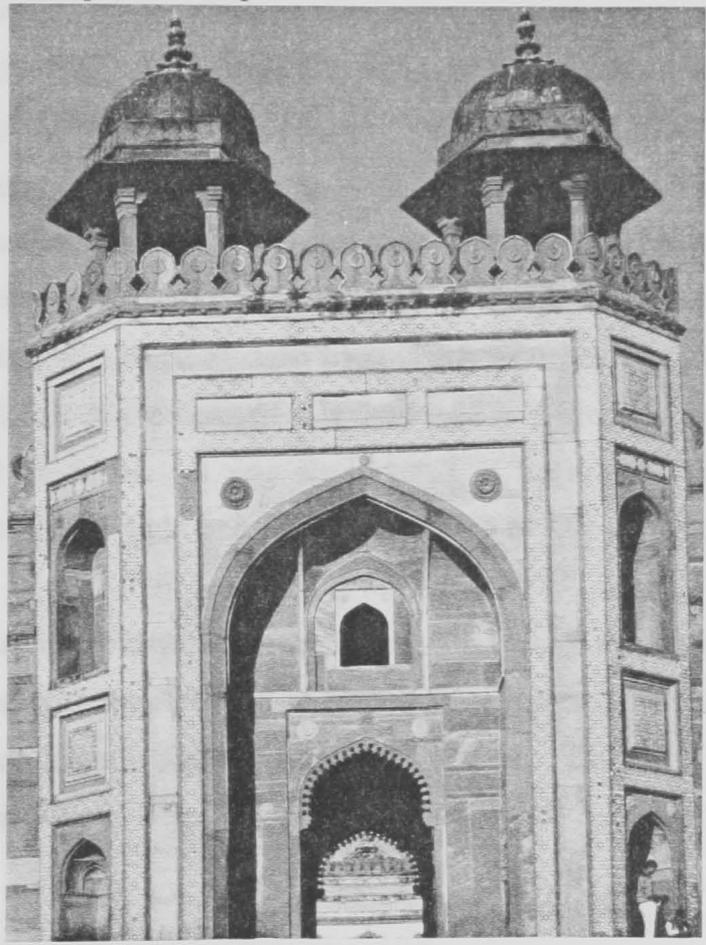
Figure 6-108: Badshahi Darwaza, the Imperial Gate (Fatehpur Sikri)

Here, the white lines are employed to strengthen the design. On its axis is located the main sanctuary of the Jami Masjid.

Masjid complex is through two principal entries: the imperial entrance or the Badhshahi Darwaza, which was created for the Emperor Akbar and the Buland Darwaza, the entrance for his subjects (cf. Figures 6-108 and 6-109).

The imperial entrance lies along the east-west axis of the courtyard, through the imperial gate on the eastern side of the Jami Masjid complex. This entrance is symmetrical and it is located in the center of the eastern facade. It is crowned by two pavilions. White marble was used to emphasize the architectural details. The archway leading into the interior courtyard is covered with decorated ornamentation. This majestic entrance was also treated in terms of mass and void (cf. Figure 6-108).

The second entry or the Buland Darwaza is a gateway placed on the south side of the Jami Masjid complex. This monumental victory gate was erected twenty five years after the construction of the Jami Masjid. It was built to commemorate Akbar's victorious campaign in the Deccan (Gujarat). The particular spot was selected because of its importance as a connection between the imperial palace and the city. The Buland Darwaza displayed the power and strength of the Mughal empire and can be seen from a far distance. It acts as a powerful landmark of the city. This majestic gate is approached by a flight of steep steps which enhances the feeling of monumentality. The gate's plan is in the form of a octagon and it is crowned by three major and a number of small pavilions. It was also treated in terms of mass and void and produces a dramatic play of light and shade (cf. Figure 6-109).

In the interior courtyard, the Jami Masjid is located on the western facade and its mihrab is aligned with the direction of Mecca (cf. Figures 6-110 and 6-111). The mosque uses traditional Islamic pointed arches and domes. The main sanctuary of the mosque is emphasized by a large size portal behind which is a large dome. The east-west axis
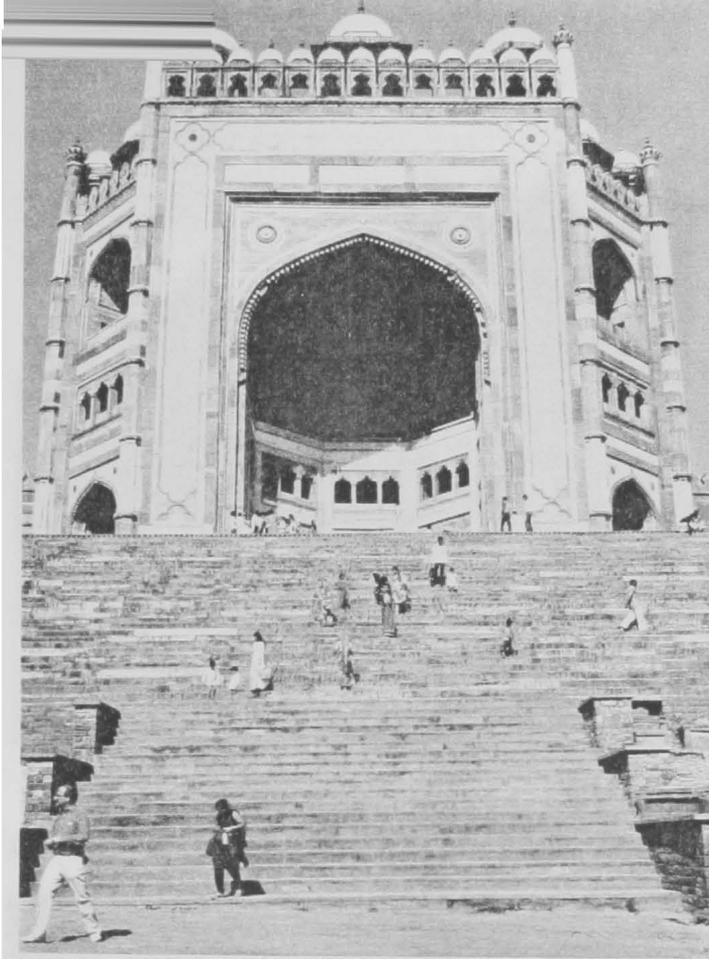
Figure 6-109: Buland Darwaza (Fatehpur Sikri)

It is a landmark of the city because of its monumental scale. It is located at the top of a steep flight of steps and can be seen from many parts of the city.

Figure 6-110: The Jami Masjid facade
(Fatehpur Sikri)

The structure on the right is Salim Chisti's tomb. People are not allowed to wear shoes inside the Jami Masjid complex. The red sandstone becomes very hot in the Summer and it makes walking barefoot quite uncomfortable. A mat is spread for people to walk on.

6. SPATIAL DESIGN PRINCIPLES   222
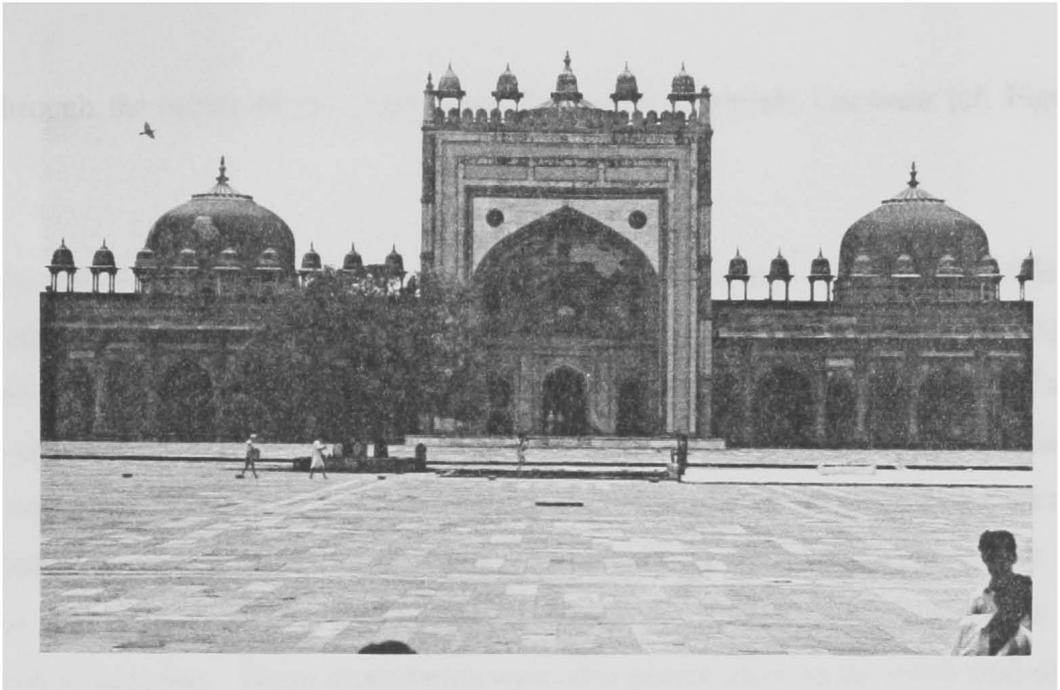
Figure 6-111: Jami Masjid detail (Fatehpur Sikri)
The main sanctuary in the form of a dome is located in the center behind the portal.
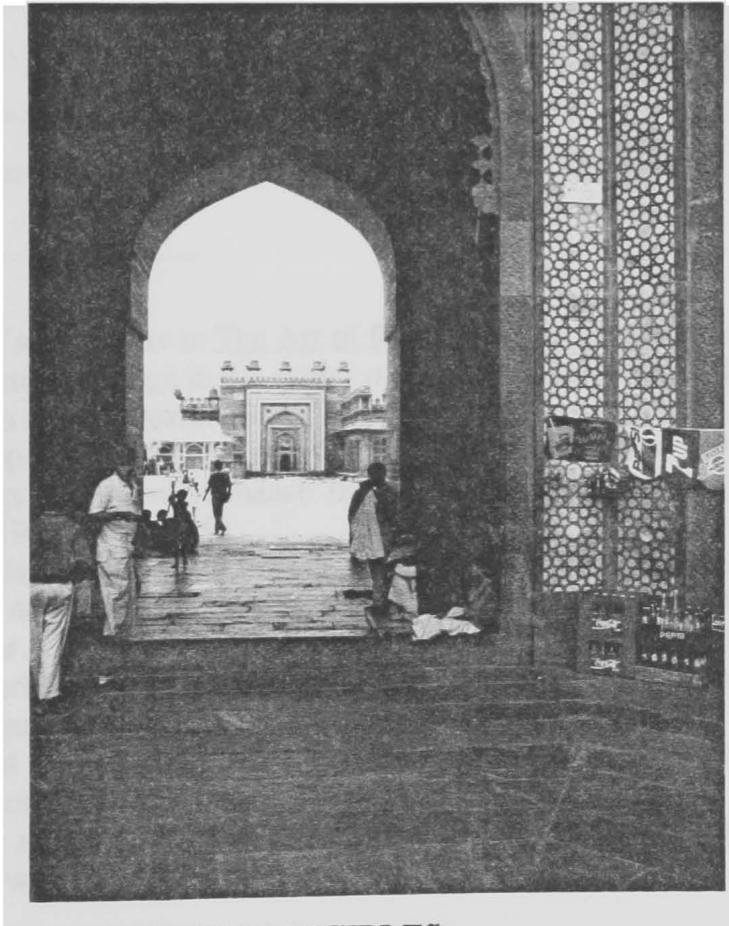
Figure 6-112: Buland Darwaza's interior (Fatehpur Sikri)

6. SPATIAL DESIGN PRINCIPLES

passes through the center of the main sanctuary and the Badshahi Darwaza (cf. Figure 6-116).

Originally, the interior courtyard was built as a symmetrical unit. On the north side, a dummy entrance was created to display symmetry (cf. Figure 6-113). Later on changes were made in the plan to accommodate the tombs of Salim Chisti and Islam Khan. These changes may not have been part of the original scheme since the tombs were not placed symmetrically on the main axis. This seems to have been deliberately done in order to break symmetry and to ensure that observers are not able to view both tombs at the entrances (cf. Figures 6-108 and 6-109). Instead, the designers tried to create an impression of surprise. These monuments were also placed close to the north wall so as not to obstruct the major pedestrian space[17]. The placement of the tombs at the far end of the north wall also provides an opportunity to view the tombs in perspective (cf. Figure 6-114). The north wall which is blank acts as a stage for the tombs of Salim Chisti and Islam Khan. The setting of these buildings in the north end of the courtyard allows pedestrians to move around the tombs. This creates a visually rich experience

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[17] Camillo Sitte in The Art of Building Cities also suggests that designers should not place their buildings in the center of a square plaza, instead they should place them near the sides of the square. Sitte thinks that buildings located at the sides of public squares will keep the middle area free for circulation; it will also provide more space around the buildings which will enhance their visual qualities in terms of the perspective effect (Sitte, 1945, pp. 13-19).

Jan Gehl in Life Between Buildings: Using Public Spaces describes what people do and need in urban spaces. Gehl's research is based on the observation of people's behavior. He suggests the sizes and arrangement of public and semi-public spaces that will spark activity. According to him, public space is a stage where everyday activity takes place. Successful spaces do not result by accident but they have to be crafted and nurtured through design and planning. Gehl recommends that the center of the urban spaces or square be left empty and to "let life fill it up." Another suggestion is to provide an opportunity to sit on the edges so that people's activities in the middle area can be watched (Gehl, 1987).

6. SPATIAL DESIGN PRINCIPLES
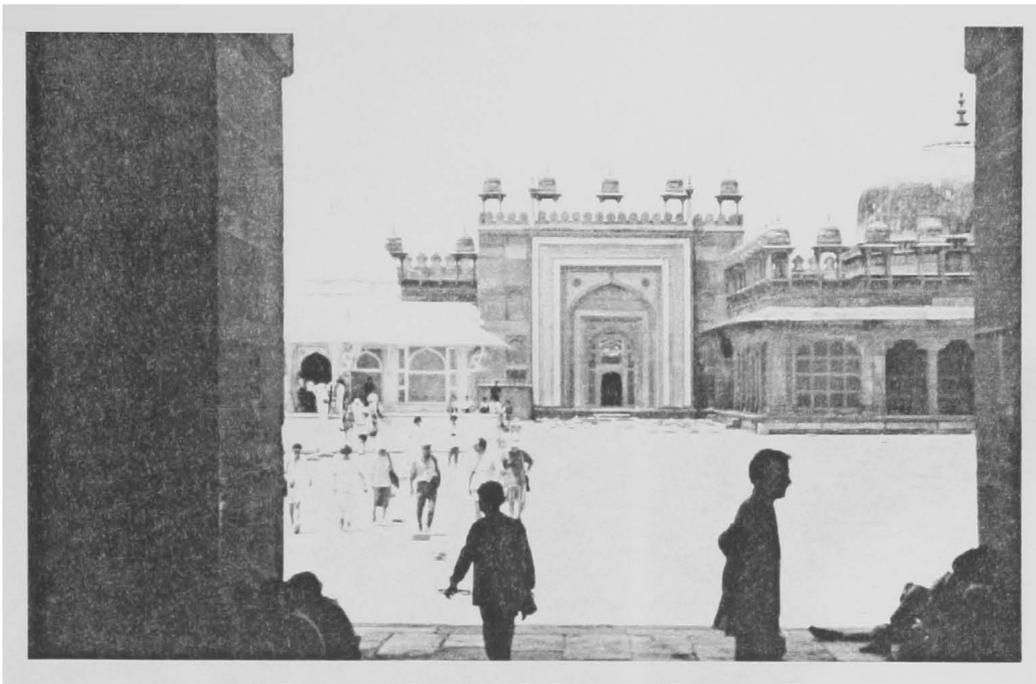
Figure 6-113: Dummy gate in the north wall (Fatehpur Sikri)
A dummy gate was placed on the north-south axis which passes through the Buland Darwaza. This view is from inside the colonnaded space.
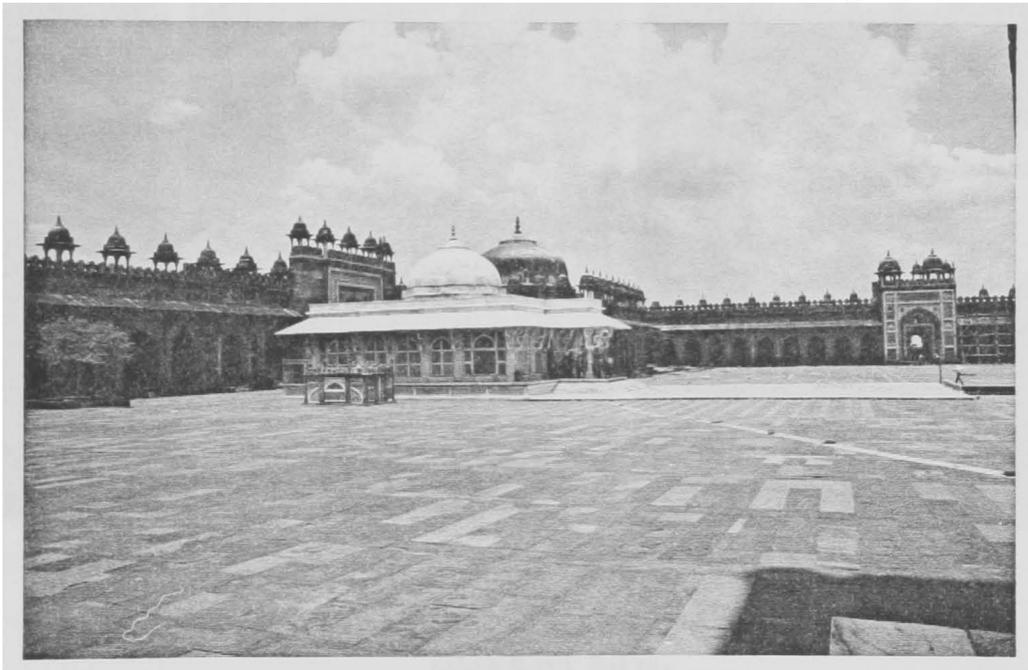
Figure 6-114: Salim Chisti's tomb and the Badshahi Darwaza (Fatehpur Sikri)
The tombs of Salim Chisti and Islam Khan are located on the left. The Badhshahi Darwaza can be seen in the eastern facade. The placement of the tombs closer to the north wall keeps the middle space free for circulation. It also helps to see the tombs in perspective.

6. SPATIAL DESIGN PRINCIPLES   225
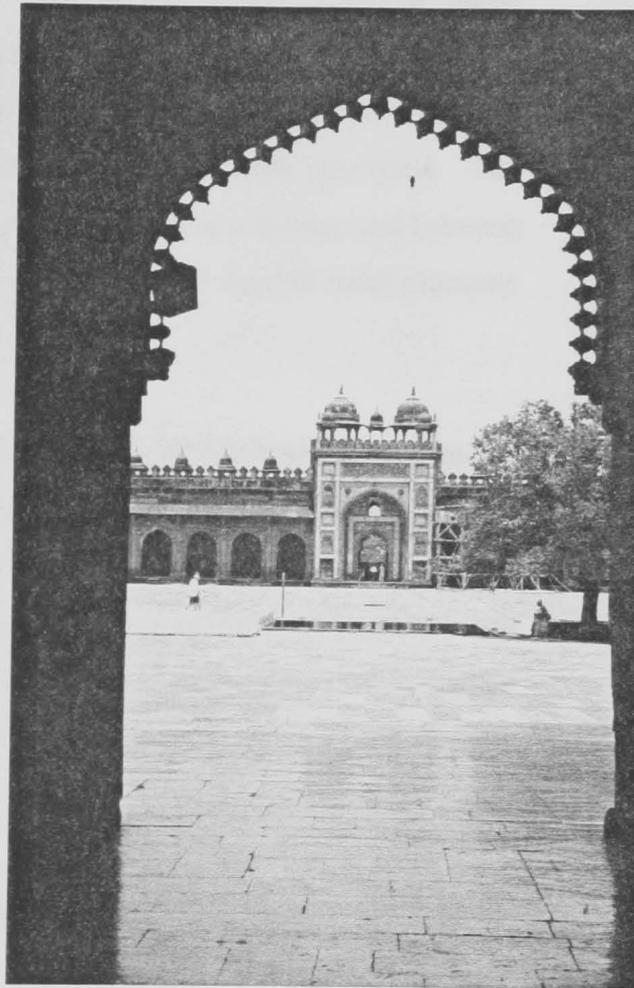
**Figure 6-115: Interior of the Jami Masjid on the left
(Fatehpur Sikri)**
The Jami Masjid has a high ceiling and ornamental columns.

**Figure 6-116: Badshahi Darwaza, the imperial gate on the right
(Fatehpur Sikri)**
The east-west axis passes through the Badhshahi Darwaza and the framed view is
from the main sanctuary.

because the buildings can be viewed from different angles and from behind the colonnaded veranda (cf. Figure 6-118).

As the observer enters the Jami Masjid courtyard through the Buland Darwaza, Salim Chisti's tomb strongly captures the attention and acts as a focal point. The white marble of which it is made, sets a contrast against the red sandstone. The tomb is also located on a white marble platform which defines its space in the red sandstone courtyard. The walls of Salim Chisti's tomb are of perforated marble which gives a connection between the interior and the exterior space. The pattern of the perforated marble casts dramatic shade and shadows within the tomb (cf. Figure 6-115).

At present, a number of shops exist in the interior chamber of the imperial gate or the Badshahi Darwaza and in the colonnaded veranda on the eastern and southern sides of the courtyard, between the two gates. The interior facade of the Buland Darwaza which was conceived in terms of mass and void is crowned by a number of pavilions and archways (cf. Figure 6-117 and 6-119). The facade of the interior courtyard is topped by pavilions or chattris all around (cf. Figure 6-120). The interior space of the mosque flows outside and vice versa (cf. Figure 6-115).

Near the eastern facade of the Jami Masjid complex, a path takes visitors down to the area which was once very close to the lake (cf. Figure 6-122). At the far end of the complex, on the north-west side, there is a small tower known as Hiran Minar which is placed on a rectangular platform[18] (cf. Figures 6-133 and 6-134). This tower is of a circular form and is crowned by a pavilion. Inside, there is a circular staircase which

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[18] Unfortunately, modern visitors are hardly taken to this side of the complex. They are only shown the main imperial palace and the Jami Masjid. While in India, I met a number of Indian and foreign tourists who have neither heard nor seen this part of the city. It seems that this area is neglected by the Archeological Survey of India.
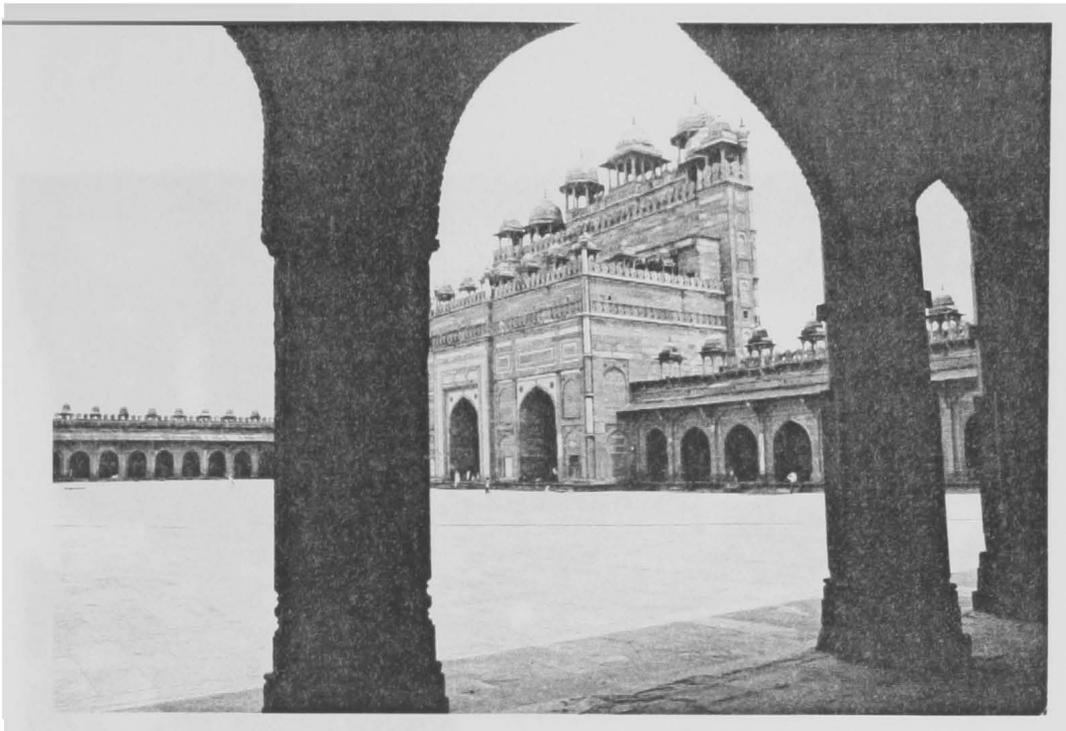
Figure 6-117: Buland Darwaza: framed view (Fatehpur Sikri)
This is a view of the Buland Darwaza from the inside of the courtyard. The monumental scale of the Buland Darwaza is connected with the colonnaded space by stepping down.

Figure 6-118: Tombs of Salim Chisti and Islam Khan: framed view (Fatehpur Sikri)
The view is from inside the colonnaded space of the Jami Masjid.
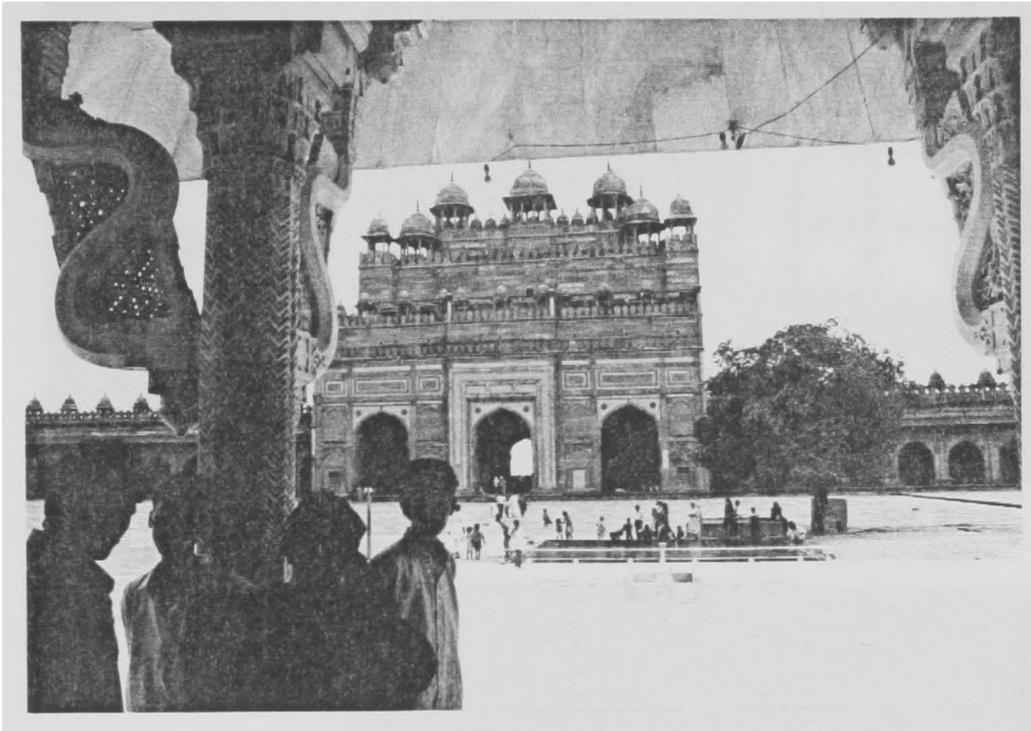
Figure 6-119: Buland Darwaza: framed view (Fatehpur Sikri)

Figure 6-120: Colonnaded veranda (Fatehpur Sikri)

The northern facade with the dummy gate and the tombs of Salim Chisti and Islam Khan in front.

6. SPATIAL DESIGN PRINCIPLES
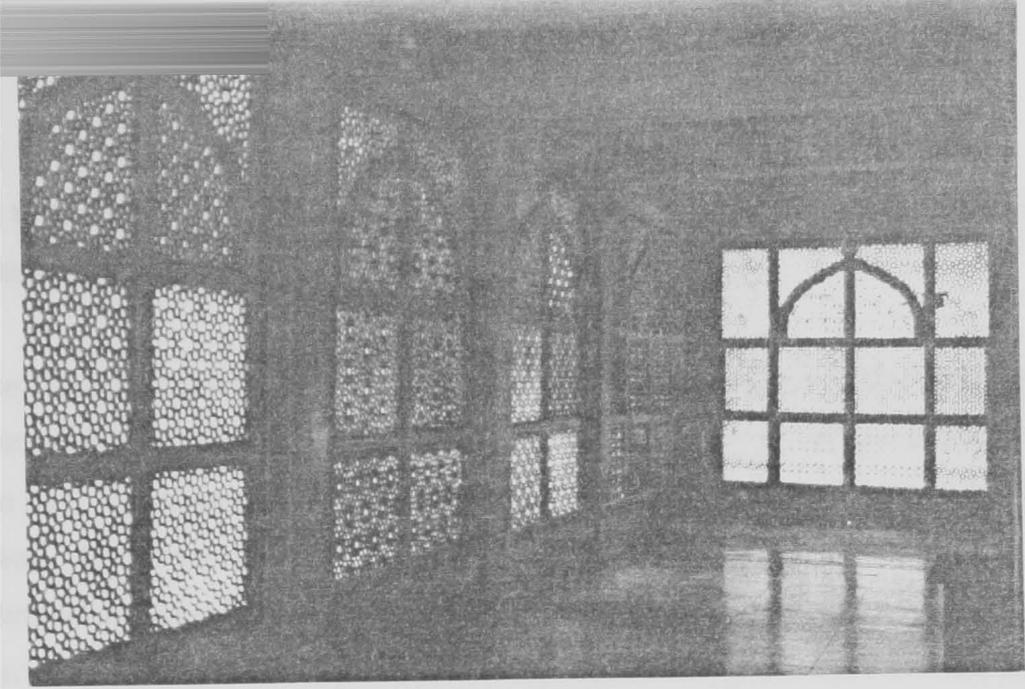
Figure 6-121: The interior of Salim Chisti's tomb (Fatehpur Sikri)
This is the perforated marble screen which allows light into the tomb.
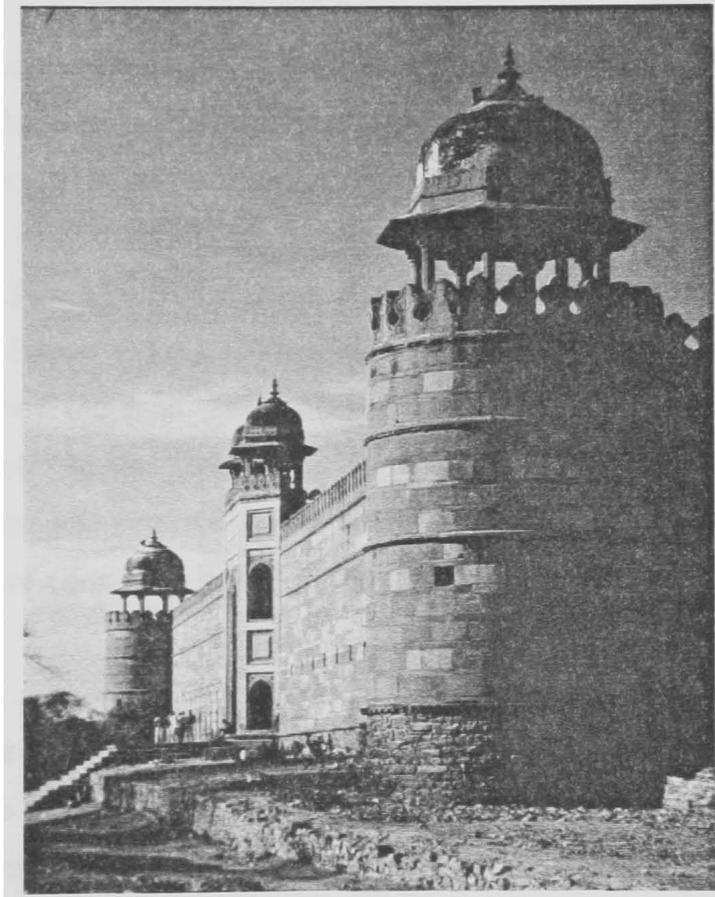
Figure 6-122: The outer wall of the Jami Masjid (Fatehpur Sikri)
The road in front of the facade connects the building with the Hiran Minar.

6. SPATIAL DESIGN PRINCIPLES

leads to this pavilion. The top of the tower provides interesting views of the complex and surrounding landscape.

To the right of the Hiran Minar is the caravanserai (cf. Figures 6-129 to 130). Although this structure was built before Akbar founded Fatehpur Sikri, it became an important part of the city. The caravanserai was designed and planned according to the topography of the land. It contains a large interior courtyard which is divided into two levels. The building was conceived in the form of steps so that it fits with the sloping ground (cf. Figure 6-131). There are approximately one hundred rooms around the courtyard with small rectangular openings for each room. Each room has access to the outside terrace.

The entrance facade of the caravanserai is a large portal with five arches (cf. Figures 6-130); the main entrance in the center is defined by a large archway and on either side of this are two decorative arches. The arches used here are the true arches which are used for structural purposes and not for decoration. This type of arch is found in Islamic architecture (cf. Figure 6-132). The front corners of the caravanserai are also defined by octagonal towers (cf. Figure 6-129). The different levels of the terraces are connected by steps and over the main archway, steps are also used to provide a connection to the road level. In the background, the Jami Masjid complex provides visual diversity to the skyline (cf. Figure 6-130). The straight road which ran in front of the caravanserai may have connected it with the settlement of the era.

The road on the north-east side of the caravanserai is paved with very rough textured stones which probably date back to Akbar's time (cf. Figures 6-126 and 6-127). It slopes upwards and leads to the imperial palace. On the left of this access road are two major structures which blend into the landscape. These are the waterworks and an octagonal shaped covered well. These structures are connected by a covered colonnaded corridor (cf. Figure 6-128). Directly behind, there is a long one story building which

6. SPATIAL DESIGN PRINCIPLES

Figure 6-123: Rear view of the Hathi Pol (Fatehpur Sikri)
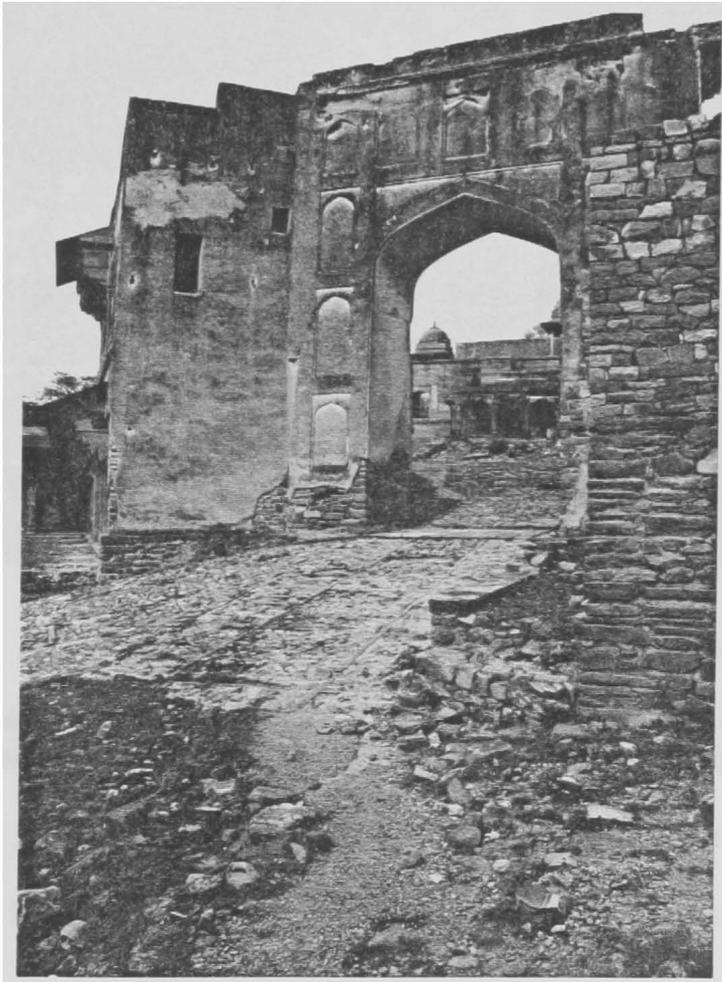
Figure 6-124: Archway Leading to the Harem Garden

During Akbar's era, this gate led to the Diwan-i-Amm. It was also connected to the Harem Garden.
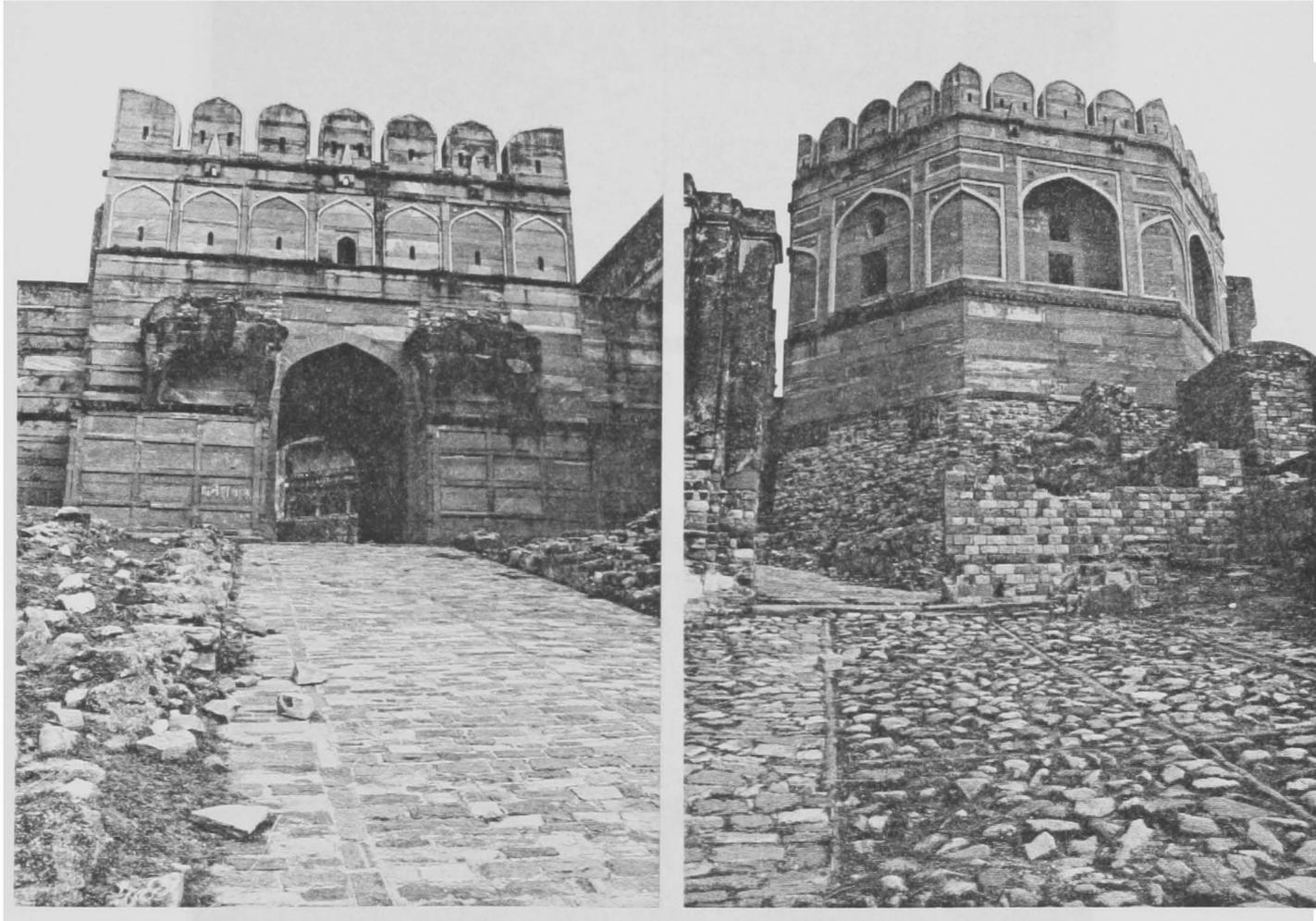
Figure 6-125: Hathi Pol (on the left)
Fatehpur Sikri
There are two elephants on the front facade. In this gateway, drums were played to inform the people of Akbar's departure and arrival at the imperial palace.

Figure 6-126: Octagonal tower (on the right)
Fatehpur Sikri
This octagonal tower may have been used as a security watchtower.

6. SPATIAL DESIGN PRINCIPLES

Figure 6-127: The pathway (Fatehpur Sikri)
This pathway provided the connection between the city and the palace.
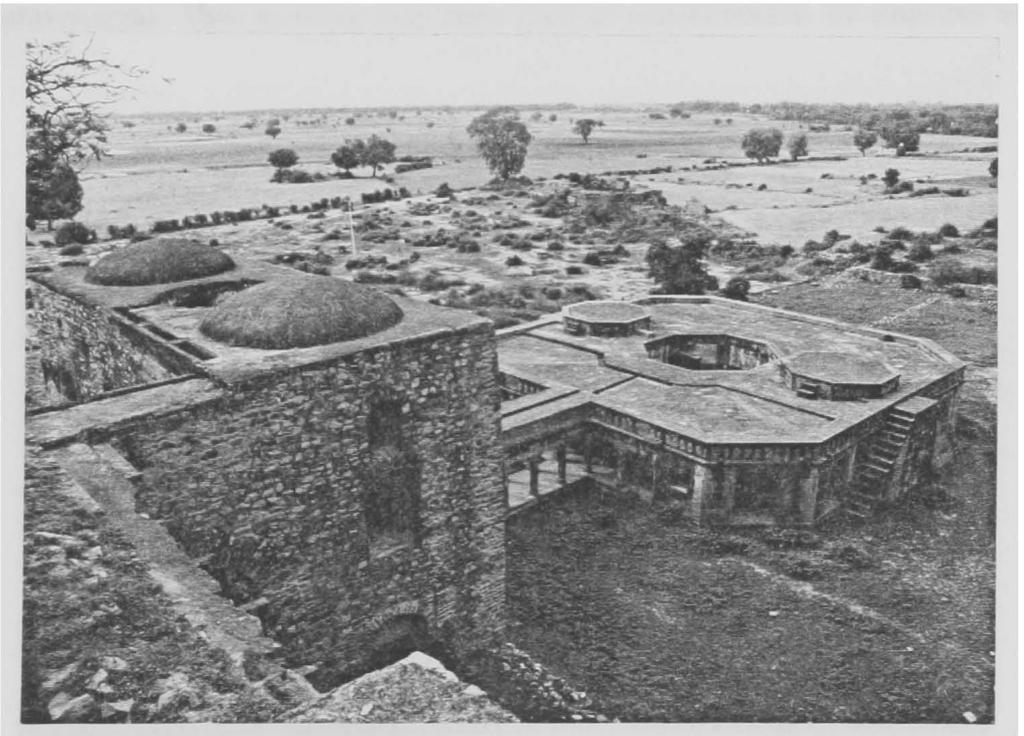
Figure 6-128: The water well (Fatehpur Sikri)
The octagonal shaped structure is the well. This same well may have been used by the people staying at the caravanserai. It may have also supplied water to the imperial palace.
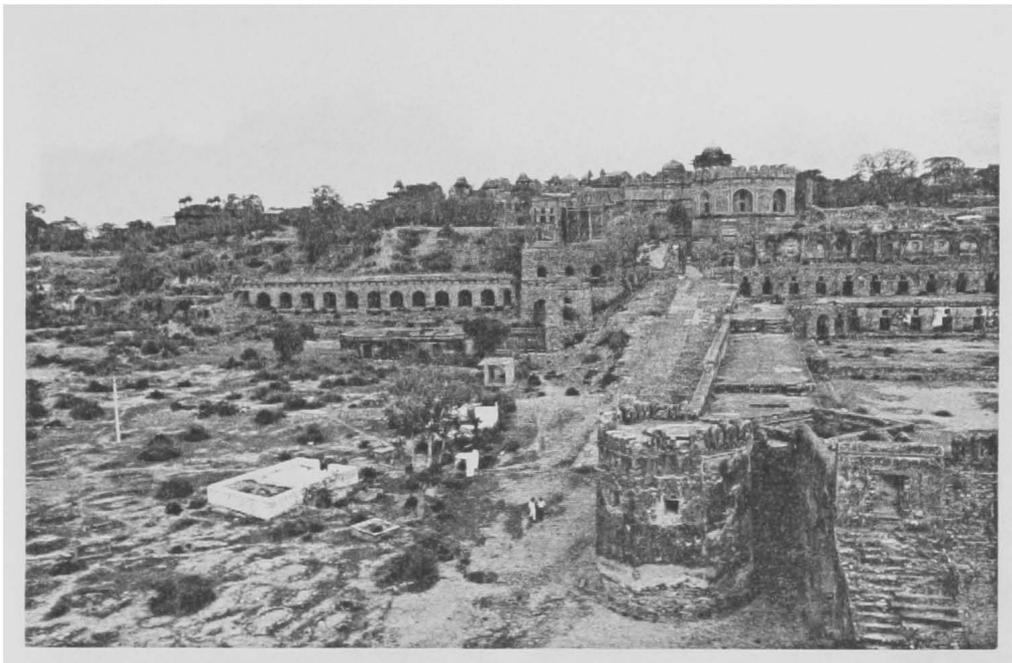
Figure 6-129: Caravanserai (Fatehpur Sikri)

This structure was built before Akbar's era. It was built according to the lay of land. On the left side, there is a long one story building which was probably built at the same time as the caravanserai. This building may have used to accommodate the pilgrims visiting Chisti.
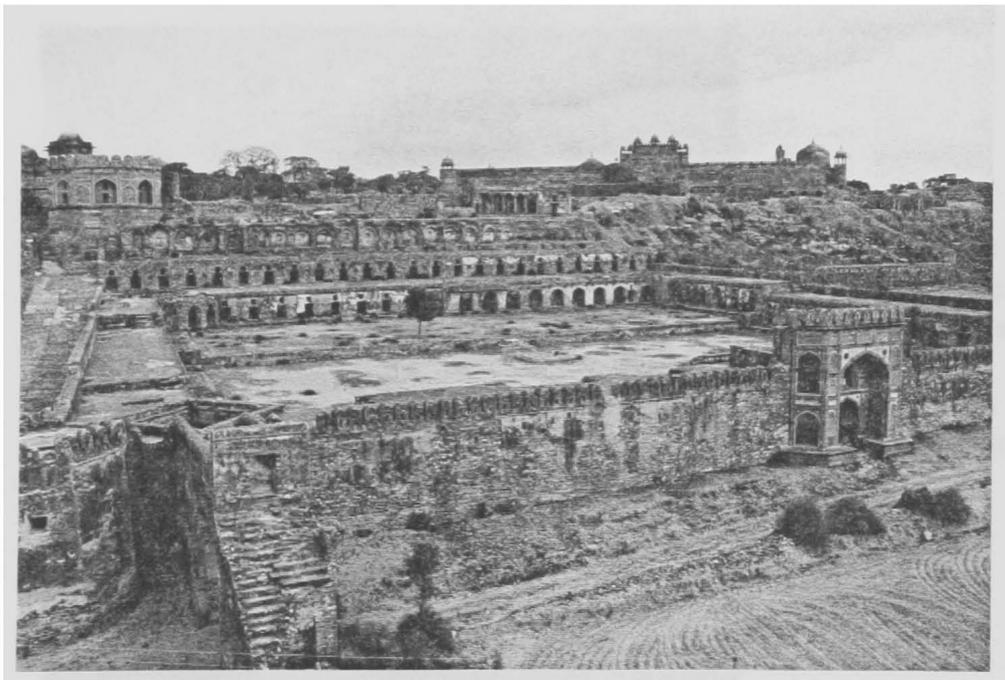
Figure 6-130: Caravanserai (Fatehpur Sikri)

The structure has a central courtyard which is divided into different spaces by level changes. The main entrance is through the portal in the front facade. The Jami Masjid complex can be seen in the background.

6. SPATIAL DESIGN PRINCIPLES
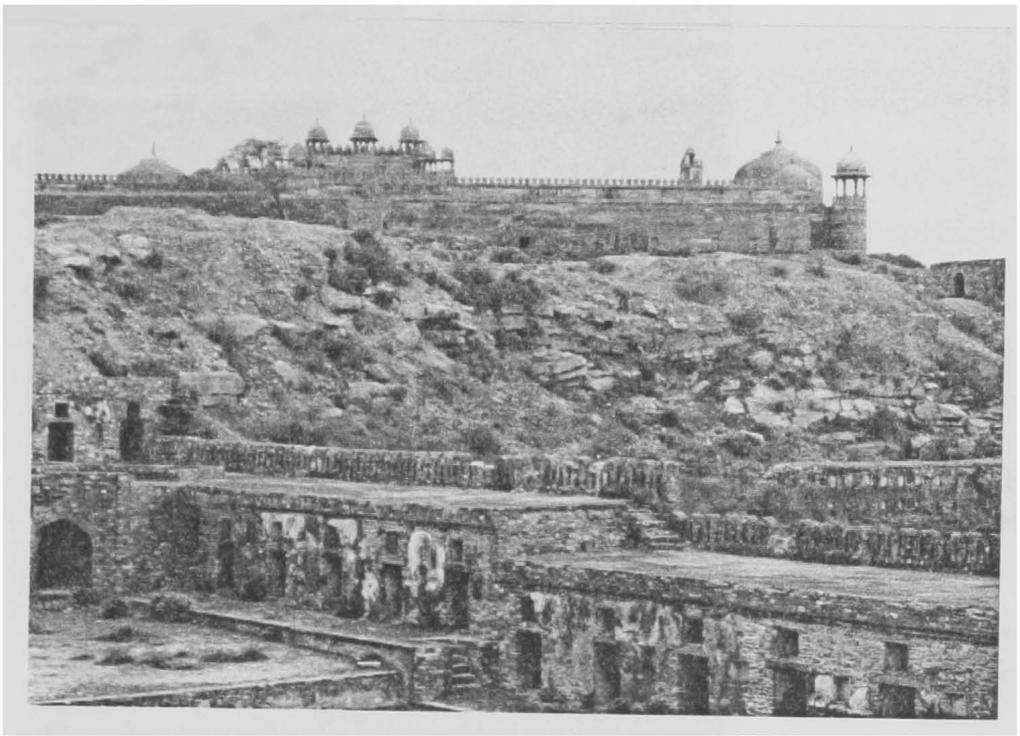
Figure 6-131: Caravanserai detail (Fatehpur Sikri)
Different buildings were connected by level changes. The Jami Masjid can be seen in the background
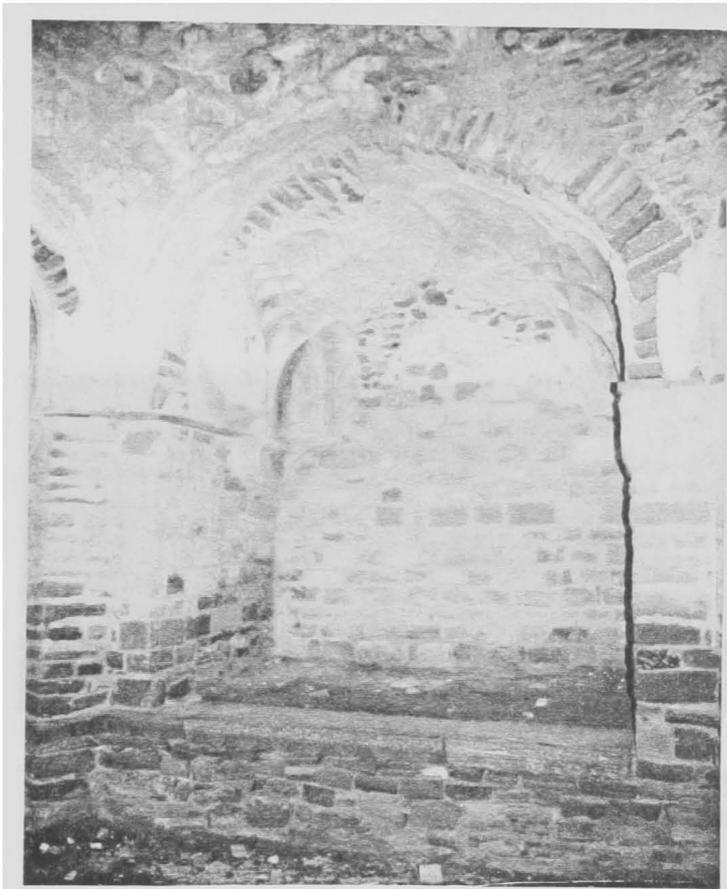
Figure 6-132: Caravanserai's interior (Fatehpur Sikri)
True arches were used in this structure.

6. SPATIAL DESIGN PRINCIPLES
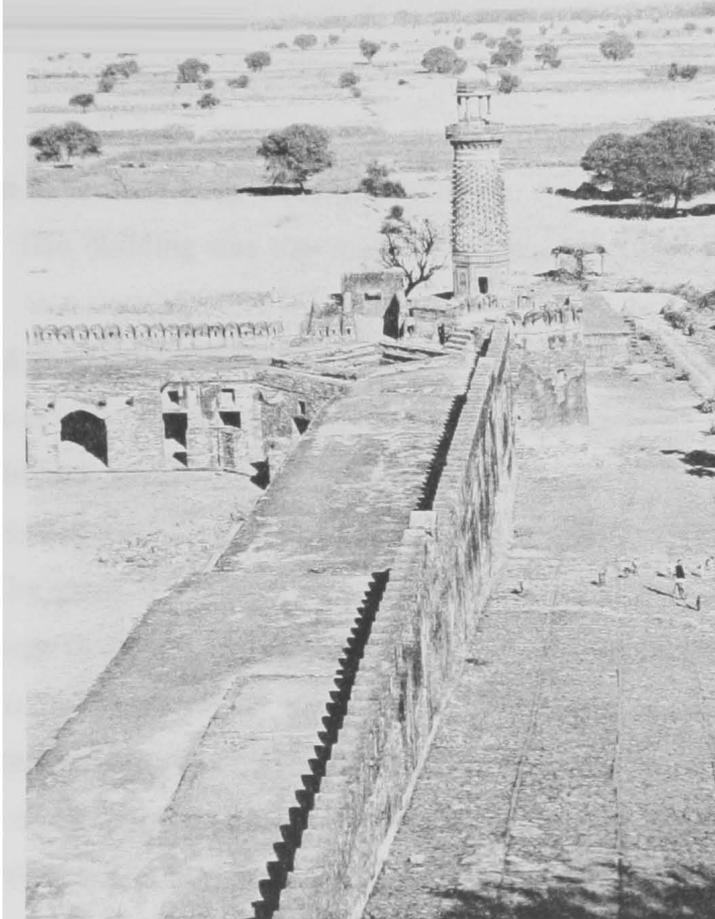
Figure 6-133: Hiran Minar (Fatehpur Sikri)

The Hiran Minar is the small tower in front and the caravanserai is on the left.
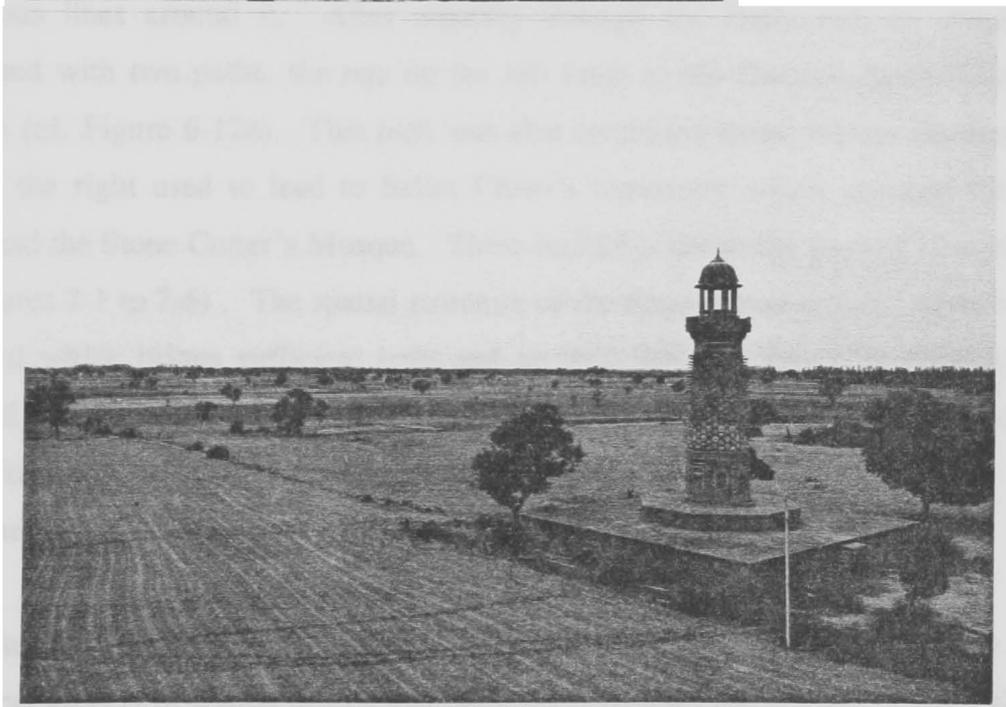
Figure 6-134: Hiran Minar (Fatehpur Sikri)
The Hiran Minar is located at one edge of the city. At present,
it is surrounded by agricultural fields.

6. SPATIAL DESIGN PRINCIPLES   237

seems to have been built more or less at the same time as the caravanserai (cf. Figure 6-129). This building was also used to accommodate the pilgrims visiting Salim Chisti.

The road continues and bends towards the left, in a north-easterly direction. This bend creates a sense of surprise since the view is unfolded with every step forward. The road passes through a gate known as the Hathi Pol, so called, because its main opening is decorated with two stone elephants in relief facing each other (cf. Figure 6-123 and 6-125). The gated facade is symmetrical in design and it is crowned by decorative forms in the shape of arches. The vertical effect of the facade has been broken by the creation of horizontal bands on the surface. Inside this gate, drums were played at the arrival or departure of the emperor. On its right is an octagonal tower which was meant for the security of the complex (cf. Figure 6-126). The octagonal shape provides visibility in all directions. The horizontal effect of this vertical tower is again created by providing continuous lines around it. After entering through the Hathi Pol, an observer is confronted with two paths, the one on the left leads to the Diwan-i-Amm through an archway (cf. Figure 6-124). This path was also connected to the Harem Garden. The path on the right used to lead to Salim Chisti's monastery which included the Rang Mahal and the Stone Cutter's Mosque. These buildings are in the stage of deterioration (cf. Figures 7-1 to 7-6) . The spatial structure of the Rang Mahal is based on an interior courtyard which brings sufficient light and air into the building. The doorway uses trabeated construction and its main feature is its arched portal and two pedestals. A unique feature of this building is the use of thin columns with carved brackets and a base in its interior.

From the above site analysis and an examination of the layout of Fatehpur Sikri, theoretical aspects of spatial design and planning principles are laid out in the following section.

6. SPATIAL DESIGN PRINCIPLES

6.4. SPATIAL LAYOUT DESIGN AND PLANNING PRINCIPLES

The spatial structure of Fatehpur Sikri is unique; it employs interlocking courtyards to create spatial order. Courtyards were important for holding court activities and festivities. They were a very important element and were used to create spatial order in Buddhist, Hindu and Islamic architecture and town planning. Courtyards formed the nucleus of houses where most of the outdoor activities took place. They were used for drying grain, social gatherings and for sleeping during Summer nights. Courtyards are still important as a design element in traditional agricultural society of the Indian subcontinent, the Middle East and Central Asia.

The spatial structure of the imperial complex of Fatehpur Sikri can be compared with the Delhi Red Fort. Both complexes are rectilinear and employ geometry in their layouts, but there the similarity ends. The layout of Fatehpur Sikri is dynamic whereas the latter is static. In Fatehpur Sikri, the buildings can be viewed from different vantage points as well as along their axes. In contrast, the observer can only observe buildings in the Delhi Red Fort along their axial layouts.

The individual buildings of Fatehpur Sikri are symmetrical[19] but in their spatial layout, the rules of symmetry are broken and the buildings were deliberately placed asymmetrically. Here, the designer seems to understand the concept of movement in its third dimension. The imperial complex at Fatehpur Sikri was designed to be observed

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[19] The term symmetry, as it is used these days, has lost its original meaning of harmony and balance of form. In modern terminology, it means a strict duplication of forms on both side of an axis or mirror like reflection. According to Vitruvius, symmetry is "a proper arrangement between the different parts and the whole general scheme, in accordance with a certain part selected as standard." cf. Morgan (1960) Vitruvius: Ten Books on Architecture. p. 14.

6. SPATIAL DESIGN PRINCIPLES

from a number of angles in order to create a dynamic visual experience. Its beauty[20]
lies not only in its individual monuments, but in their relationship to one another and to
the total urban context.

6.5. MULTIPLE AXES

The spatial order of the imperial complex according to Petruccioli (1987, p. 62) was
created by the use of multiple axes: five north-south axes and four east-west axes[21] (cf.
Figure 6-135). The north-south axis (V1) passes through the royal bazaar. The second
axis (V2) proceeds through Jodhabai's palace while the third axis (V3) passes through
Miriam's Palace. The fourth one (V4) goes through the Diwan-i-Khas and the Dafter
Khana whereas the fifth one (V5) passes through the Anup Talao.

The first, east-west axis (H1) passes through the Diwan-i-Khas and intersects with the
axis (V4) in its center whereas the second, east-west axis (H2), goes through the
emperor's pavilion at the Diwan-i-Amm. The third (H3) proceeds through Miriam's
palace, Birbal's palace and the Anup Talao. The fourth east west axis (H4) goes through
only Jodhabai's palace.

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[20] Leon Battista Alberti, a Renaissance architect, defines beauty as "reasoned
harmony of all parts within a body, so that nothing may be added, taken away, or
altered, but for the worse (Rykwert, Leach and Tavernor, 1988, p. 420)."
  The same concept is further reinforced by another Renaissance architect, Andrea
Palladio, who states that "beauty will run from form and from the correspondence of the
whole to the parts, of the parts among themselves, and these again to the whole; so that
the structure may appear an entire and complete body, wherein each member agrees with
the other and all members are necessary for the accomplishment of the building
(Wittkower, 1971, pp. 21-22). To sum up, both these Renaissance architects emphasized
that the beauty is based on totality in relation to its parts.

[21] Multiple axes were also used to create spatial order in the Alhambra (14th
century), Spain. Cf. Oleg Grabar (1992). The Alhambra.

6. SPATIAL DESIGN PRINCIPLES
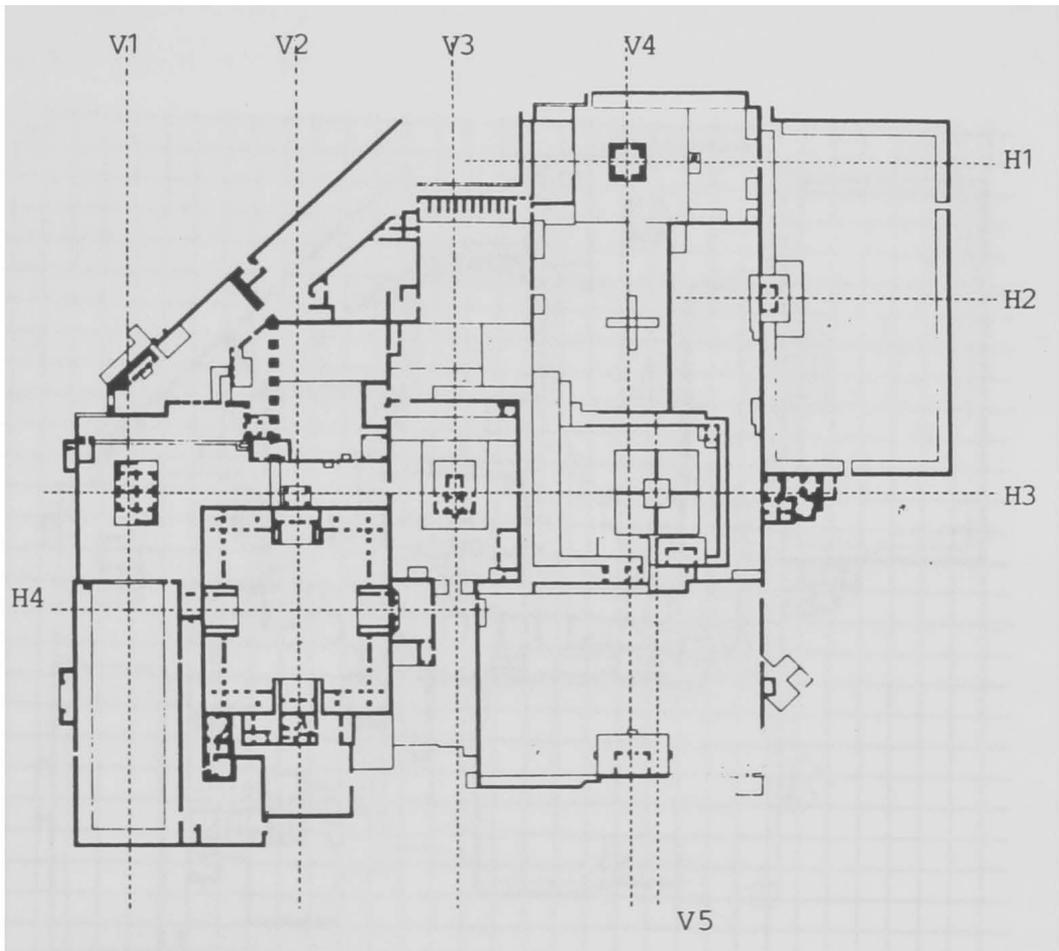
Figure 6-135: The axes of the imperial complex
(Fatehpur Sikri)

Multiple broken axes were employed to create spatial order in the layout of the imperial complex.

6. SPATIAL DESIGN PRINCIPLES
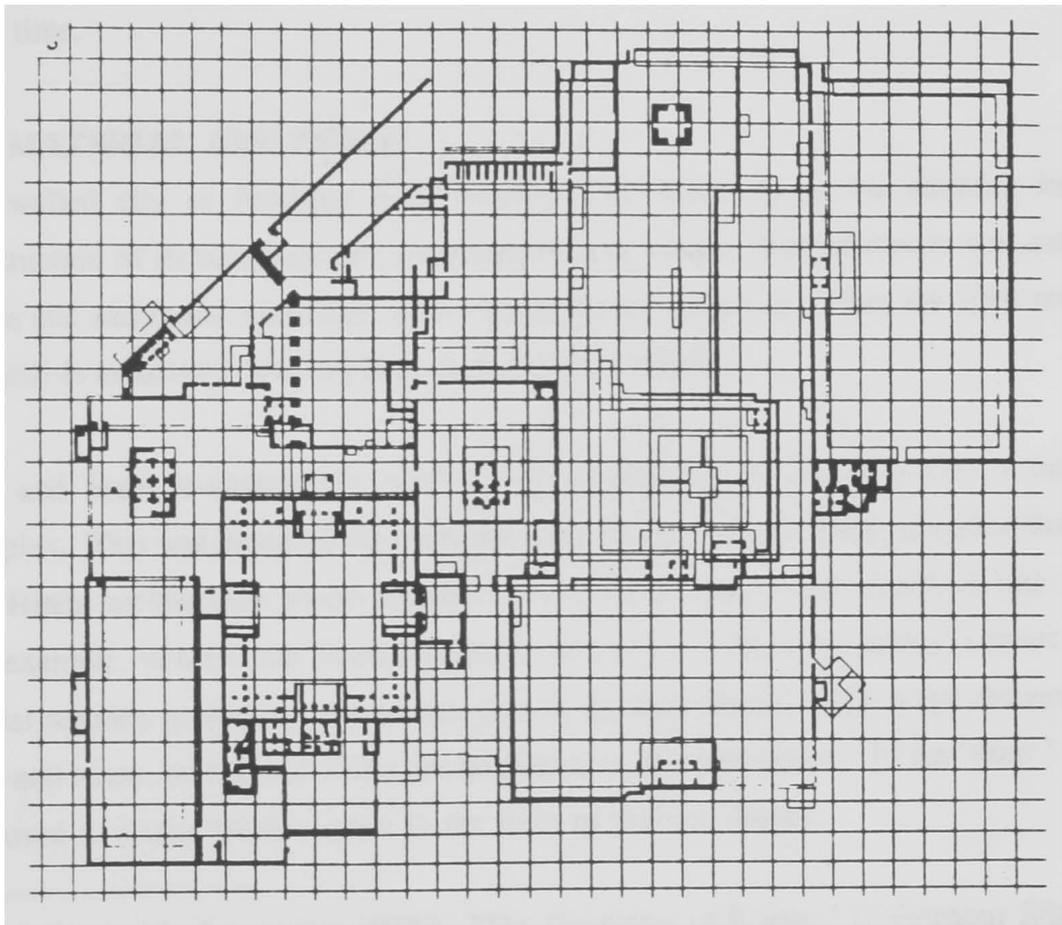
Figure 6-136: Modular grid through the imperial complex
(Fatehpur Sikri)

The axes are not placed in order to generate a particular system of proportions as developed by the Western Renaissance architects. Attilio Petruccioli has shown that the module grid runs through the spatial layout of the imperial complex[22] (cf. Figure 6-136). Grid lines in the form of regulating lines[23] were used to create the spatial order.

The main objective of using the module grid must be flexibility and adaptability to accommodate various buildings by a number of architects working side by side at the same time.

6.6. MATERIAL AND COLOR

The walled city of Fatehpur Sikri employs red sandstone as the material for the construction of its buildings. It was used for two reasons. Red sandstone was quarried on the site and Indian craftsmen were very proficient in its use. Also, the color red was and still is associated with joy and celebration in India[24].

Post and beam is extensively used in the construction of Fatehpur Sikri's imperial complex. This was based on the trabeated wooden construction found in earlier Buddhist and Hindu architecture where wooden architectural details were translated into stone. For example, in the Great Stupa of Sanchi, the design of the stone railing is based on an earlier wooden prototype. Arches are used in the Jami Masjid while in the caravanserai, post and beam, arches and vaults are employed in its construction. In the "mint," vaults are used to create interior space in the form of shallow domes.

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[22] Cf. Attilio Petruccioli (1987). "The Geometry of Power." In Fatehpur Sikri. pp. 50-64.

[23] Le Corbusier defines the regulating line: "... the means to an end; it is not a recipe. Its choice and the modalities of expression given to it are an integral part of architectural creation" (Corbusier, 1965, p. 67).

[24] Red is also the bridal color in India as opposed to the white color in the West.

6.7. LAND USE AND FUNCTIONAL CRITERIA:

It is observed that the spatial structure of Fatehpur Sikri is based on the Mughal camp where tents were zoned according to their level of privacy and classified as public, semi-public or private (cf. Figures 5-12 and 5-13). In Fatehpur Sikri, these spaces are defined by walls and enclosures. This contrasts with the modern concept of functional zoning where buildings are not located according to the level of privacy but to function, such as residential, commercial, industrial, and recreational.

6.8. TOPOGRAPHY: RELATIONSHIP TO LANDSCAPE

The Jami Masjid along with the imperial complex is located at the uppermost ridge and therefore it holds a commanding position over the surrounding city and landscape (cf. Figure 6-137). There were many advantages in locating the city at the highest point. It provided views of the lake and was a strategic and powerful spot for defense. High ground was also good from a drainage point of view[25].

6.9. SPATIAL DEFINITION: ENCLOSURE AND CHANGE OF LEVEL

Spaces in the imperial complex of Fatehpur Sikri are defined by wall enclosures and also a change in level[26]. The public, semi-public and private spaces are separated by

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[25] Building on high ground also saves the flat terrain for agriculture. Historically, towns have relied on agriculture which was a very important resource. Therefore settlements were built at the highest point over the valley. For example, the Incas developed agricultural terraces over the mountain terrain and located their main town, Macchu Picchu, at the very top.

Many hill towns were also built all over Italy. In these towns, houses were built along the slopes of hills with streets running parallel to the topographical contours and access was provided through a series of steps. These towns provide breathtaking views over the surrounding landscape (Lozano, 1990, pp. 229-30)

[26] Gordon Cullen in his The Concise Townscape articulates this concept of spatial definition. He coined the term a "sense of here and there". Under this category he indulges into the concepts such as, interior spaces extending out into different areas,

6. SPATIAL DESIGN PRINCIPLES
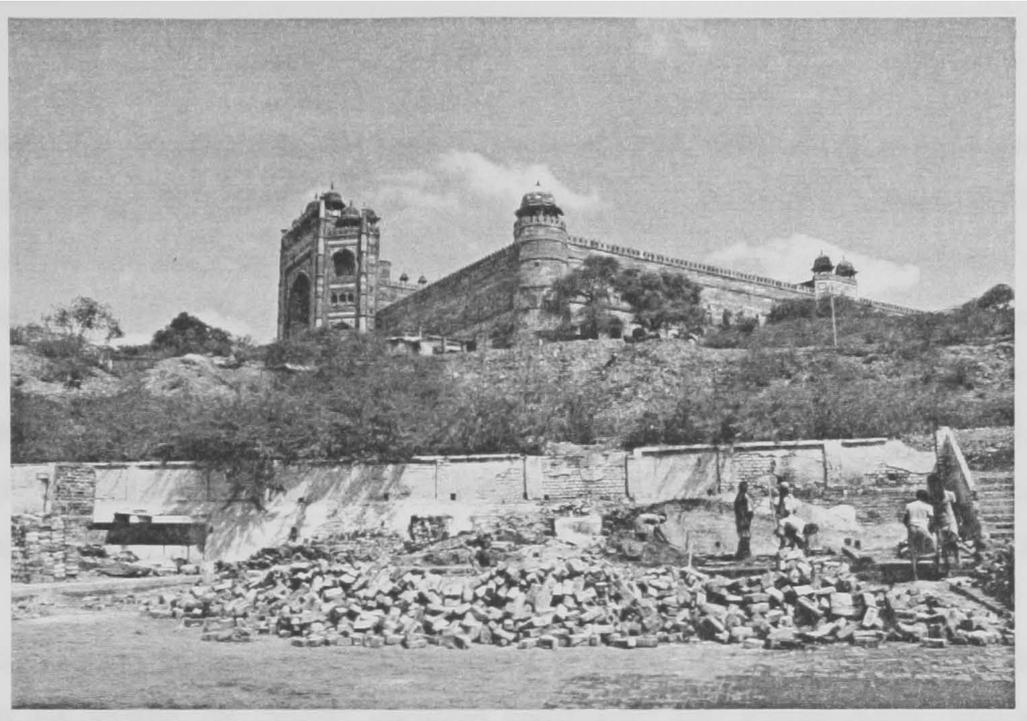
Figure 6-137: Relationship to the landscape
The Jama Masjid at Fatehpur Sikri is located at the top of the ridge.
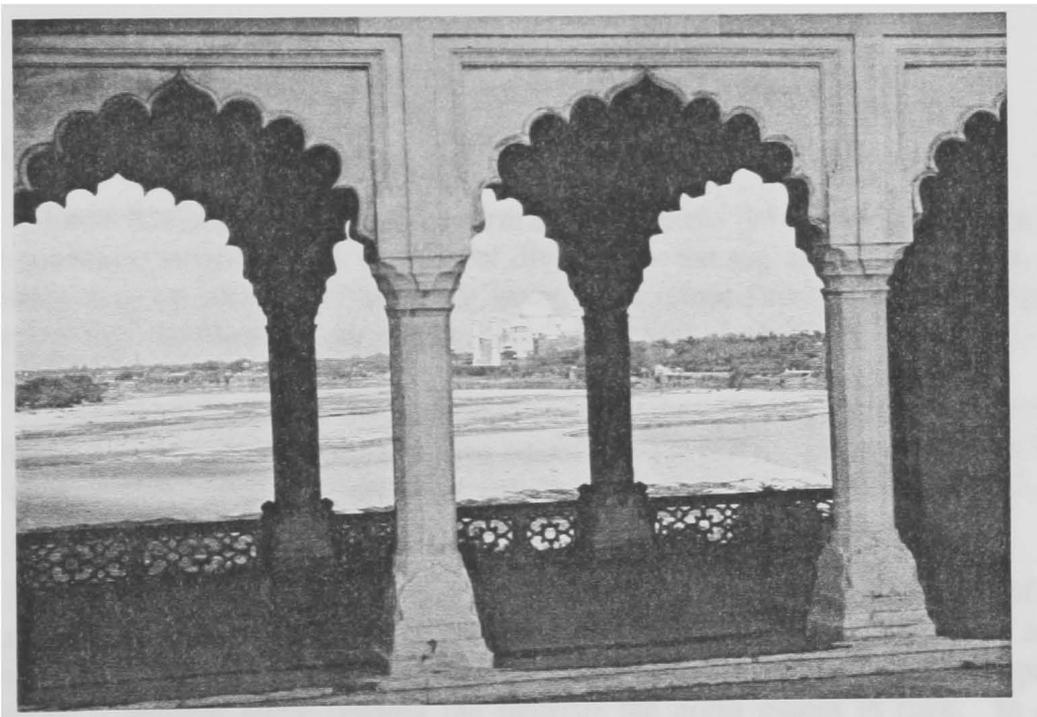
Figure 6-138: Taj Mahal (Agra)
Here the concept of transparency is used to connect the Taj Mahal with the Agra Fort.

6. SPATIAL DESIGN PRINCIPLES

enclosures. For example, the harem area is separated from the semi-public area of the Diwan-i-Khas courtyard, and the private area of the emperor's residence by a wall enclosure (cf. Figures 6-50, 6-51 and 6-76). Large spaces are also broken into small compartments[27]. The change in level was also used to separate one space from another and to define a particular space. For example, the emperor's private area is separated from the semi-public area by a change in level (cf. Figure 6-55 and 6-59). Another example is Miriam's palace which is placed on a platform created through a change of level. Identity to a space is provided by a level change (cf. Figures 6-80 to 6-82).

In the Diwan-i-Amm, a complete enclosure is created with the colonnaded veranda which runs all around the central enclosed courtyard[28] (cf. Figure 6-17). The emperor's pavilion serves as a focal point and here the designer seems to understand the concept

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spatial continuity, spatial infinity (Cullen, 1981, pp. 182-187)

[27] Leon Battista Alberti uses the term compartition / partitio to explain this concept. Compartition/partitio is "the process of dividing up the site into smaller units, so that a building may be considered as being made up of close fitting small buildings, joined together like members of the whole body" (Rykwert, Leach and Travernor, 1988, p. 426).
    Raymond Curran in his Architecture and Urban Experience uses the term "Space Dividing Elements" for subdividing the modern urban space. He explains how buildings are used to subdivide the urban space and to act as focal points" (Curran, 1983, p. 153).

[28] In the Diwan-i-Amm courtyard "rhythm" is created by the repetition of columns all around the building enclosure. According to Leland Roth, in architecture and urban design "rhythm" is read by scanning the colonnaded facade. This is comparable to scanning a musical score reading the patterns the notes makes in time. In a similar manner, architectural and urban design elements can also create an orchestra which is found to be similar to music. Architecture and music both must be experienced in time. The "rhythm" of architecture can be experienced by walking through the colonnaded walkway, experiencing the passage of the columns (Roth, 1993, p. 67).

of the cone of vision[29]. The whole pavilion can be seen from the covered colonnade space. A complete spatial enclosure is also found in the Jami Masjid as well as in the caravanserai (cf. Figures 6-110, 6-114 and 6-130).

The interior courtyard of the caravanserai creates a strong sense of enclosure. The unique feature of this structure is the way in which the building is tied with the landscape. The building was designed according to the topographic characteristics of the land. As a result, the building and the interior space were created in the form of various levels.

6.10. TRANSPARENCY

The principle of transparency[30] is used to provide a visual and spatial extension of one space into another. Through the puncturing or openings in the walls at various positions,

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[29] A German architect Maertens in his book The Optical Scale in the Plastic Arts states that "the part of our field of vision occupied by any object is defined by the angles it formed by the rays from our eye to the outline of the object." He further confirms that "the maximum angle at which an object can be perceived clearly and easily is about 27 degrees, corresponding to a ratio of 1:2 between the size of the object and its distance from the beholder". At this angle the surroundings are perceived as dim background. At an angle of 18 degree (1:3) the object still dominates but it relationship to surroundings becomes equally important. At an angle of 12 degree (1:4) or less, the objects becomes part of the surrounding and it communicates only through silhouette (Blumenfeld, 1972, pp. 217-219).

[30] Here the term "transparency" is used to explain the concept of connection between indoor or enclosure and outdoor spaces: they flow into the domain of each other.
    Gordon Cullen defines this same concept by the term "enclave". He defines enclave as an interior space open to the exterior and having direct access from one to the other (Cullen, 1961, p. 25).
    The concept is also discussed by Robert Venturi who comments: "Architecture occurs at the meeting of interior and exterior forces of use and space. This meeting is expressed more specifically, in the particular openings in walls which connect exterior forces of use and space (Venturi, 1967, p. 88)."

6. SPATIAL DESIGN PRINCIPLES

different spaces get connected by views[31]. It also provides ventilation and brings natural light into the structures. The use of this can be traced in the three Mughal complexes of Fatehpur Sikri, Agra, and Delhi. For example in the Diwan-i-Amm of Fatehpur Sikri, the enclosed linear space around the courtyard extends outside and makes the space look wider (cf. Figure 6-21). Another example is apparent in the Diwan-i-Khas of Fatehpur Sikri where interior and exterior spaces are connected and are therefore inseparable (cf. Figures 6-30 and 6-31). Views from the different levels of the Panch Mahal also connect with various courtyards, buildings and the surrounding landscape (cf. Figure 6-30). In the Agra fort, this principle is employed to make a visual connection with the Taj Mahal (cf. Figure 6-138). Openings in the building facades also create a feeling of lightness in the structures.

In Mughal architecture and urban design, the principle of transparency is extensively employed (cf. Figures 6-24, 6-25, 6-139). Large openings in the walls have created a feeling of lightness in the structures. In contrast, buildings of the pre-Mughal period are heavier in character. In the former, the emphasis was on creating volume whereas the latter emphasized mass.

6.11. THE ELEMENT OF SURPRISE

The dimension of surprise can be found in a number of instances in the design and planning of Fatehpur Sikri. An example of this is the sense of surprise which is created when a visitor leaves the spacious Diwan-i-Amm courtyard for the small, dimly lit transition space in the emperor's pavilion. This space provides the entry into the Diwan-

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[31] This concept is extensively used in Chinese gardens where the various openings are made to borrow scenery from distant views or even a neighboring garden.

Figure 6-139: Agra Fort
Transparency is used to connect indoor and outdoor spaces.
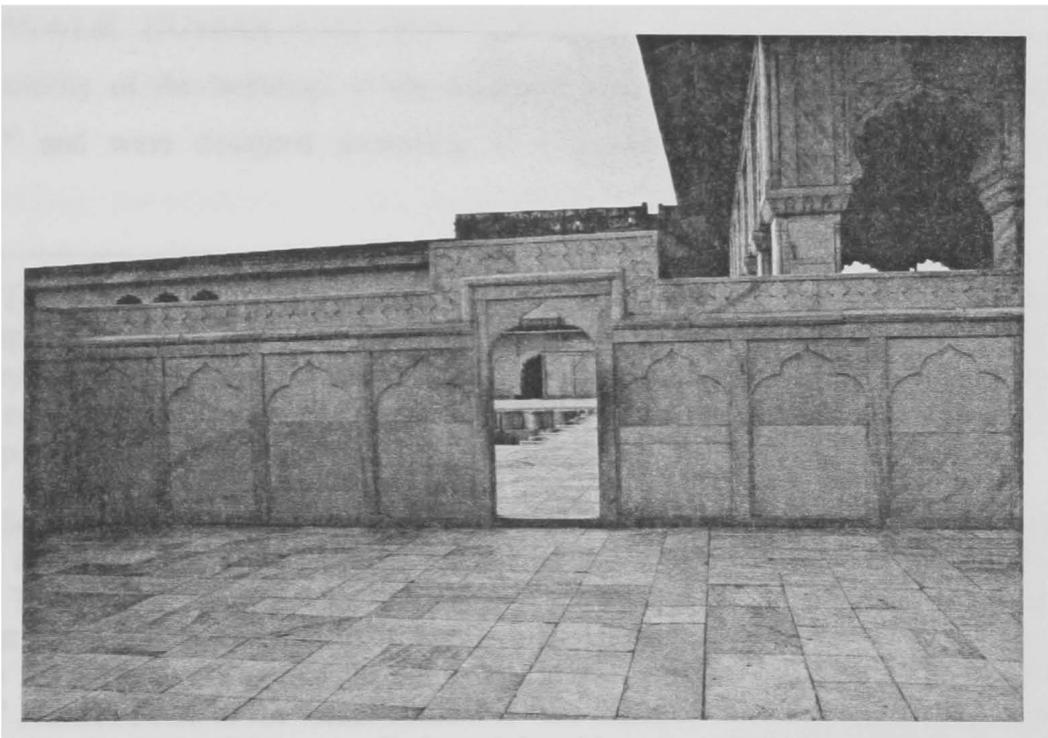
Figure 6-140: The element of surprise
Here the element of surprise is used by wall enclosures and by providing a small opening into the big space of the Khas Mahal, the emperor's sleeping quarters in the Agra fort.

6. SPATIAL DESIGN PRINCIPLES

i-Khas. The visitor again experiences surprise when confronted with the large space of the Diwan-i-Khas courtyard and garden.

The surprise element is also introduced through the provision of small gateway openings. For example, the entrance into the harem area (the palaces of Miriam, Jodhabai and Birbal) from the emperor's residential area is a very small one (cf. Figure 6-76). A small entrance is also used from the Diwan-i-Khas courtyard to the Harem Garden. The element of surprise is used in the Jami Masjid complex where the visitor is not exposed to a complete view of Salim Chisti's tomb at the entrances of the Badshahi Darwaza and the Buland Darwaza Similarly, this concept is also used in a number of places in the Agra Fort (cf. Figure 6-140).

6.12. SCALE: HUMAN AND MONUMENTAL

The majority of the buildings in the Fatehpur Sikri complex have a long horizontal facade[32] and were designed according to a human scale[33]. A human scale was

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[32] The horizontality of the facade is emphasized by the horizontal lines around the buildings. According to Bruno Zevi, "when following a horizontal line in instinctive mimicry, man feels a sense of the immanent, the rational, the intellectual. It is parallel to the earth on which man walks and accordingly accompanies his movement" (Zevi, 1993, p. 188).

[33] Scale in its origin refers to measurement. For example, architects use scale, a system of measurement, to represent the actual size of a building in its proportions.
    The concept of human scale in urban planning and design is used in two contexts: the first deals with social and the other, visual. Human scale in the social context is a "group in which every person in the group knows another by face, by voice and by name." Human Scale in the visual context is "the distance from the object: and from the distance can be derived the over all size of the object as well as the smallest part which serves as the module on which to design." In contrast to the human scale, the monumental scale goes beyond the normal human but it is related to it, so as to develop a dominating feeling out of its contrast to what is found or expected as normal (Blumenfeld, 1972, pp. 216-222)

achieved by creating a low ceiling and wide projections of eaves which run all around the buildings; these eaves cast horizontal shadow lines. For example in the Diwan-i-Amm, it is achieved by providing horizontal lines of eaves running along the colonnaded spaces. Horizontal lines were also used to provide a line of continuity and to divide vertical facades into horizontal tiers (cf. Figure 6-21). This principle can be observed in the facade of the Diwan-i-Khas (cf. Figures 6-31, 6-32 and 6-33) and as well as in the facade of the Panch Mahal (cf. Figures 6-43, 6-44 and 6-45). In the latter, horizontal lines divide the vertical facade into separate tiers each of which is celebrated with ornamental details .

The large courtyard of the Diwan-i-Khas also provides a stage setting for the structures in their context. All the structures in this space fit in the cone of vision. They are either one or two stories in height with the exception of a pavilion at the top of the emperor's residence and the Panch Mahal. Even in the case of two story buildings, the height of each level is low and proportioned to human scale. To further emphasize the feeling of horizontality, the principle of level change is employed. The Turkish Sultana building provides a visual frame of reference to the observer's eye. This helps the eye to establish a relationship among the Turkish Sultana, the emperor's residential quarters, the entrance to the harem area and the Panch Mahal (cf. Figures 6-54, 6-62, 6-71 and 6-72). The eye moves up in the form of steps: from the single story Turkish Sultana to the emperor's residential facade which has a height of two stories and then it moves one step down. Finally the eye is led to the two story high facade which provides an entrance into the harem area. There is a strong sense of horizontality among the buildings around the emperor's private courtyard which includes the emperor's residence, the entrance facade to the harem and the Madarasa. The horizontality of the facade is broken by the vertical, visually dominating structures of the Panch Mahal and the pavilion on the top of the emperor's residential quarters.

The horizontal facade of Jodhabai's two-story exterior is emphasized by the ornamental roof line (cf. Figure 6-100). In similar fashion, the human scale of the interior courtyard is created by an eave projection at the first floor level. It provides a line of continuity all around this interior courtyard (cf. Figure 6-102). The size of this courtyard also provides the opportunity to observe the buildings in the normal cone of vision.

Monumental scale was employed in the creation of the Buland Darwaza and the Badshahi Darwaza. In these two entrances to the Jami Masjid, the monumentality in the scale is provided by placing the gates on steps. Human scale is created through the use of arches all around the interior courtyard. The transition from the monumental scale of the Buland Darwaza to the interior colonnaded space is achieved by lowering the height of the inner facade[34] (cf. Figure 6-117). The massiveness of the Buland Darwaza is lightened by the creation of void within. On entering the complex through the Badshahi Darwaza, the observer is exposed to the view of the entire courtyard and at this point, a sense of scale is established. The large size of the interior courtyard allows the observer to view within the cone of vision, the whole facade including the monuments of Salim Chisti and Islam Khan. The sense of scale is achieved because the observer can easily comprehend the relationship between the different parts of the complex. The observer's eye moves from the colonnaded veranda around the courtyard to the top of the inner facade of the Buland Darwaza and finally to the top of Buland Darwaza.

Monumentality of the main sanctuary of the Jami Masjid is achieved through a huge portal in front of the main dome. Looking west from the Badshahi Darwaza, the western facade of the Jami Masjid which comprises the main sanctuary also falls within the observer's cone of vision. Monumentality is created in the Jami Masjid to depict God

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[34] The same technique is also used in the design conception of the Hathi Pol.

as powerful and superior to man since this is the only building in Fatehpur Sikri where a monumental scale is used. In contrast, a human scale is reflected in the surrounding buildings of the imperial complex and the caravanserai.

6.13. SPACES: SIZE AND SHAPE

The observer goes through a variety of spatial sequences in Fatehpur Sikri; these sequences are connected with one another and provide a sense of continuity. The sizes and shapes of courtyards are either in the form of a rectangle or a square. This variety of sizes and the forms of spatial enclosures create rich visual experiences.

The placement of buildings such as the Diwan-i-Amm, Miriam's Palace and Birbal's Palace in the middle of courtyards suggests movement. It forces an observer to go around the buildings. This is very similar to performing circumambulation around a religious structure. The adequate sizes of these courtyards also help an observer to comprehend the relationship between different buildings and also to experience these buildings in ever-changing perspectives within the cone of vision. The long rectangular shape of the royal bazaar in the harem area also suggests movement and this concept of movement is reinforced by the arcade veranda around the space.

The central courtyards of the Diwan-i-Amm and Jodhabai's Palace acted as a theatrical space where different activities took place. Once again, the size of these courtyards allows everything to be observed in perspective. The largest courtyard in the imperial complex and Jami Masjid is that of the Jami Masjid. Its importance is marked by its size, the presence of Salim Chisti's tomb as well as by its monumental gateways and the wall enclosure all around.

6.14. THE VISUAL IMAGE

There are a number of elements which play an important role in creating a powerful visual image of the city[35]. According to Blumenfeld, the city image is grasped in two ways: from the outside as a silhouette and from inside as sequences of open spaces (Blumenfeld, 1972, p. 233). Thirty visitors staying in the Uttar Pradesh Tourist Bungalow in Agra were given a short questionnaire by me. This was done to assess the elements which contribute to the visual image of Fatehpur Sikri[36] (cf. questionnaire and analysis in the Appendix).

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[35] Kevin Lynch (1960) in his The Image of the City has identified that people use five basic elements: landmarks, paths, edges, districts and nodes in order to construct their image of a city.

Landmarks: These are the prominent features of a townscape which come to people's minds when they think of a particular place. Examples include the Statue of Liberty in New York City and the Golden Gate Bridge in San Francisco.

Pathways: These are the channels of movement within a city.

Districts: They include neighborhoods or a particular type of land use. Examples include residential areas and shopping areas.

Edges: They represent the termination of a district. They define space in terms of building lines or water edges.

Nodes: These are similar to landmarks but are centers of activities. An example is Time Square in New York City.

Kevin Lynch's study is a major contribution to the theory of urban design. It provides a simple and reliable framework to help designers and planners understand the key elements which play a very important part in creating the visual character of cities.

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[36] In addition to the questionnaire, subjects were shown photographs of Fatehpur Sikri. This was done to evoke their memory of the city. The survey was conducted over a three day period. Since a small sample was used, it may not be statistically valid but it provides public consensus of the image of Fatehpur Sikri.

6.14a. SKYLINE

Fatehpur Sikri has a unique skyline in which the various roofs which are in the form of domes and pavilions play an interesting orchestra (cf. Figure 6-141). According to Spiro Kostof, "skylines are urban signatures," and they are the "shorthand of urban identity." They "celebrate faith, power and special achievement" (Kostof, 1991, p. 296).

6.14b. LANDMARKS

The Panch Mahal, the Buland Darwaza and Salim Chisti's tomb act as landmarks of the city (cf. Figures 6-45, 6-109 and 6-114). The first is due to its unusual asymmetrical architectural form whereas the second is because of its size. The third, Salim Chisti's tomb, serves as a landmark because of its unusual form and the white marble with which it is constructed. The tomb sets a contrast to the red sandstone thus creating a memorable image. In addition to these three structures, the monolithic column in the interior space of the Diwan-i-Khas also acts as a landmark of the city (cf. Figure 6-36). These landmarks therefore contribute to the mental images people carry with them about the visual impression of a city. Landmarks confirm, "this is the spot. ...stop looking, it is here" (Cullen, 1971, p.26). Landmarks are also important because they help visitors to orient themselves through the complex since they provide a sense of direction. They also help people to identify with Fatehpur Sikri.

6.14c. PATHWAYS

Since the spatial structure of the imperial complex is based on interlocking courtyards, no streets or formal pathways were provided. Pathways therefore do not play a significant role in creating a memorable experience of the imperial complex of Fatehpur Sikri.

6.14d. DISTRICTS

Districts in terms of architectural style are hard to identify by an average visitor because the architectural style does not differ dramatically enough to register in the mind.

6.14e. NODES

Nodes are the areas where activities take place. Except for the Jami Masjid, the imperial complex is frozen in time. In the present context Mughal court activities have disappeared and they have been replaced by the sightseeing of tourists. Visitors tend to remember the Jami Masjid as a religious area where people pray or pay homage to the tomb of Salim Chisti. This area is used in the same manner as it was used in the time of Akbar.

6.14f. EDGES

The outer walls which demarcate the Jami Masjid stand very boldly and leave a memorable impression on the visitor's mind (cf. Figure 6-122). When approaching the Jami Masjid from the Hiran Minar, the edges are defined by the outer surface walls of the caravanserai (cf. Figure 6-133). The city walls are not considered important to the image of Fatehpur Sikri. This is probably because visitors do not get an opportunity to experience them first hand since they are quickly driven through the city gate.

6.15. UNIQUE FEATURES

There are a number of unique elements in the imperial complex which provide both a sense of place and identity. These features are listed below.

6.15a. ORNAMENTATION

Ornamentation was used quite extensively in the design of the buildings. It is found on the wall surfaces of the interiors as well as the exteriors. It was done to draw the

observer's attention. Ornamentation was also applied to the columns[37] (cf. Figures 6-46 to 6-49). The ornamentation of the columns around the Diwan-i-Amm courtyard creates a visually rich circulation space (cf. Figures 6-22 and 6-23). Ornamentation was also used to create spatial hierarchy, for example the monolithic column in the Diwan-i-Khas building cries out to the observer that the place is of great significance (cf. Figure 6-36). The interior space of the area used as a Hindu temple in Jodhabai's palace is highly ornamented to depict its architectural importance (cf. Figure 6-104). Rich ornamentation was applied at the entrance of Salim Chisti's tomb to capture the observer's attention and to create architectural hierarchy (cf. Figure 6-119).

6.15b. FRAMED VIEWS

A number of framed views are revealed in the imperial complex and in the Jami Masjid complex (cf. Figures 6-116 to 6-119). They are mostly the result of colonnaded spaces which perform a multiple role of framing a view and providing a sense of enclosure and the element of transparency. Similar examples are found both in Agra Fort and in the Delhi Red Fort. From the Agra Fort, the framed view of the Taj Mahal enhances the picturesque quality of the monument (cf. Figure 6-138). Another example of a framed view is also found at the entrance to the Khas Mahal, where the structure is seen through an archway. This focuses the viewer's attention on the monument (cf. Figure 6-142).

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[37] The description of a column can be best described according to the Renaissance architect, Leon Battista Alberti, who describes a row of columns simply as a wall, open and discontinued at several places. He further articulates that a column is not only an important structural skeleton, but it is a significant architectural ornament. Therefore for Alberti, ornamentation is not an integral part of the architectural structure but it is an addition of decoration in the form of decorative details (Rywert, Leach and Tavernor, 1988, pp. 25-26; Wittkower, 1971, pp. 33-34).

6. SPATIAL DESIGN PRINCIPLES

Figure 6-141: The skyline (Fatehpur Sikri)

Pavilions and domes provide an interesting skyline to Fatehpur Sikri. This view is captured from the top of the Panch Mahal.
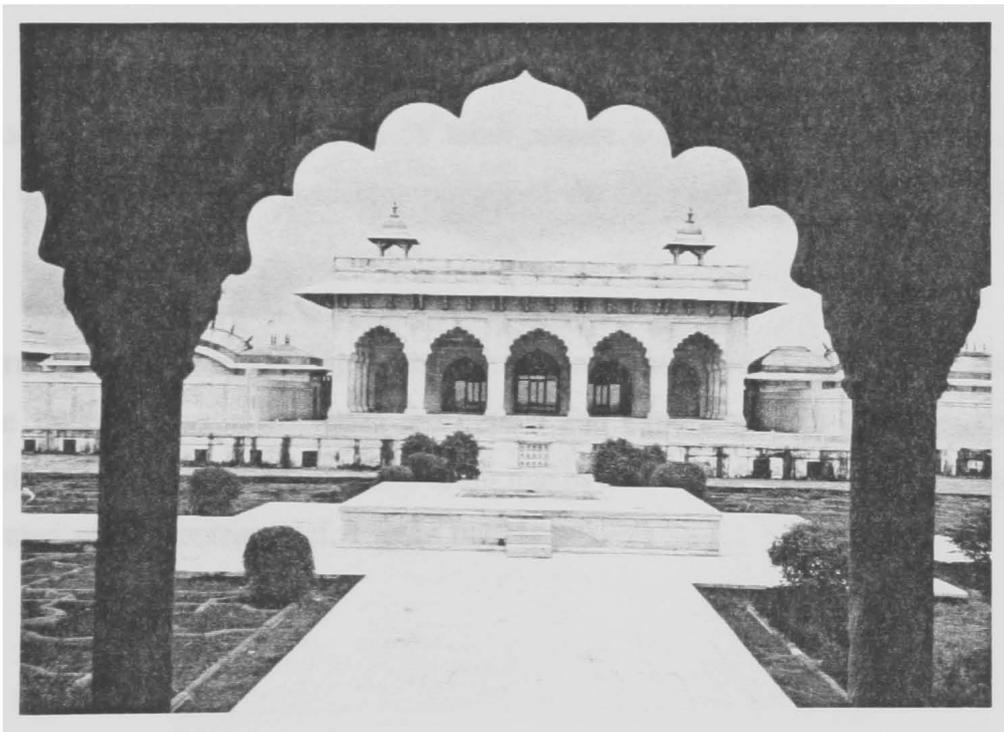
Figure 6-142: Khas Mahal: Framed view (Agra Fort)

6. SPATIAL DESIGN PRINCIPLES

6.15c. WATER AS A DESIGN ELEMENT

Water was used both as a reflective medium and to create a sense of coolness in the Anup Talao. Water is one of the most important elements in Mughal spatial design. For example, it is an integral part of the spatial design of the Taj Mahal where the symmetry is once again reinforced in its reflection in the water (cf. Figure 6-143). It was also used extensively in Akbar's Tomb at Sikandara as well as in the Agra Fort. The Delhi Red Fort can be described as virtually a water garden since water was brought inside the buildings for aesthetic reasons as well as to create a cooling environment in the hot Summer (cf. Figure 6-144). The three Mughal complexes at Fatehpur Sikri, Agra and Delhi were located in close proximity to some form of water, either a lake or a river[38]. Water was also used as a defensive barrier in the form of moats around the Delhi Red Fort and the Agra Fort. This however was not done around the imperial palace at Fatehpur Sikri.

6.15d. FLOATING EFFECT

The use of marble in Salim Chisti's tomb creates a sense of lightness. The structure seems to float on the red sandstone paving of the Jami Masjid (cf. Figure 6-114).

6.15d. TACTILE QUALITY

The ornamentation and carving of the columns and the perforation of red sandstone and marble invite the users to touch the details and experience the tactile quality. For example, a pilgrim to Salim Chisti's tomb makes a wish and knots a piece of yarn in the perforated marble screens (cf. Figure 6-121).

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[38] The ancient Hindu cities of Varanasi and Hardwar were also located on the River Ganges, the holy river of the Hindus.
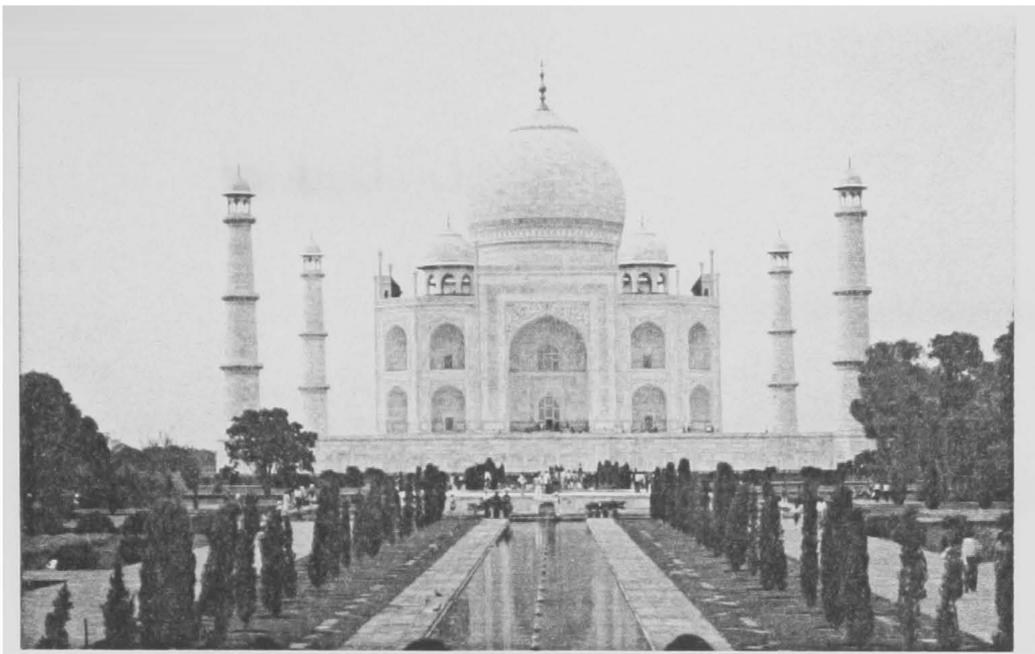
Figure 6-143: Taj Mahal (Agra)
The water channel in the center is an integral part of its site planning.
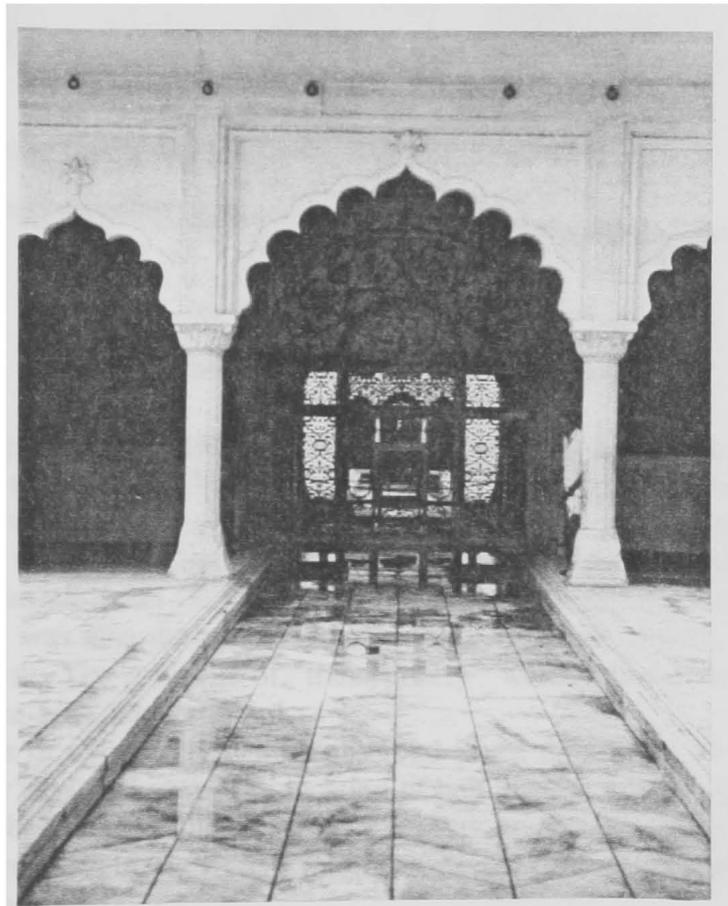
Figure 6-144: Red Fort at Delhi
Water was brought inside the buildings to keep them cool in the hot Summer.

6. SPATIAL DESIGN PRINCIPLES   260

The Emperor's Pavilion

The Emperor's private courtyard

The Diwan-i-Amm

The Panch Mahal

The Main entrance

Transparency to connect
interior and exterior space.

The Diwan-i-Khas Courtyard
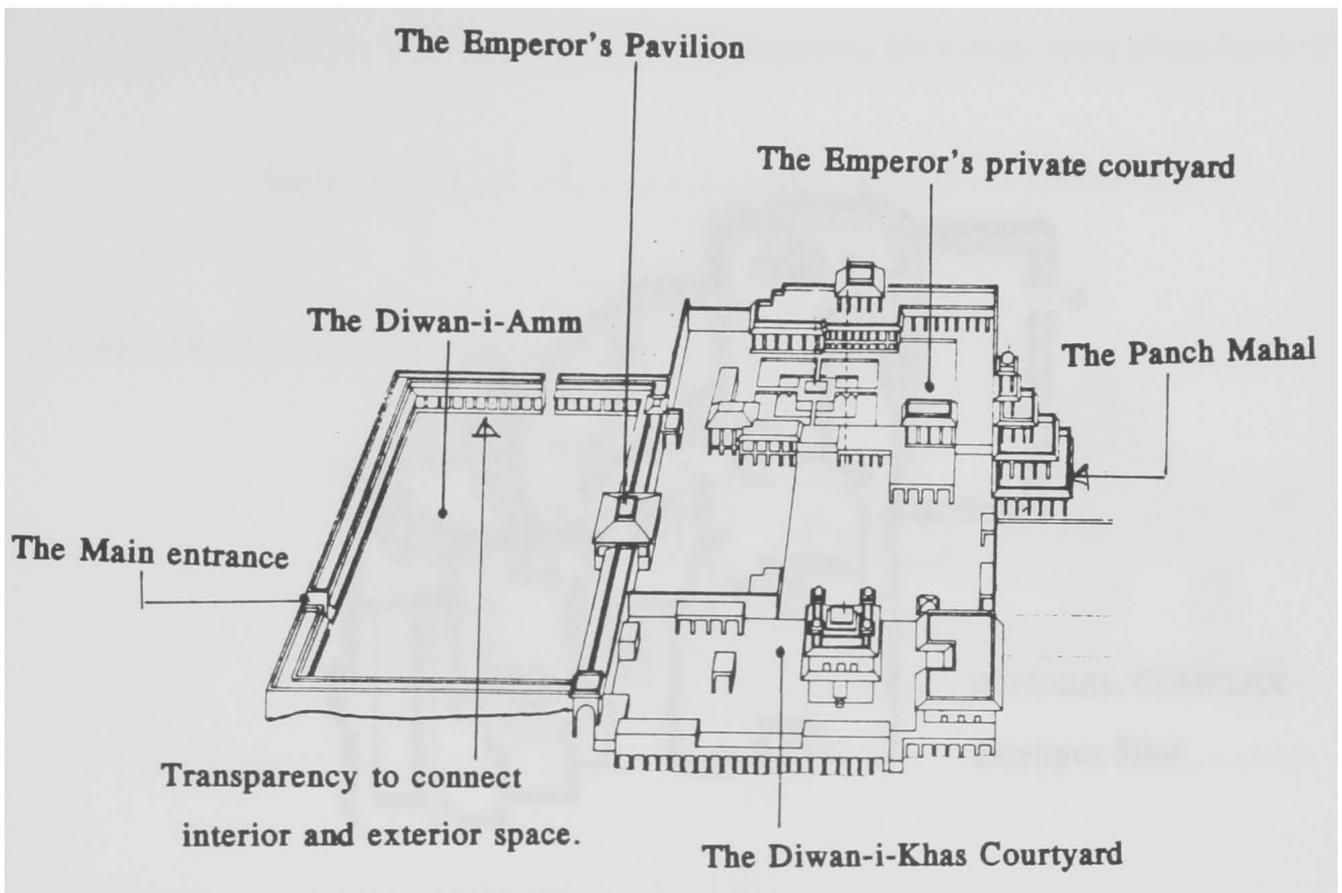
Figure 6-145: Principles of Spatial Structure

The above diagram shows that the main entrance into the Diwan-i-Amm was not provided on its central axis. It was instead placed obliquely opposite to the emperor's pavilion, in the western wall of the courtyard. A secondary entrance was also provided in the southern wall. The rules of symmetry were deliberately broken so that people using the main entrance can view the buildings in a two point perspective. The Diwan-i-Amm courtyard was also defined by a colonnaded space all around, creating a strong sense of enclosure. The principle of "transparency" was applied to connect the interior colonnaded space with the courtyard.

The rules of asymmetry can be observed in the courtyards of the Diwan-i-Khas and the Emperor's private area. The location of buildings in these courtyards provide an opportunity to observe the buildings from a number of vantage points; every movement in these courtyards provide a "Kodak" moment. Spaces here are defined by level change and wall enclosures.

6. SPATIAL DESIGN PRINCIPLES
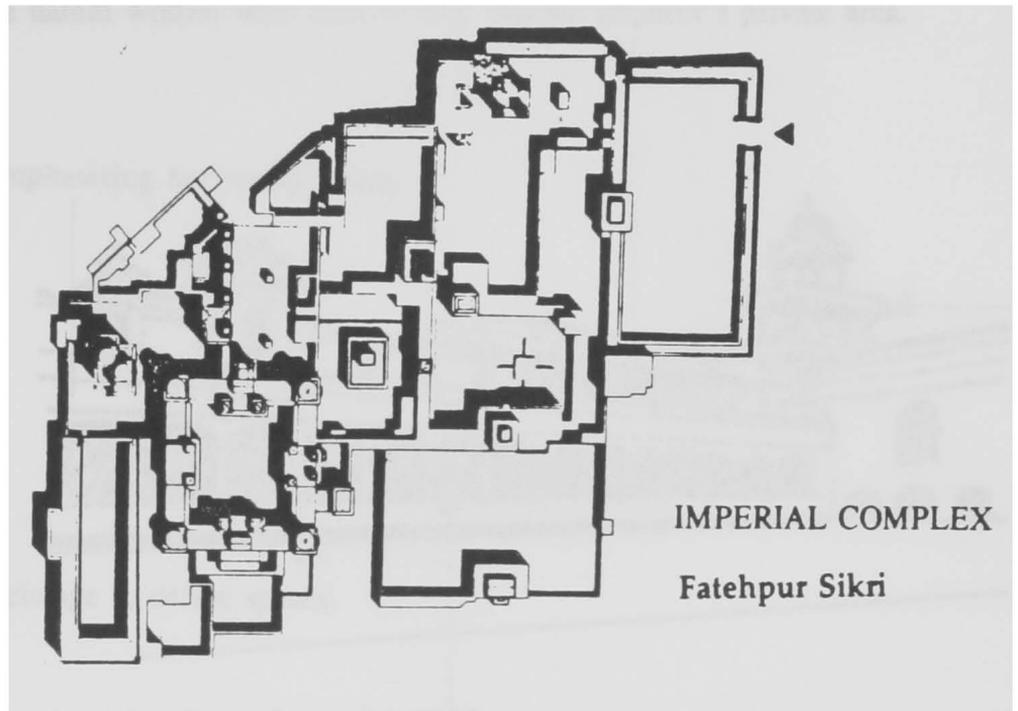
Figure 6-146: Spatial structure

Courtyards were used as spatial organization elements. They are defined by the walls and colonnaded spaces and were created through the use of a variety of rectangular spaces. The spatial structure of Fatehpur Sikri was very advanced according to its time. The spatial order was also based on a definite program of spatial sequences. In these courtyards the buildings can be observed from the front, the rear, the sides, and diagonally. Passing through the imperial complex provides a memorable experience. There is no single controlling axis. Instead multiple axes were deliberately employed.

Visual interest created by the unusual form of the Panch Mahal.

The harem women were able to look into the emperor's private area.

Human scale by emphasizing horizontal facade.
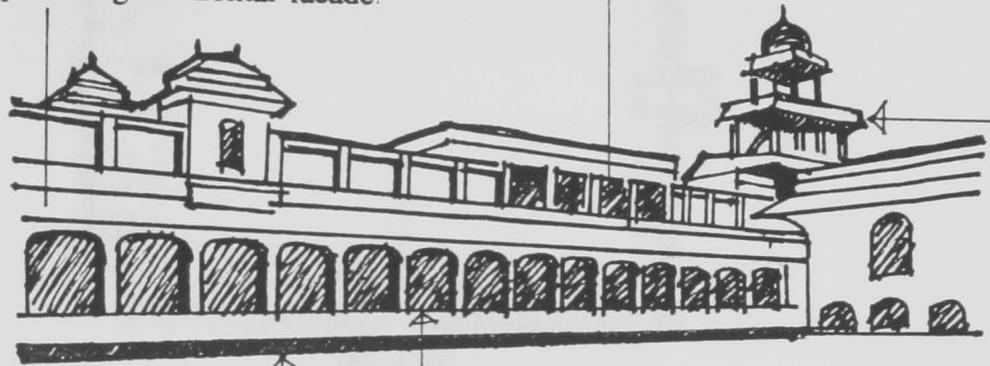
Level change to define spaces.

Transparency to connect interior and exterior space.

**Figure 6-147: Level Change, Transparency, Human Scale
and Gate Hierarchy**

The facade in the above diagram separated the Harem area from the emperor's private area. Level change was used to define the circulation space and human scale was created by emphasizing horizontal facades and horizontal lines in the form of eaves.

The interior colonnaded space and exterior space are connected through the application of the principle of transparency. At the upper level of the horizontal facade the harem women were able to look into the emperor's pavilion without being seen by other men. In traditional Islamic society, women's space (feminine space) is also on the rooftops from which they can glance into the men's space (masculine space).

The entrance into the harem area is marked by a small projected pavilion at the upper level of the facade. The Panch Mahal in the background punctuates the sky with its unusual shape.

6. SPATIAL DESIGN PRINCIPLES

Transparency is used to connect colonnaded space and the exterior space.
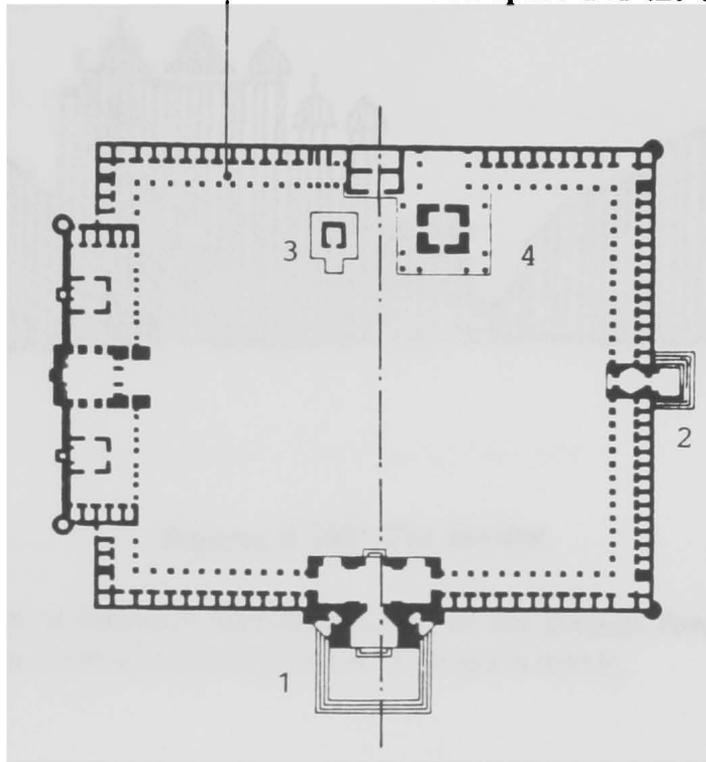
1. The Buland Darwaza

2. The Badshahi Darwaza

3. Salim Chisti's Tomb

4. Islam Khan's Tomb

Figure 6- 148: Element of surprise and sense of enclosure

The tomb of Salim Chisti is not located on the main axis of the public entrance; this may have been deliberately done to create a sense of surprise. The tomb of Islam Khan was added to the Jami Masjid complex later on. The location of both tombs at the end of the northern wall also provides more assembly place for prayers; it keeps the circulation space free. Transparency is employed to connect the interior with the exterior space.
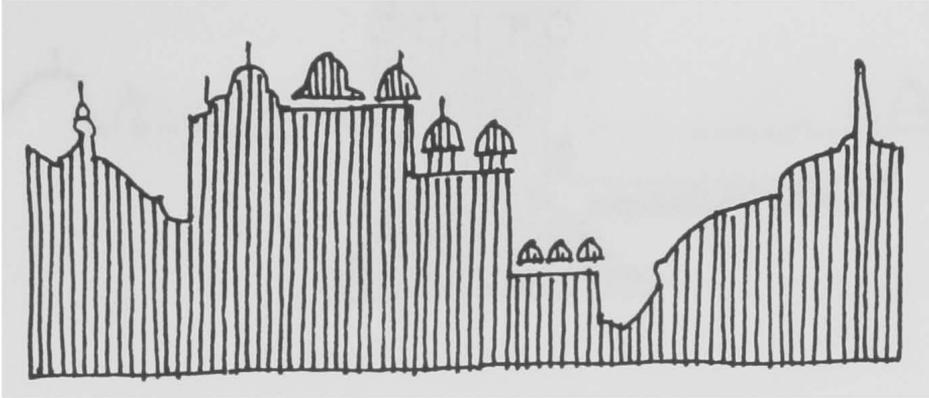
Figures 6-149: The skyline

The unique skyline of Fatehpur Sikri punctuates the sky through domes and pavilions. The skyline creates a memorable experience in people's minds.
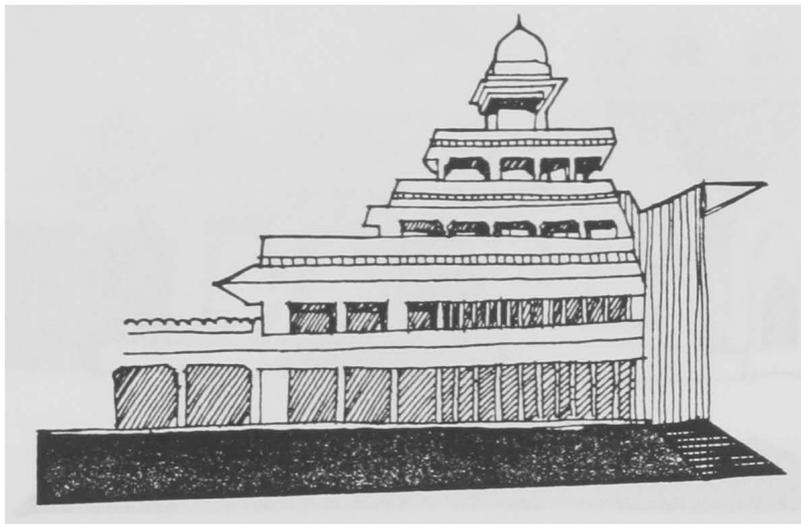
Figure 6-150: The Panch Mahal

The Panch Mahal has been identified as one of the landmarks of Fatehpur Sikri. Monumental scale is achieved in this building by its height while human scale is achieved by the creation of low ceiling heights.

6. SPATIAL DESIGN PRINCIPLES
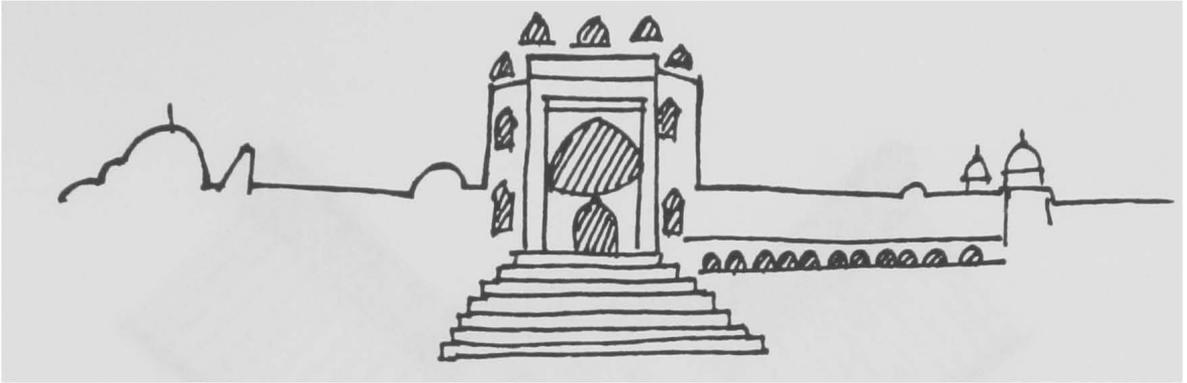
Figure 6-151: The Buland Darwaza

The Buland Darwaza dominates the surrounding landscape of Fatehpur Sikri because of its monumental scale. It was the public entrance to the Jami Masjid and was a powerful symbol of Mughal power. It is one of the landmarks of Fatehpur Sikri.
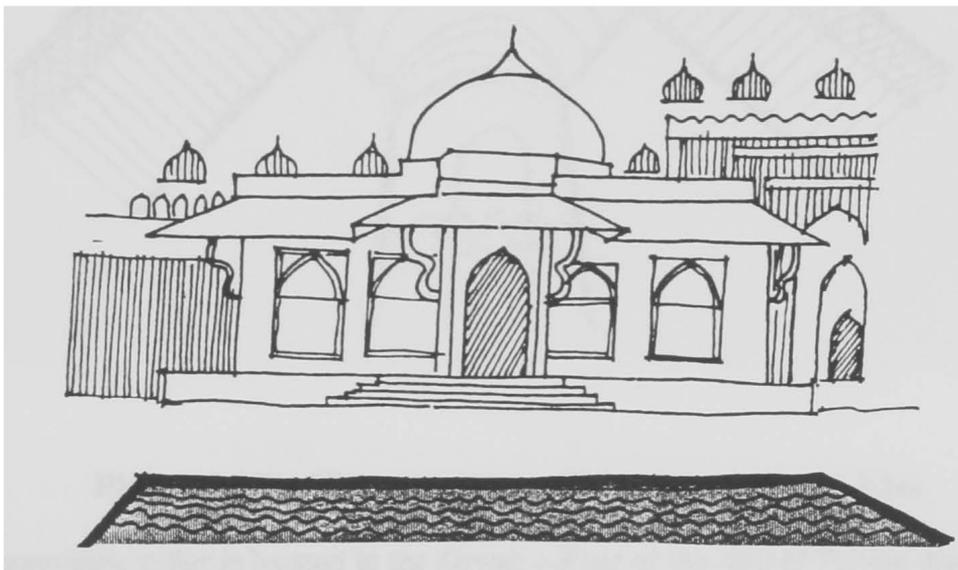
6-152: Salim Chisti's Tomb

This monument is made of white marble; its sets a contrast to the red sandstone background. It is identified as a landmark not because of its monumental scale, but for its historical and religious significance. According to Kevin Lynch this can be identified as a Node.

6. SPATIAL DESIGN PRINCIPLES 266
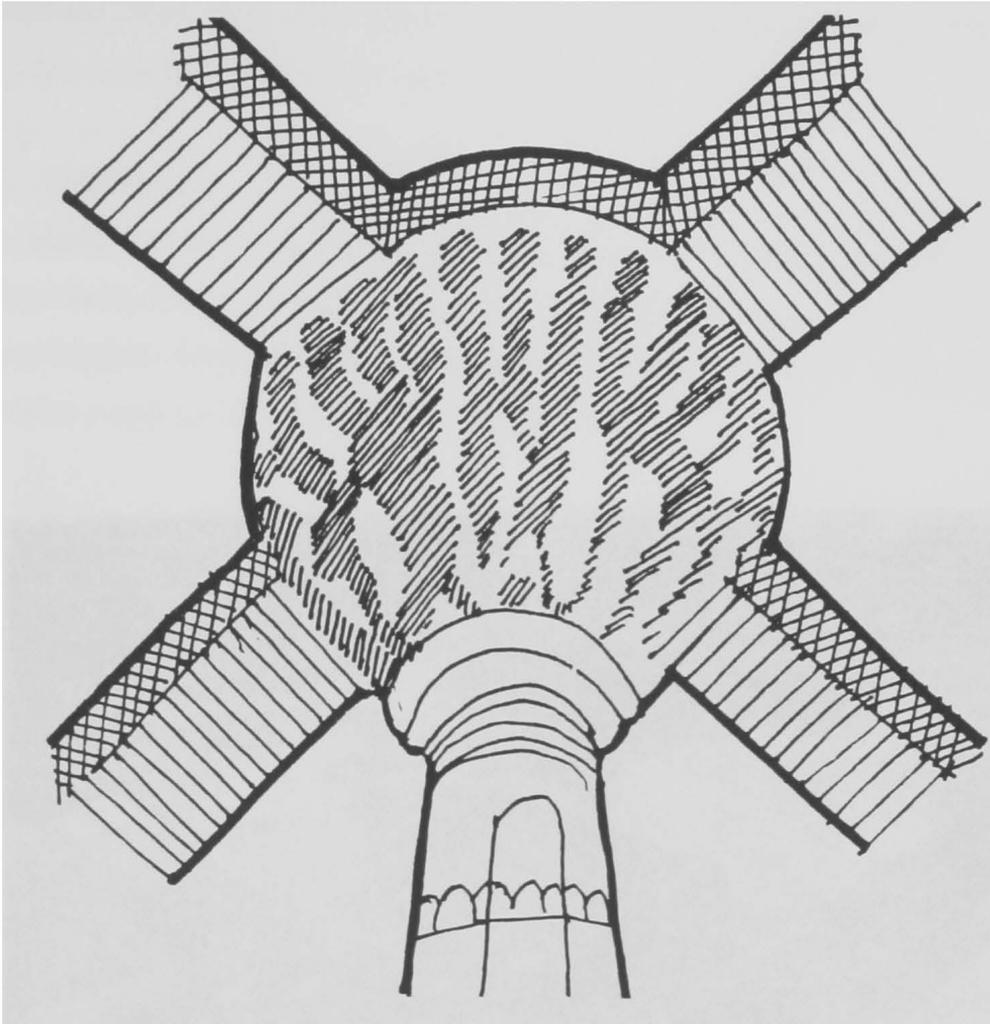
Figure 6-153: The monolithic pillar of the Diwan-i-Khas

This monolithic pillar is located in the Diwan-i-Khas or the Hall of Private Audience and has been identified as a popular landmark. Its unique form creates an unforgettable experience in people's minds. It may have conceived as an axis mundi symbolizing the connection between God, the emperor and the earth. This axis may have been conceptualized as the throne where the emperor sat and the four connecting corridors may have symbolized his rule over the four directions. This pillar provides a fixed reference point since it forces people to go around it, as if performing the ritual of circumambulation.

6. SPATIAL DESIGN PRINCIPLES
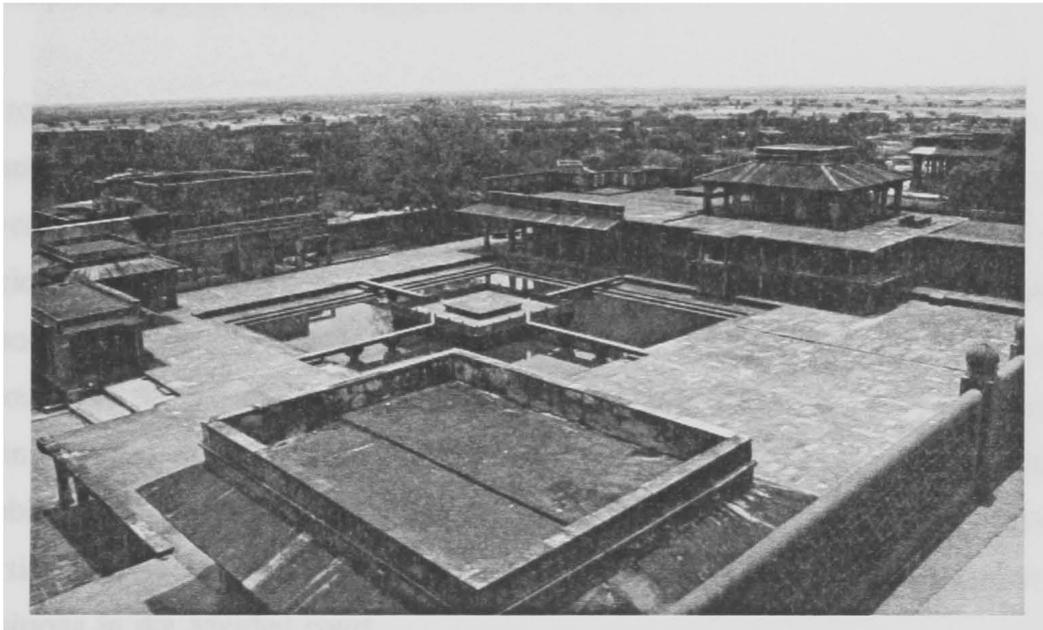
6-154: Water as a design element

Water was an important element in Mughal architecture and landscape architecture. In Fatehpur Sikri, it was used as a reflective medium. This can be seen in the Anup Talao which was designed in the form of <u>charbagh</u>.

The design principles discussed above are not only limited to the Mughal cities of Fatehpur Sikri, Agra and Delhi but can also found in other cultures. These principles have been summarized in Figures 6-145 to 6-154.

6.16. SUMMARY

The chapter has met its three objectives. It examined the role of the architect in Indian society during the pre-Mughal and Mughal eras and investigated the movement patterns during Mughal time. The final objective was to understand the design and planning principles employed by the designers of the time.

Through an examination of the role of the Indian architect in its historic context, it was found that the artists and designers who constructed monumental Hindu temples were not given the credit they deserved. This was because of the rigid social structure of Hindu society in which artisans belonged to the lower caste. There were no formal architectural schools so that knowledge was transmitted to family members. This continued throughout the Mughal period. Since these architects lacked formal education and training, they did not achieve a high status in the Mughal court and upward social mobility was limited. During Mughal times, a number of non-Indian architects also participated in the building design process but they too were not elevated to high positions in the Mughal court.

The second objective was met by identifying four movement patterns within the imperial complex and the Jami Masjid. Path-1 was used by ordinary subjects to see the emperor in the Diwan-i-Amm. Path-2 led the public through the Buland Darwaza to the Jami Masjid. Path-3 was used by the public to visit Salim Chisti's monastery and this path also provided a connection between the imperial palace and the city through the Hathi Pol. Path-4 linked the imperial palace with the Jami Masjid. I walked on these paths to examine the movement patterns. Visual observations were made and analyzed.

Three sides of Fatehpur Sikri are enclosed by a wall and on the fourth side there was a lake during Akbar's time. The main entrance to the city is through the Agra Gate in the wall enclosure. Near the Agra Gate, the main road branches out to the right, leading to the top of the ridge where it passes through the Naubat Khana. This gateway provides an entry into the Char Suq. This marketplace has an entrance on four sides but the Naubat Khana is the main one. On both sides of the road there were shops in the form of a linear bazaar. Close to this road on the right, there is a building known as the Tansen Barahdari which has a centralized plan. The building has an intimate scale which was created by a low roof level.

After passing through the Naubat Khana, there is a horse stable on the right. The importance of this structure lies in its vaulted roof which gives it an unusual form. The architectural hierarchy of the main entrance is created by an archway. Opposite to the stable are ruins of a building structure. The "footprint" and the part of the building which is still standing shows that its spatial structure was based on the use of the courtyard.

Finally the road leads into the Diwan-i-Amm. This space is defined by the creation of an enclosure. The structure comprises of a pavilion and a rectangular enclosed colonnaded courtyard. From the Diwan-i-Amm, access is provided to the Diwan-i-Khas through a garden which acts as a transition zone between the two areas. The garden space is created by paths and water channels. During Akbar's era an entrance to the Diwan-i-Khas was also provided through the Diwan-i-Amm. This entrance is closed at present.

Coming directly out of the emperor's pavilion, one enters the semi public courtyard near the Pachisi court. The space is defined by a level change. In this courtyard, the Diwan-i-Khas is the dominant feature. Its architectural hierarchy is created through rich ornamentation and a unique interior spatial arrangement. West of the Diwan-i-Khas is

the treasury building which has richly ornamented brackets at its ceiling level. A small pavilion, known as the astrologer's seat is attached to this building.

South-west of the Diwan-i-Khas is the Panch Mahal, an elegant five story building in the form of a pyramid. This building is one of the landmarks of Fatehpur Sikri. To the east of the Panch Mahal is a building known as the Madrasa. Its architectural form and style is similar to that of the other buildings.

On the south-western corner of the Pachisi court there is a small room known as the Turkish Sultana whose architectural hierarchy is created through rich ornamentation. South of the Diwan-i-Khas is the emperor's residence which is separated from the Pachisi court by a level change. Here the horizontal facade is broken by a two story structure. The emperor's private courtyard is also provided with a square tank created in a form of a charbagh.

East of the emperor's residence is a horizontal two story facade. This facade provides an entrance into the harem area through a small opening. The entrance on the ground is marked by two columns and steps. Stepping into the harem area, the observer is confronted by a small building known as Miriam's palace. This building is set on a platform and has a roof in the form of a small pavilion. The space west of Miriam's palace leads to Birbal's palace through a viaduct and the Hawa Mahal which is crowned by two pavilions.

Birbal's palace is placed on a platform. In this building more importance is given to mass than void. To its east, there is a porter's lodge. To its south is a structure which may have been used as a royal bazaar for the harem women. It has a central courtyard and a colonnaded veranda all around. To the south of Mariam's palace is Jodhabai's palace. The spatial structure of this building is based on the concept of the introvert courtyard.

6. SPATIAL DESIGN PRINCIPLES

This was done to create privacy in the building. The vertical elements in the form of small pavilions and shallow domes are used at the roof level. To the left of this building is the porter's lodge.

South-west of the imperial palace is the Jami Masjid complex which houses the tomb of Salim Chisti. There are two entrances, one on the east and the other on the south. The former or the Badshahi Darwaza was the imperial entrance while the latter or the Buland Darwaza was used by the emperor's subjects since it provided a connection with the city. The Jami Masjid was originally designed with symmetry but later on this was broken by the placement of the tombs of Salim Chisti and Islam Khan.

Near the eastern facade of the Jami Masjid, a path takes visitors down to the area which was once close to the lake. At the far end of the complex, on the north west side, a small tower known as the Hiran Minar sits on a rectangular platform. To the right of this is the caravanserai. Its interior courtyard was designed according to the lay of the land. The road on the north eastern side continues to the imperial palace and the Jami Masjid, through the Hathi Pol. To the right of this is an octagonal tower which was meant for the security of the complex.

A number of spatial structures, design elements and typologies are observed. They can be summarized as follows.

Fatehpur Sikri consists of a unique spatial pattern which has been generated through the interlocking of various courtyards. The individual monuments show symmetry but in spatial layout, the rules of symmetry are broken and buildings are deliberately placed in an asymmetrical manner. The layout plan reflects the spatial layout of the Mughal camp as well as the Mughal garden. The placement of buildings in the courtyards provides an opportunity to view them from a number of vantage points. The view, however, changes

with every movement or with every step. The same building is seen in a different setting; sometimes it is in the forefront or at the side and, in a number of instances, provides an interesting background. The spatial structure of the complex is created to provide the experience of movement and a dynamic visual environment. Edmund Bacon (1974) in his classic Design of Cities defines architecture as a movement system.

The spaces have been defined by enclosures and a change of level. There are a number of examples, such as, the courtyards of the Diwan-i-Amm, the Diwan-i-Khas, and Miriam's palace. The concept of transparency is also extensively used to connect interior and exterior spaces as well as to make visual connection between the different spaces. This was done by puncturing the walls at various positions. It is found in many places including colonnaded spaces and buildings, for example, the interior space of the Diwan-i-Khas flows outside and vice versa.

The element of surprise is created by providing small entrance openings or small, dark spaces leading into large spaces such as from the emperor's pavilion in the Diwan-i-Amm into the Diwan-i-Khas. It was also created in the Jami Masjid by not locating Salim Chisti's tomb on the south axis so that it is totally hidden when the visitor enters through the Buland Darwaza.

Human scale is created by low ceilings and by emphasizing the horizontality of the facade. Monumental scale was employed to break the horizontal facade and to create focal points in the form of landmarks. The visual image of Fatehpur Sikri lies strongly in its landmarks. These are the Panch Mahal, the Diwan-i-Khas, the Buland Darwaza and Salim Chisti's tomb. The Jami Masjid complex is also an important part of the visual image. Other unique features include ornamentation, the use of water elements, floating effect and the tactile. The interiors and exteriors of the buildings are profusely carved. The floating effect is created through the use of white marble material against

6. SPATIAL DESIGN PRINCIPLES

the red sandstone as in Salim Chisti's tomb. The rich ornamentation of the columns and walls continuously invite visitors to touch and feel the stone carvings. These carvings may have been translated into stone from the earlier wooden details.

In brief, Fatehpur Sikri employs the principles of symmetry in the individual buildings, and asymmetry in the layout of the complex. This was done to create movement as well as a rich and dynamic visual experience where the scene is constantly changing.

7 - CONCLUSIONS

This study has analyzed the plan of the Fatehpur Sikri complex (in its present state) rather than focus on individual buildings. There were four defined objectives of this research; the first was to examine the visual and spatial structure of the plan form, that is, how the buildings are located on the site. This was viewed in the context of the historical evolution of the complex. The second objective was to analyze the plan in the light of the mandala, a Hindu concept of spatial organization. The third objective was to examine the functional relationships of various physical structures of Fatehpur Sikri in terms of the social life at the Mughal court. The last objective was to understand the design and planning principles employed to create the exterior spaces of Fatehpur Sikri. This was carried out by conducting a visual analysis in India at this specific site as well as at the Agra Fort and the Red Fort at Delhi.

This chapter first summarizes the research and raises a number of questions. Second, it discusses the research findings and the continuity of Mughal architecture in the present context. Third, it pinpoints the current issues and problems in Fatehpur Sikri. Lastly, the chapter makes recommendations for future research and also discusses what can be learnt from this study of Fatehpur Sikri.

7.1. SUMMARY

Fatehpur Sikri has been identified as a world heritage monument which was built about 450 years ago. This city is the result of a unique history as well as the social and political forces of the time. As a result, it was examined through the social and political

context of Mughal time and culture. In 1526, Babur, the founder of the Mughal dynasty in India and the first Mughal emperor, penetrated India from Afghanistan. Babur ruled for five years and after his death, he was succeeded by his son Humayun. Akbar, the third ruler and the son of Humayun was the emperor who commissioned Fatehpur Sikri. He was followed by three more emperors in this dynasty: Jahangir, Shah Jahan and Aurangzeb.

Babur and Humayun were orthodox Muslims who were determined to spread Islam in India. During this era, many Hindu and Jain temples were demolished and mosques were superimposed on them. Unlike his father and grandfather, Akbar had great tolerance for the native Indian religions. He started his own religion, Din-i ilahi which literally means "religion of God" and which was a synthesis of the major Indian religions. His purpose was to unify the people of his empire. He abolished Jiziya, the tax collected from non-Muslims and put an end to other forms of discrimination against the non-Muslims of his empire. He was very open minded and exhibited an interest in other religions. During this time, there was also a great influence of Sufism in Northern India. A large number of people, both Muslims and non-Muslims, were attracted to the Sufi saints. Akbar's unconventional decision to locate the tomb of Salim Chisti, a Sufi, in the Jami Masjid complex must have also been based on his desire to bring unity among his subjects. Even today this spot is a common meeting ground for both Muslims and non-Muslims.

Akbar's decision to move his capital from Agra to Fatehpur Sikri was based on spiritual reasons since the city played no significant role from a military point of view. The city of Fatehpur Sikri was the home of the well-known Sufi Saint, Salim Chisti, whom Akbar had approached to seek blessings for a male heir. After Chisti's prophesy in 1569, that he would have three sons, Akbar made the decision to build a new capital at Fatehpur Sikri.

7. CONCLUSIONS

The plan of the imperial complex of Fatehpur Sikri is distinctive. There are no streets, instead it consists of interlocking courtyards set to the cardinal points. In its physical structure, the plan has both regularities and irregularities: the design of the individual monuments is based on symmetry while the layout of these buildings is the result of asymmetry.

Akbar invited the best craftsmen from different parts of his empire to take part in the building of this ceremonial city. The majority of these craftsmen were Hindu who were very experienced in Hindu temple construction and their execution. Akbar's open attitude and respect for other religions is reflected in the architecture and layout plan of Fatehpur Sikri's imperial complex. It is found to be open, informal and flexible. It also mirrors the themes of Din-i ilahi where everyone is welcomed irrespective of religion. The use of decorative ornamentation from various Hindu as well as Jain temples also reflects Akbar's open attitude towards other religions.

A number of questions arise from the interlocking plan. Some of these are: why the plan was adopted; whether it was because of its flexibility to accommodate different architectural monuments and their spatial arrangement; whether it was based on the spatial concepts of mandala in the form of the "nine square grid" which was already in practice at the time. The tomb of Akbar's father, Humayun, was built on the spatial concepts of the "nine square grid." Other questions can also be raised: whether Akbar gave freedom to the artisans to adopt or to recreate forms from Hindu and Jain temple architecture or whether he expressed a desire for the architecture of Fatehpur Sikri to reflect the architecture of his empire. These two questions are two sides of the same coin.

The research concludes that in the layout plan, mandala in the form of the nine square grid was not applied in the grid plan of Fatehpur Sikri as it had been implemented in the

7. CONCLUSIONS 277

planning and design of the early eighteenth century city of Jaipur in India. Spatial concepts were developed on the basis of a need to accommodate the architectural forms and spatial conceptions from different regions of Akbar's empire. It is also possible that Akbar did not want to base the plan of Fatehpur Sikri on the rigid plan of the mandala. He looked for a unique solution to express his belief in universalism which was the main theme of Din-i Ilahi. To understand the relationship between Akbar and the spatial conception of Fatehpur Sikri, it is important to examine the Red Fort at Delhi which was built by Shah Jahan. Akbar's architecture and spatial design concepts reflect his tolerance and acceptance of the varied religions and culture of his subjects.

The layout plan of Fatehpur Sikri is open and in the form of courtyards which acted as arenas for the social activities of the time. In the plan of the imperial complex, defense was also not a concern and the absence of a wall enclosure reflects Akbar's tolerant attitude towards his subjects. It indicated a ruler living among his people, secure and unafraid. In contrast, the layout of the Delhi Red Fort is introverted and it reflects a military theme. Defence was a prime factor and the imperial palace of the Delhi Red Fort is surrounded by massive battlemented walls. Unlike Akbar, Shah Jahan was not a favored emperor; he completely insulated himself from his subjects and the walls of the Red Fort created not only a physical barrier between the ruler and the ruled but they also provided the emperor a psychological assurance of security. The architecture and spatial conception of Shah Jahan follow Islamic forms and rigid rules of geometry. Shah Jahan did not allow his architects any freedom and so his architecture reflects his orthodox beliefs in Islamic theology and a ruling ideology along military lines.

Fatehpur Sikri's layout plan was conceived before the erection of its buildings. This can be determined from the writings of Father Monserrate who lived at Akbar's court. To avoid the noise of construction, Akbar had various parts of the buildings done elsewhere and then placed in the complex. For example, stone may have been cut and dressed at

7. CONCLUSIONS

the quarries. Ornamental forms may have been produced in workshops. According to Father Monserrate, these parts were made in "the accordance to the exact plan of the building, and then brought to the spot, and there fitted and fastened together" (Monserrate, 1922, pp. 200-201). The architect in charge of developing the total layout is not known. The plan may have been based on the consensus of many architects and craftsmen who were involved in the construction of the total complex. Prime underlying factors may have included the accommodation of various buildings and the efficiency of construction. The whole complex was built over a period of fifteen years.

The third objective examined the functions of the buildings in terms of their court activities and social life. Three sides of Fatehpur Sikri are enclosed by a wall and on the fourth side there was a lake during Akbar's time. The main entrance to the city is through the Agra Gate in the wall enclosure. Near the Agra Gate, the main road branches out to the right and passes through the Naubat Khana. This gateway provides the main entry into the Char Suq, a marketplace with an entrance on each of its four sides. On both sides of the road there were shops in the form of a linear bazaar. Close to this road on the right, there is a building known as Tansen Barahdari which has a centralized plan. This building was used as a meeting palace for nobles. After passing through the Naubat Khana, there are horse stables on the right, and opposite to these, are the ruins of a building structure which may have served as a residence for the caretaker of horses or for the security guards of the palace.

The road finally leads into the Diwan-i-Amm, the public space where the emperor held audience with his subjects, where prayers were said and festivals were celebrated. From the Diwan-i-Amm, access is provided to the Diwan-i-Khas through a garden which acts as a transition zone between the Diwan-i-Amm and the Diwan-i-Khas. This garden space is created by paths and water channels.

7. CONCLUSIONS

The semi public courtyard of the Diwan-i-Khas is defined by a level change. It is also located near to the Pachisi court. The architectural and spatial hierarchy of the Diwan-i-Khas is created through a very sculptured space. The building may have been created for religious discussions and meetings with special dignitaries.

West of the Diwan-i-Khas is the treasury building which has richly ornamented brackets at its ceiling level. A small pavilion, known as the astrologer's seat is attached to this building. South west of the Diwan-i-Khas is a pleasure pavilion known as the Panch Mahal which is an elegant five story building in the form of a pyramid. This building is one of the landmarks of Fatehpur Sikri. To the east of this is a building known as the Madrasa which may have been used as a school for harem children.

On the south western corner of the Pachisi court there is a small building known as the Turkish Sultana whose architectural hierarchy is created through rich ornamentation. South of the Diwan-i-Khas is the emperor's residence. This is separated from the Pachisi court by a level change. The Anup Talao is located in the middle of the emperor's private courtyard. This is a square water tank with a platform in the center; this platform is connected to the sides by narrow bridges. Artistes and singers like Tansen must have performed in this area. South of Akbar's residential area is the Daftar Khana, the administrative center.

East of the emperor's residence is a horizontal two story facade. This facade provides an entrance into the harem area through a small opening. After stepping into the harem area, the observer is confronted by a small building known as Miriam's palace. This is where one of Akbar's queens lived. The space west of Miriam's palace leads to the Hawa Mahal and through a viaduct to Birbal's palace which may have served as a residence for one of Akbar's queens. To its east is a porter's lodge and to the south is a structure which may have been used as a royal bazaar for the women of the harem.

7. CONCLUSIONS

South of Miriam's palace is Jodhabai's palace where many of the harem women lived.

South-west of the imperial complex is the Jami Masjid complex which houses the tomb of Salim Chisti. There are two entrances, one on the east and the other on the south. The former which is known as the Badshahi Darwaza was the imperial entrance while the latter or the Buland Darwaza was used by the emperor's subjects since it provided a connection with the city. The Buland Darwaza is another landmark of the city of Fatehpur Sikri. On the north-west side of the Jami Masjid is Salim Chisti's monastery which includes the Stone cutter's mosque and the Rang Mahal. The former may have been used by Chisti and the townspeople for their prayers whereas the latter was the temporary living quarters for Miriam-az-Zamani, the mother of Jahangir, the fourth Mughal emperor. It was used by her during her pregnancy. Near the eastern facade of the Jami Masjid, a path takes visitors down to the area which was once close to the lake. At the far end of the complex, on the north-west side, a small tower known as the Hiran Minar sits on a rectangular platform. To the right of this is the caravanserai, a structure which was built before Akbar's time.

The last objective which was to study the city's design and planning principles was achieved through site work at Fatehpur Sikri, the Agra Fort and the Delhi Red Fort. Fatehpur Sikri consists of a unique spatial pattern which was generated through the interlocking of various courtyards. The individual monuments show symmetry, but in spatial layout, the rules of symmetry are broken and buildings are deliberately placed in an asymmetrical spatial order. The layout plan of the imperial complex reflects the spatial layout of the Mughal camp as well as the Mughal garden. The placement of the buildings in the courtyards provides an opportunity to view them from a number of vantage points. The view, however, changes with every movement or with every step. The same building is seen in a different setting: sometimes it is in the forefront, or at the side and in a number of instances, becomes the backdrop. The spatial structure of the

7. CONCLUSIONS

complex is created to experience movement and a dynamic visual experience.

The spaces were defined by enclosures and a change of level. The design principle of transparency was also extensively used to create a sense of infinite space and to connect interior and exterior spaces; this was done by puncturing the walls at various positions. It is found in many places which include colonnaded spaces and buildings.

The element of surprise was created by providing small entrance openings or small, dark spaces leading into large open spaces. Human scale was created by low ceilings as well as by emphasizing the horizontality of the facade and by wide eaves running all around the building which cast horizontal shadow lines. Monumental scale was employed to break the horizontal facade and to create focal points in the form of landmarks. The visual image of Fatehpur Sikri lies strongly in its landmarks. These are the Panch Mahal, the Diwan-i-Khas, the Buland Darwaza and Salim Chisti's tomb. The Jami Masjid complex is also an important part of the visual image. Other unique features include ornamentation, the use of water as reflective medium, and the floating effect through the use of materials. The use of white marble in Chisti's tomb against the red sandstone creates a floating effect. The interiors and exteriors of the buildings are profusely carved. The rich ornamentation of the columns and walls continuously invite visitors to touch and feel the stone carvings. These carvings may have been translated into stone from the earlier wooden details.

In the harem area women were able to go to the roof levels of many buildings. It was possible for them to come very close to the Diwan-i-Khas and the emperor's residential area through the Panch Mahal as well as the space above the gated facade of the harem area. Harem women were thus able to observe court activities without being seen.

7. CONCLUSIONS   282

7.2. RESEARCH FINDINGS

In response to the first objective regarding the visual and spatial structure of the plan form, the research concludes that the layout of the imperial complex of Fatehpur Sikri in the form of interlocking courtyards was based on flexibility. It was also based on efficiency and the accommodation of buildings of different sizes. The courtyard was also used as a stage for court activities. The spatial conception and ornamentation of Fatehpur Sikri display the themes of Din-i-ilahi.

Using the framework of the mandala to analyze the plan of Fatehpur Sikri, it can be concluded that this was not the underlying basis. Instead, the plan has its origin in the Naksa-i-Ain-Manzil, the plan of the Mughal encampment. The spatial arrangement of the camp was linear in Mughal camp planning and it was done according to the principles of public and private spaces. In the first section, the emperor would meet his subjects and soldiers. The second section was used to issue state orders and receive intelligence reports but only high officials and privileged courtiers were allowed into this area. The third section was meant for the emperor's relaxation and rest and the last one was for the women of the harem. The harem section was strictly guarded and the women were secluded from most of the men. The spatial layout of the imperial complex of Fatehpur Sikri follows the flexibility and the functional land use zoning of the Mughal encampment. Mughal gardens also follow this spatial pattern.

In response to the third objective which dealt with the functional relationships of the physical structures in Fatehpur Sikri, the plan of the imperial complex was examined in the frame work of the spatial conceptions of the Mughal camp layout. This provided clear answers about the function of buildings popularly known as the Turkish Sultana, the Diwan-i-Khas, Birbal's palace, the horse stables and the mint. There is no consensus among Mughal architectural historians about the functions of various structures. The building known as the Turkish Sultana has been described by various scholars as the

7. CONCLUSIONS   283

residence of one of Akbar's wives but this seems to be unlikely because of its small size and its location within the emperor's private residential area. According to the Mughal camp layout, women lived in the harem area. The emperor would visit with his wives in their own palaces or they would visit him, but they would not live with him in his residential area. In the Mughal court, men and women were segregated. It seems more likely that this building was used as a meeting space where the emperor discussed important matters with one of his ministers or where he would meet with his favorite wife or concubine. The Turkish Sultana is a small, richly ornamented, carved room but it was not a queen's residential palace.

The Diwan-i-Khas has been popularly described by various scholars as the place where Akbar conducted religious discourses with various scholars. It has been described as the Ibadat Khana or the "house of worship." In this building, spatial hierarchy was created through the construction of an extraordinary pillar in the form of the universal axis, the mundi. This pillar which is in the center of the structure has a platform at the top. The platform is encircled by a hanging gallery at the upper level of the interior. The gallery and platform are connected by four stone bridges along each diagonal of the hall. The plan of the building evokes a similarity to the Hindu temple plan where the deity is placed at the center with the path of circumambulation surrounding it. In this case the gallery could be construed as the circumambulation path. The connecting bridges may have been conceived for the worshipper to approach the deity with offerings. The concept of mundi and circumambulation are also reminiscent of the Buddhist stupa.

The central circular platform at the top of the pillar may have been used as a throne for the emperor Akbar. This center pillar may have represented the axis of his rule over the four quarters of his empire. It may have also symbolized the connection between the earth, Akbar as the founder of Din-i ilahi, and God. Through the connecting bridges, he may have even received "offerings" from his courtiers. Only important people would

have been allowed the privilege to go up while servants would have stayed on the ground floor. The Diwan-i-Khas may have also been designed and used for various purposes, such as, meetings with certain ambassadors or dignitaries or religious functions and discussions. This imposing building may have expressed strong symbolism as opposed to function. It is possible that it was intended as a Diwan-i-Khas[1] but it is questionable whether the structure was successful and fulfilled its functional objectives.

Birbal's palace was located in the harem area which was zoned only for harem women. According to a number of architectural historians, this was the palace of Raja Birbal who was one of Akbar's ministers. It is unlikely that Akbar would permit the location of his courtier's palace in the middle of the harem area. This building may have been the palace of one of the emperor's queens.

Another building, south of Birbal's palace, may have served as a royal bazaar for harem ladies. Special bazaars were held for the harem and since these women were in strict seclusion, the bazaars would have been either within or in close proximity to the harem section. Some authors suggest that this building served as stables for camels and horses. It is doubtful that stables would be placed so closely to the harem and to the palaces of the queens. In fact, the building known as the mint has been recently identified as horse stables. This information was revealed in a recent excavation of the area.

The fourth objective analyzed the physical plan of the complex on the basis of the visual analysis conducted on the site of Fatehpur Sikri. The plan of the city is based on a modular scale. The buildings are located in the courtyards in such a way that a visually

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[1] The plan of the Diwan-i-Khas is in the form of a square with a circle in its center. It is similar to the Italian High Renaissance plan symbolizing the emperor as the center of the universe. The circular form resting on top of the monolithic pillar or mundi signified divine perfection.

7. CONCLUSIONS

dynamic experience is generated when a person moves through the complex. The designers of Fatehpur Sikri seemed to understand the articulation of the exterior space in the third dimension.

7.3. ISSUES, PROBLEMS AND RECOMMENDATIONS

Studying the functions of the buildings in terms of court activities provided a clear picture of Akbar' court life at Fatehpur Sikri. The spatial planning of Mughal gardens and encampment provide a basis to analyze the buildings and courtyards in terms of their functional activities. The identification of exact buildings on the basis of Abul Fazl's Akbar Nama and Ain-i-Akbari as well as European travelogues present a problem. This is because the writings give almost no clue to building locations and their unique architectural characteristics. The European sources need to be examined very carefully because most of these European travellers were passing through Fatehpur Sikri and their work is purely based on their own observation or information from the tour guides. The accuracy of these descriptions is highly questionable. Minturn (1858, p. 306) who visited Fatehpur Sikri in 1858, describes Akbar's wife Miriam as a Portuguese Christian. According to Srivastava (1964, p. 184) Akbar had no Christian queens and Miriam-az-Zamani was the posthumous title of Jahangir's mother. Miriam was Akbar's Rajput Hindu wife.

The buildings of the imperial complex and the Jami Masjid are in excellent condition, but there are a number of ruins scattered within the walls of Fatehpur Sikri. It is important to make sense out of these ruins and in order to do so, there is a need for excavation and for conducting an archeological study. To assemble more information, aerial photography of Fatehpur Sikri and its surroundings area should be conducted.

From the site investigation, I discovered that the Hathi Pol, the caravanserai and the Hiran Minar area are not well cared for. Although at present these structures are in a

reasonably good condition, it is important to preserve them by providing regular maintenance services. These buildings require some work, but they should be restored according to their original details. At present, the context of the buildings is changed so it is important to establish historic districts in order to preserve the visual image of Fatehpur Sikri. The major problem with this area is that to visit these buildings visitors have to go all the way around the entire complex. In the present context the buildings are physically separated from the imperial complex as well as the Jami Masjid.

The buildings related to Salim Chisti form a part of the existing fabric of the urban settlement of Fatehpur Sikri (cf. Figures 7-1 to 7-6). These buildings reflect their history and original details but they are in a very dilapidated condition and require restoration (cf. Figures 7-7 to 7-9). Visitors to Fatehpur Sikri are not even introduced to this historic area[2]. The present settlement of Fatehpur Sikri needs upgrading and people should be educated about the rich cultural resources of their area so that they can be proud of their community. The Indian government must direct their expertise and funds to do so. It is necessary to have a total plan of this area which must include local economic development based on the resources available, for example, carpet weaving and stone work.

Fatehpur Sikri is a city frozen in time. It serves as a great laboratory to study architecture, urban planning and urban design principles of a particular period of Mughal rule. It is important for visitors to experience the city as it was in Akbar's era. At present, a number of gates and staircases are closed to the public. As a result, the visitor cannot experience the spatial sequences and architecture of the era. The whole complex

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[2] Salim Chisti's monastery existed before Akbar decided to build Fatehpur Sikri as his ceremonial city. The monastery may have been renovated. The Rang Mahal was probably the first royal building to be added to the monastery since this was where Miriam stayed during her pregnancy.

7. CONCLUSIONS   287
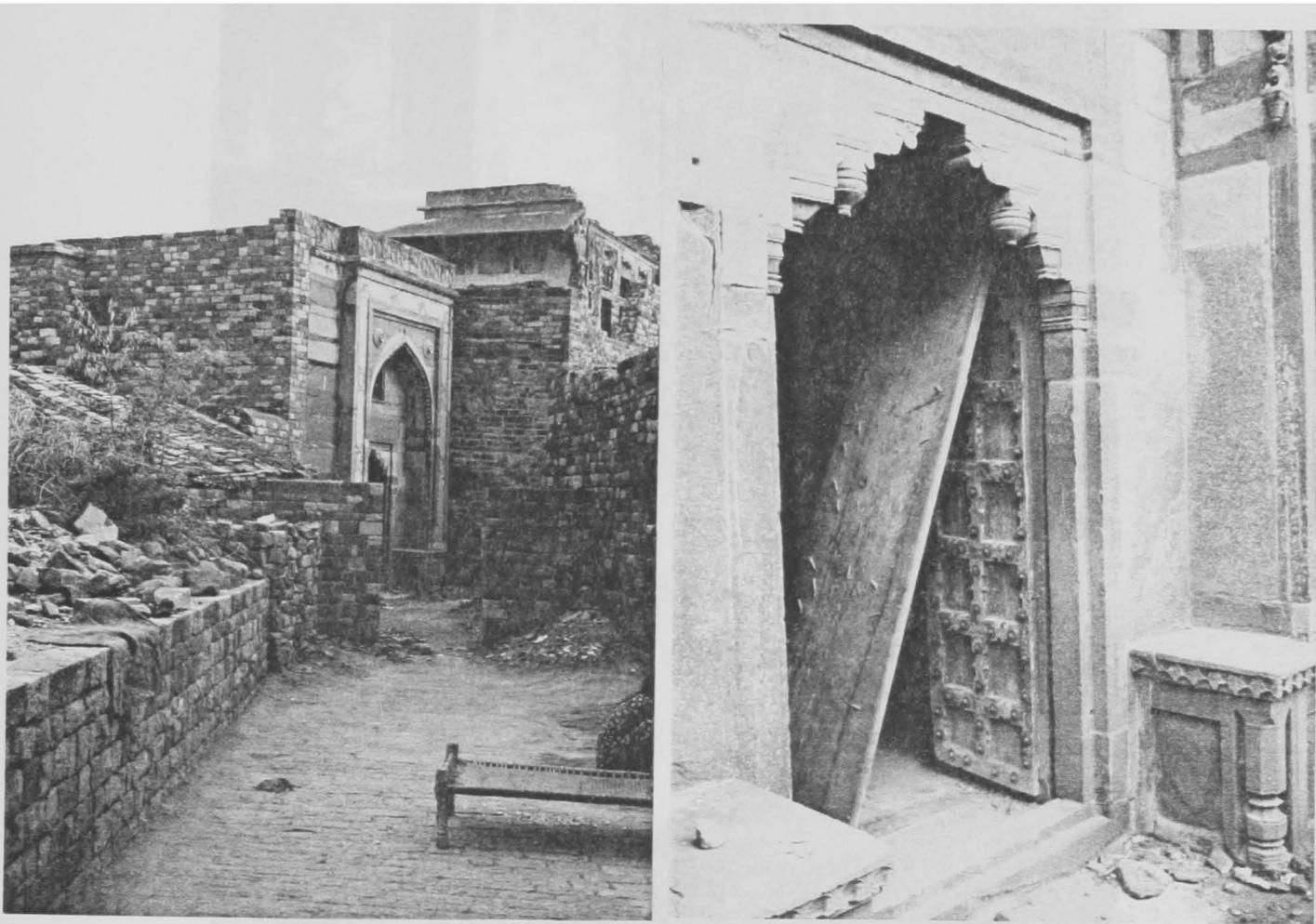
Figure 7-1: The Rang Mahal (left)

This pathway leads to the Rang Mahal. The building is surrounded by the homes of the descendants of Salim Chisti. The whole district is tied to the present settlement of Fatehpur Sikri.

Figure 7-2: The Rang Mahal (right)

This is the main entrance into the Rang Mahal. The broken door indicates the state of deterioration of this structure.

7. CONCLUSIONS

288
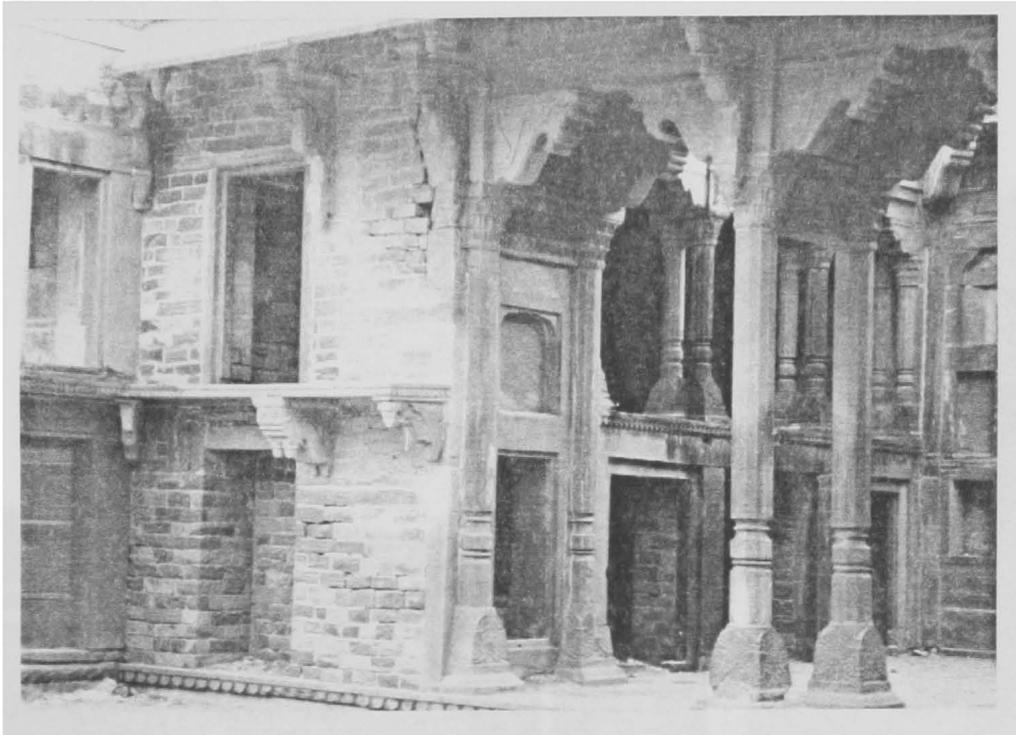
Figure 7-3: Rang Mahal : the interior

This space is around the interior courtyard. Two-story high cylindrical columns are used to create interior volume in this space.

Figure 7-4: The interior courtyard

The interior courtyard is defined by a level change.

7. CONCLUSIONS
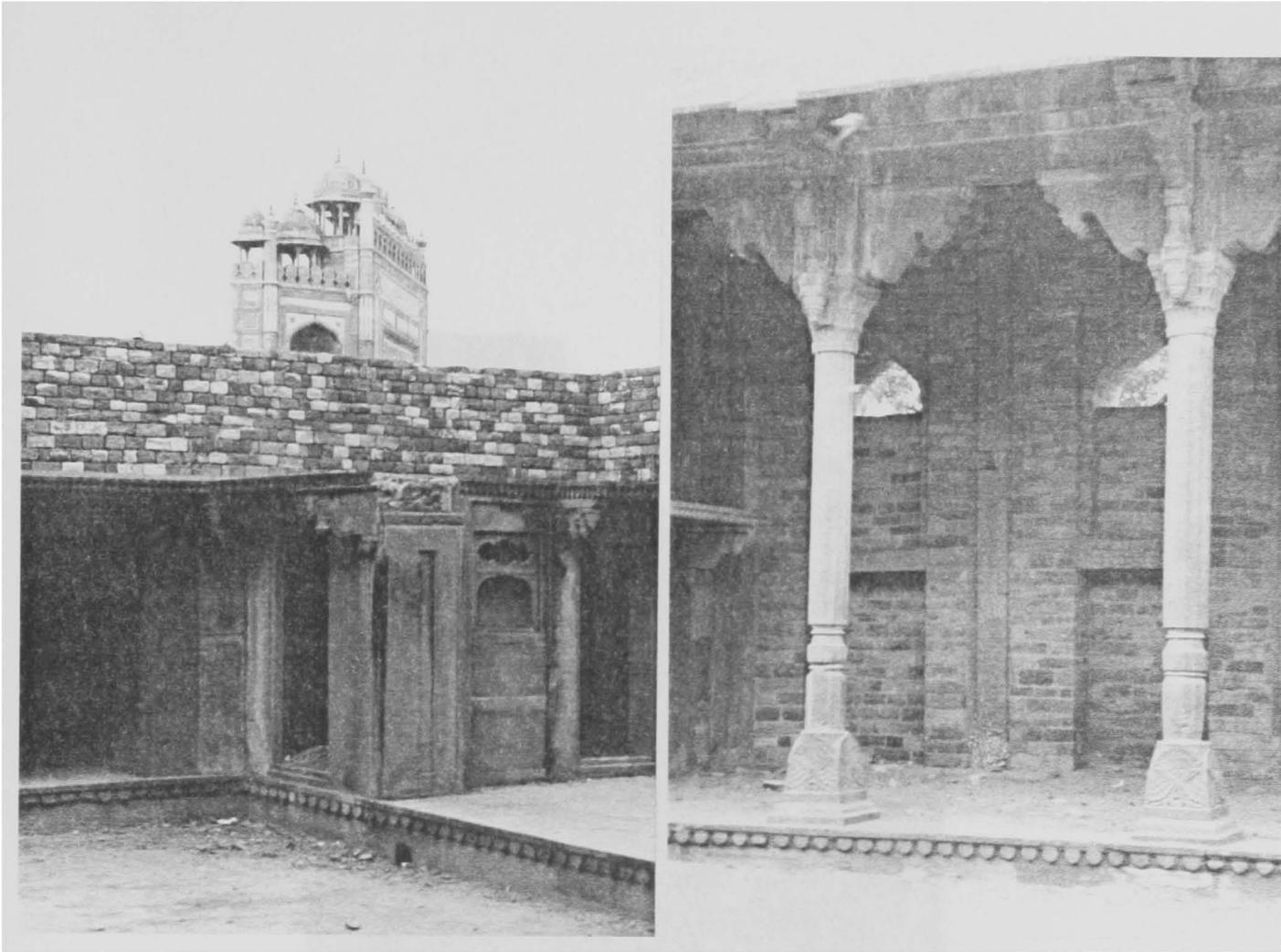
Figure 7-5: The Rang Mahal: interior courtyard (left)

The Buland Darwaza can be seen behind the Rang Mahal. The photograph shows a recently constructed wall.

Figure 7-6: Rang Mahal (right)

Post and beam construction has been employed in this building. Ornamental decoration is used.

7. CONCLUSIONS
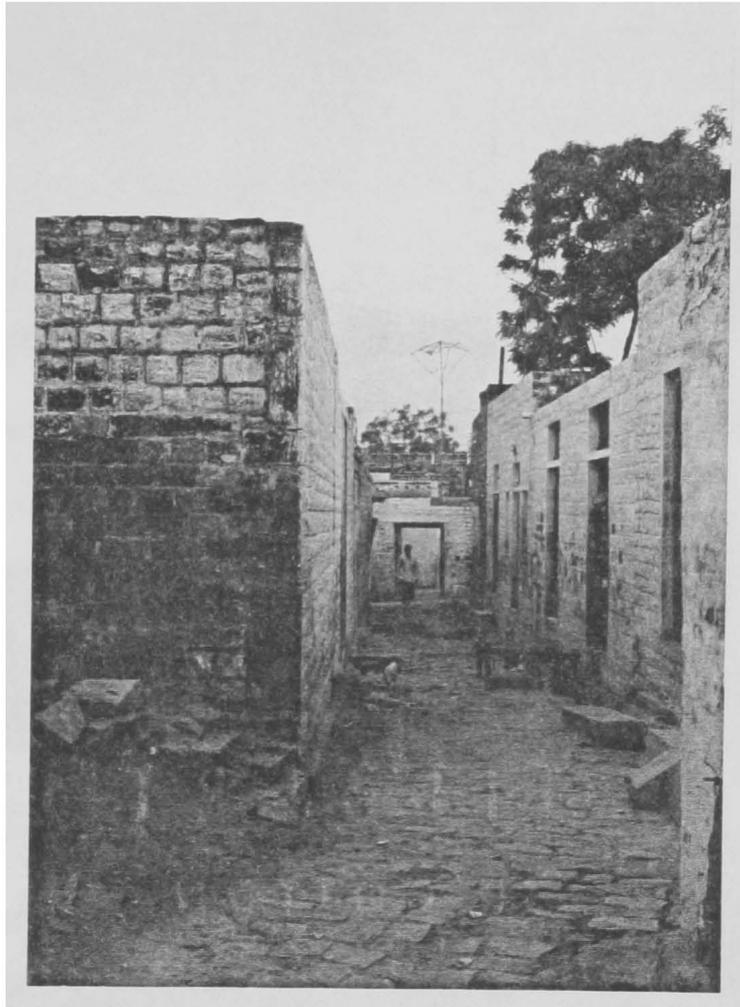
Figure 7-7: Area around the Rang Mahal

The physical condition of this area is poor and needs upgrading.

7. CONCLUSIONS   291
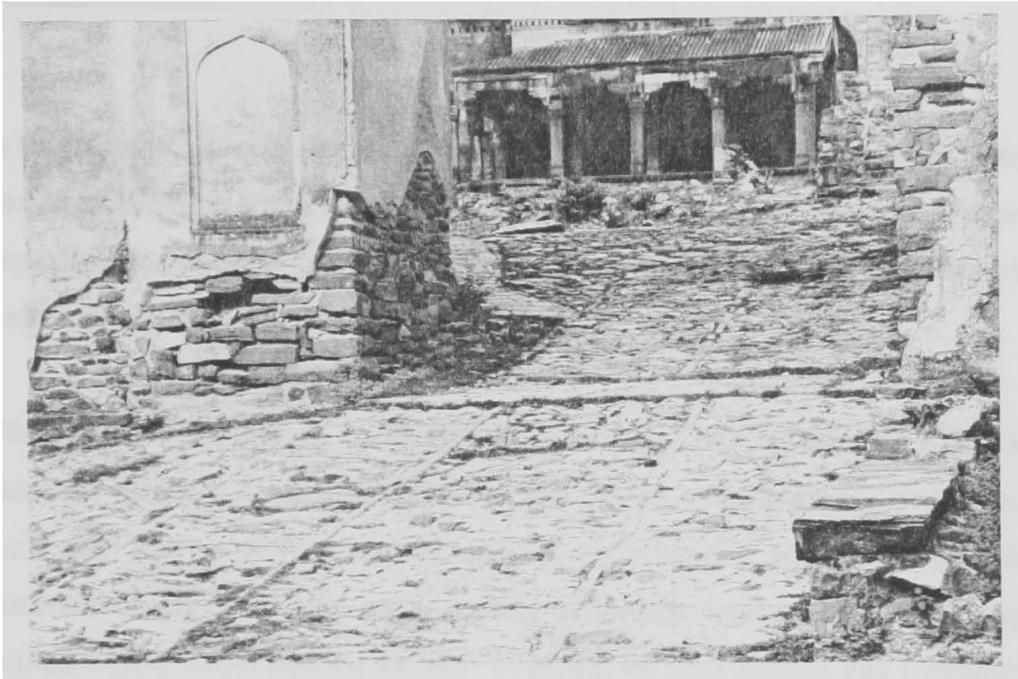
Figure 7-8: Preservation problem: The Hathi Pol Area

This area needs to be upgraded otherwise important structures will be lost.
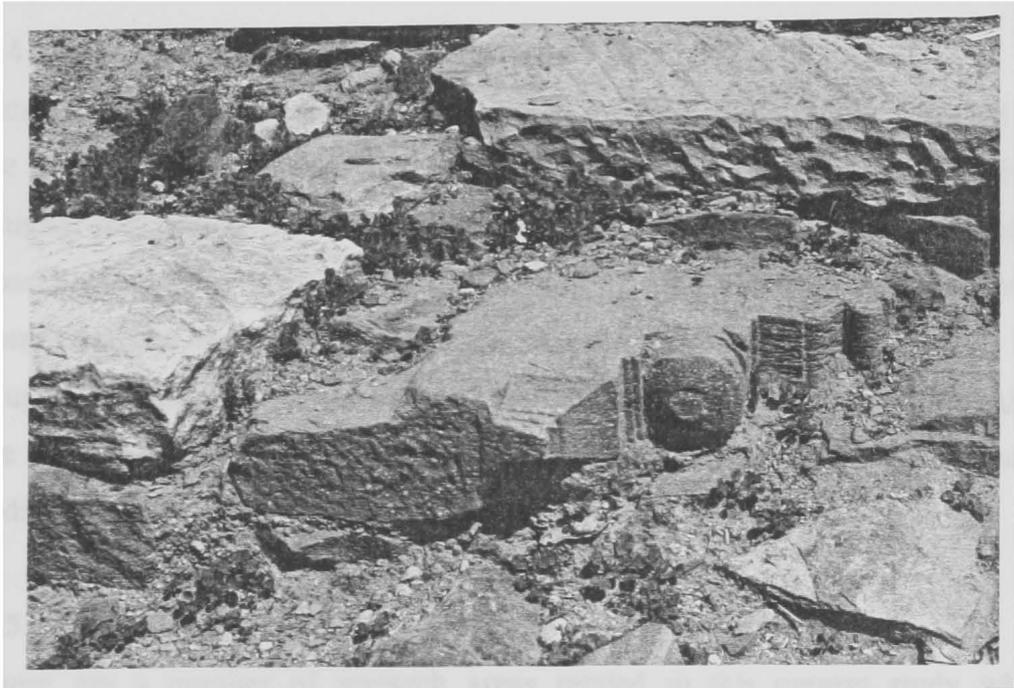
Figure 7-9: Preservation problem

During a site investigation I found a number of brackets belonging to the historic buildings scattered around the imperial complex.

7. CONCLUSIONS

is fragmented into small compartments. Tourists are also taken to the Jami Masjid first and then through Jodhabai's palace to the Diwan-i-Amm. For the visitor to properly experience the spaces, it is important to enter through the Diwan-i-Amm and to exit from Jodhabai's palace.

On the site investigation I also found that a major part of the city wall and number of gates are in the state of deterioration. They need to be upgraded to be brought back to their past glory. It is important that a comprehensive plan be developed to link the historic complex with the gates so that a modern tourist can visually experience the complex from these historic points. It should be remembered that Fatehpur Sikri was a pedestrian city, therefore the new comprehensive plan must encourage the pedestrian character of the city.

7.4. CONTINUITY OF MUGHAL ARCHITECTURE

Elements of Mughal architecture continued even after the collapse of Mughal rule. These are found in Sikh Temple architecture (cf. Figures 7-10 and 7-11). This is because Mughal penetration into India coincided with the evolution of the Sikh religion. It is possible that many artisans worked on both Mughal buildings and Sikh temples. The domes and the water pool are integral characteristics of the Sikh temple. Elements of Mughal architecture were also employed in the palatial architecture of the maharajahs and the elite class. Charbagh, a spatial concept of the Mughal garden is found in many Indian paintings of the eighteenth century (cf. Figure 7-12).

7.5. FUTURE RESEARCH

There are a number of research areas related to this present study which can be generated. Some of the areas which need to be investigated are the following:

1.   How the buildings of Fatehpur Sikri were conceptualized and constructed. There are no architectural drawings available of the era although a number of miniature
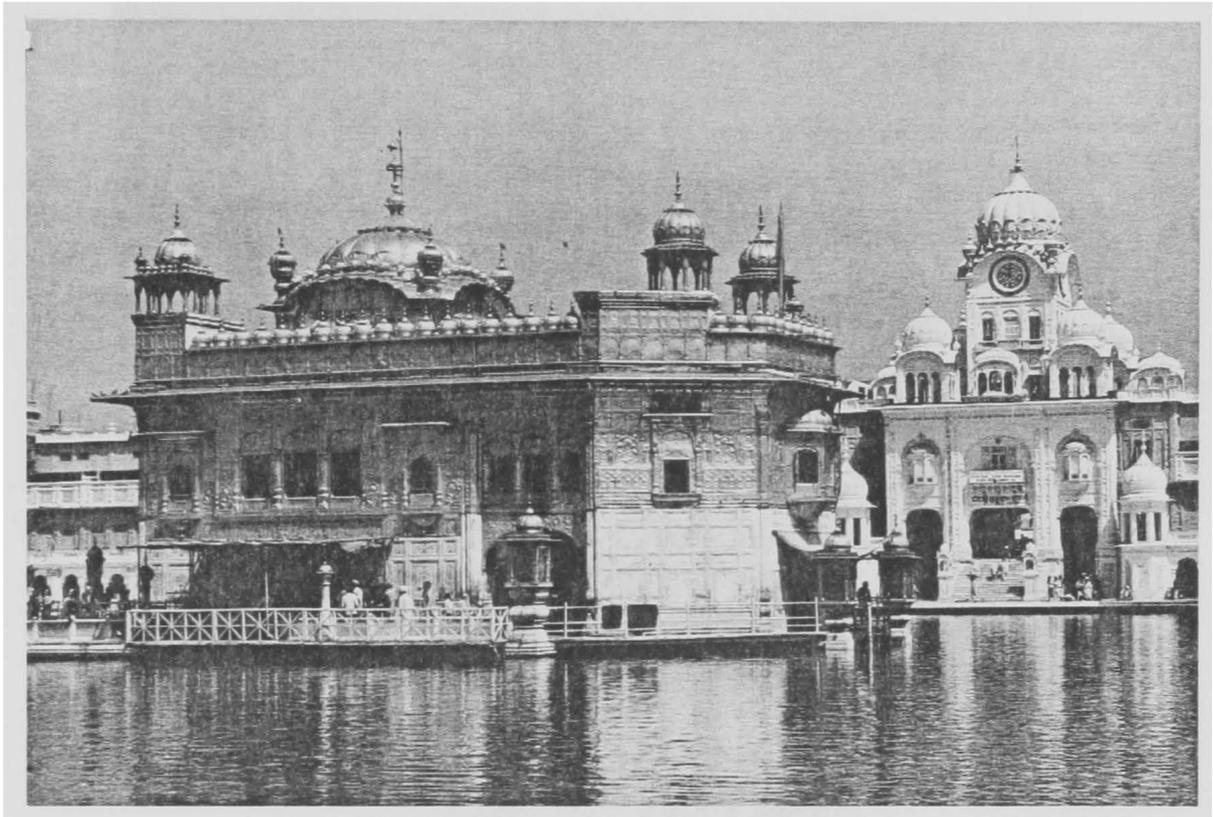
Figure 7-10: Golden Temple
Amritsar, India

This Sikh shrine was built during the Mughal rule. The shrine sits in the center of a water pool. The use of shallow domes and water elements are an integral part of Sikh religious architecture.

7. CONCLUSIONS
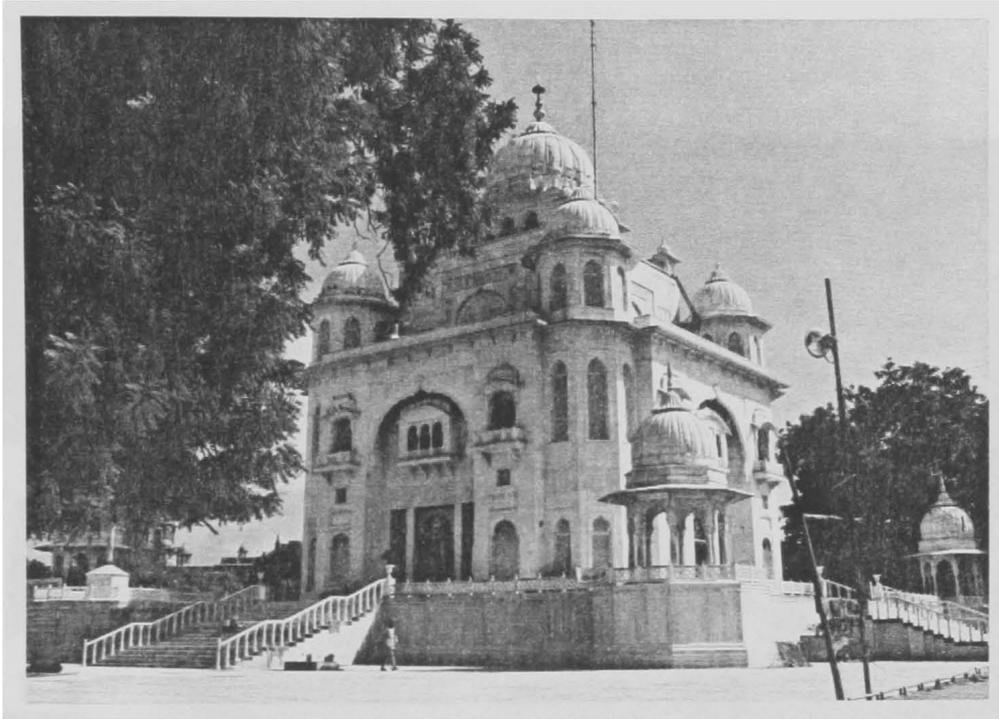
Figure 7-11: Bangla Sahib
New Delhi, India.

This a modern Sikh Temple built in the last fifteen years. It is constructed out of white marble. Its architectural characteristics can be seen to have their roots of origin in Mughal architecture.

7. CONCLUSIONS
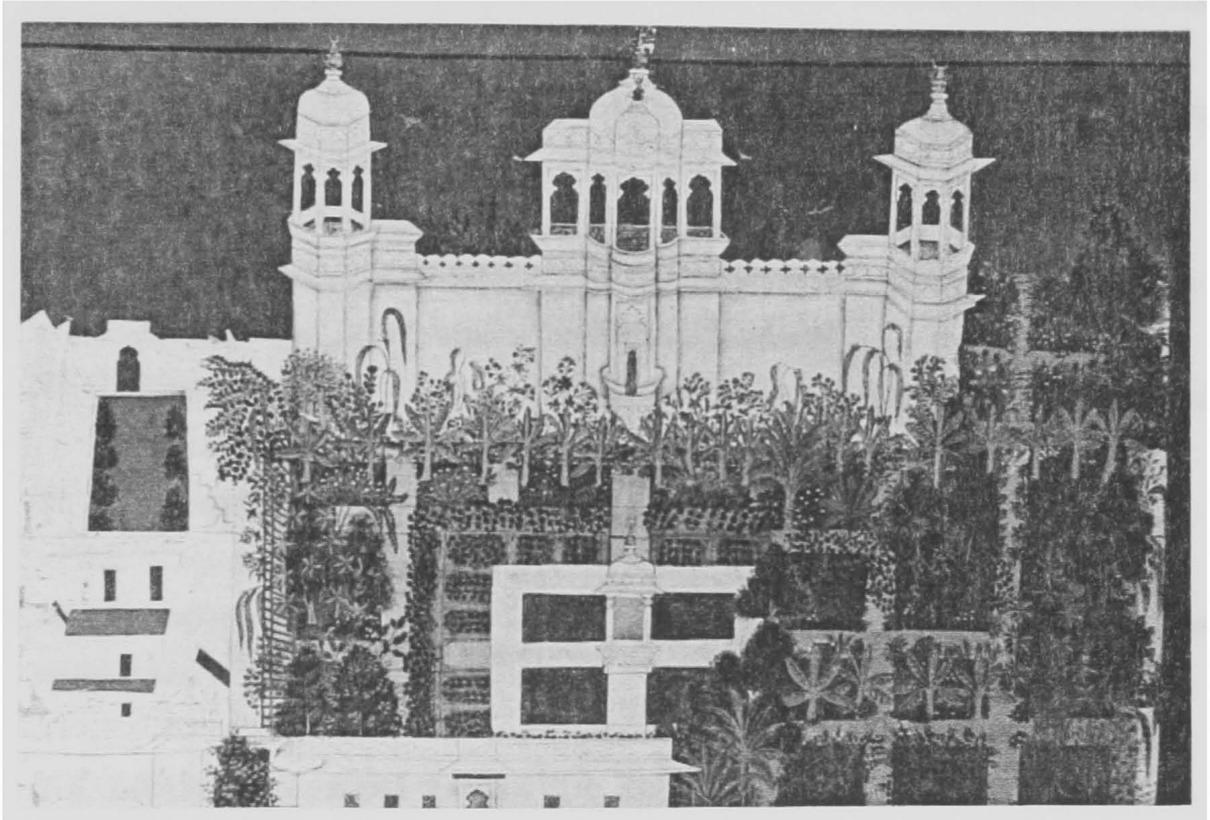
Figure 7-12: Udaipur Lake Palace Painting (18th Century)
Udaipur, India.

This painting of the eighteenth century shows the impact of Mughal architecture on the palatial architecture of Rajasthan. At present, this palace is converted into a lake palace. It also depicts the use of geometry in creating a formal garden. The garden space has been divided into a number of units by path and water channels.

7. CONCLUSIONS

296

paintings produced during the time show construction activities. These provide visual evidence for a number of building activities.

2. An investigation of the origin and sources of the architectural decorations of Fatehpur Sikri as well as their geometric configuration.

3. An investigation of the connections between Central Asian architectural forms and Fatehpur Sikri.

4. Whether there were any gardens, retreats or hunting lodges beyond the present vicinity of Fatehpur Sikri.

5. How the water supply system of the complex worked.

6. The function of the buildings which are in ruins and whether their forms can be reconstructed on the basis of available information.

7. Comparing and contrasting the similarities and differences between Hindu, Islamic and Mughal complexes.

8. Comparing and contrasting Fatehpur Sikri with the Alhambra in Spain.

Future research in this area will help develop and expand the current architectural and design theory of the Mughal period.

7.6. LEARNING FROM FATEHPUR SIKRI

There are a number of lessons which can be drawn from Fatehpur Sikri. The design principles applied to Fatehpur Sikri are not only limited to Mughal architecture or Islamic architecture in India. These principles have been applied in a number of places in the world, such as the fourteenth century complex of Alhambra in Spain. The layout of Fatehpur Sikri employs courtyards for the location of buildings. This provides an opportunity for the buildings to be viewed from a number of vantage points. Since the view changes with every movement, the same building is seen in a number of different settings. Through this spatial structure, a dynamic visual experience is created.

The use of courtyards to locate buildings has been emphasized by modern architects such as Le Corbusier and Louis Kahn. Le Corbusier used courtyards to locate the main buildings of the Capitol Complex in Chandigarh (India). Louis Kahn describes the courtyard as a room open to the sky. The location of the building in the courtyard provides a rich visual experience and has been also emphasized by Camillo Sitte (1945), in his Art of Building Cities. Courtyards in the imperial complex of Fatehpur Sikri provided space for court activities. Their importance in the form of urban spaces is marked even in the present era. They set the stage for drama in the form of social activities[3]. This can be seen in the courtyard of the City Hall of Toronto, Canada[4]. This courtyard contains a water pool which turns into an ice skating rink in the Winter.

The lesson for modern urban designers is to understand that the layout of Fatehpur Sikri is dynamic and it was very advanced according to its time. In modern cities, in many instances buildings are placed close to road edges where they simply cannot be observed in their perspective. Buildings are also placed on both sides of a very long road which results in a monotonous character. There are no focal points or landmarks to provide a sense of direction to the people. In addition, many buildings are first designed without any thought to the site characteristics. Designers would then modify the site according to the design of the building. This was not the case in Fatehpur Sikri. These architects

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[3] William Whyte has done important work in studying people's preferences of public spaces in New York City. His methodology is based on direct observation and photography. In his studies, he describes how small spaces work, that is, what kind of spaces draw people and what kind of spaces keep them out. Some spaces have been designed to "keep out undesirables, such as bums and hippies." The result is that they keep out other people too. He discovered that the spaces with the sun, wind, trees, water, seating, food and triangulation (factors such as the presence of music) attract people. They make urban spaces lively (Whyte, 1980, 1988).

[4] The City Hall of Toronto was designed by a Finnish architect, Viljo Revell, as a result of an international design competition.

7. CONCLUSIONS

conceptualized their buildings according to the dictates of the site. An example of this can be seen in the design of the caravanserai which is anchored to the ground according to the site topography.

The layout of Fatehpur Sikri was most likely not developed on a drawing board as it is done in our modern times. It was developed on the site, according to the existing topographic and landscape characteristics. The determining factor was to create a visually rich environment. An example of this can be seen in the design of the caravanserai which is anchored to the ground according to the site topography. Edmund Bacon also believes that at present, the complexity of design is reduced to a two dimensional representational or to a scale model. The latter is looked at from the top just as one looks at the buildings below while flying in an airplane. The main drawback of this bird's eye view is that buildings are not observed at eye level (Bacon, 1976, pp. 29-31). The architects of Fatehpur Sikri understood the three dimensional reality and were able to create a solution based on it. The Mughal architects and builders were also the same people and so they were able to make any changes needed to enhance their buildings even during the construction phase. In modern times the design and construction usually involve different groups of people. The architect first designs the building, then the engineer or builder implements the plan and at the last stage, the landscape architect becomes involved in the site design. This "lipstick approach" is used to beautify the spot. Mughal architects used the same design approach as the Renaissance architects who designed the building and the space around it as one. Equal importance was given to both the building and the surrounding space or to the figure/ground relationship. Modern architects and urban designers may learn to use this holistic approach, where the architect, builder and landscape architect can jointly develop a design right from the initial stage.

7. CONCLUSIONS   299

Fatehpur Sikri shows, by example, the relationship between form and climate. Building form follows climate, and building facades are punctured according to the wind direction. The use of wall enclosures for space separation, different sizes of openings and level change are employed by architects in every culture. Another lesson which can be learnt from the Mughal architects concerns the setting or context for buildings. Mughal architects took great care in creating an appropriate setting for their buildings. For example one of the prime factors which makes the Taj Mahal beautiful is its unique setting on the river bank. Mughal architects also created a visual connection between the buildings. For example, the principle of transparency was used to make a visual connection between the Taj Mahal and the Agra Fort through beautiful framed views.

This research analyzed Fatehpur Sikri in the context of setting and rituals. Spiro Kostof defines architecture in terms of settings and rituals and states that "no building is an isolated object." It belongs to the larger context. Rituals provide information about function and can be described as the "poetry of function" (Kostof, 1985, pp. 3-19). It is hoped that the study model developed for this research can be used to examine other spatial structures and urban forms in similar cultures.

7.7. EPILOGUE

Fatehpur Sikri can be seen in the light of the utopian tradition of planned communities and cities in which social ideals were addressed along with specific design concepts. The city's unique spatial structure and urban design were created in response to a new social order where the emperor attempted to create harmony among his people and a sense of belonging to their ceremonial city.

Akbar made a profound and powerful social and political statement through architecture. By accepting design elements from Hindu, Buddhist and Islamic architecture, he used a

7. CONCLUSIONS

unique secular approach which blended together the different religious and cultural traditions of his empire. During Akbar's reign, the diverse religious and ethnic groups coexisted peacefully. It may be worthwhile to explore whether a similar approach is appropriate to our present-day world of ethnic rivalry and destruction of community.

In our contemporary context most of the secular solutions ignore the dimensions of religious and cultural tradition. As a result, these solutions fail to induce in different ethnic groups a sense of pride and belonging to the society as a whole. There is a great need today to understand the social dynamics and cultural issues of our diverse population. As a part of the decision-making process, it is essential to develop public policies and urban design guidelines which would bring together communities and foster better understanding and communication. Architecture and urban design with only aesthetic theories as their criteria contribute little to peaceful coexistence between communities. Akbar was a revolutionary man of the sixteenth century; his utopian concepts may inspire environmental designers and planners to develop a social framework for a new architecture and urban design which will bring stability and social harmony to our society.

7. CONCLUSIONS

APPENDIX A

THE MUGHAL DYNASTY

TIMUR died in 1405

$\downarrow$

* BABUR ruled from 1526 to 1530

$\downarrow$

HUMAYUN ruled from 1530 to 1540; and 1555 to 1556

$\downarrow$

AKBAR ruled from 1556 to 1605

$\downarrow$

JAHANGIR ruled from 1605 to 1627

$\downarrow$

SHAH JAHAN ruled from 1627 to 1657 (died in 1666)

$\downarrow$

AURNANGZEB ruled from 1657 to 1707
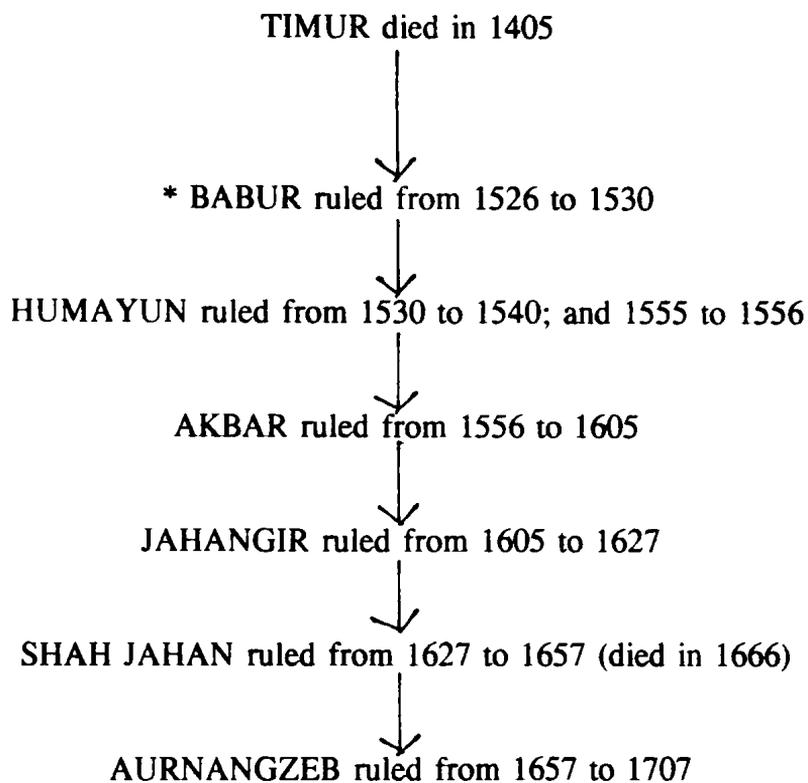
(Only the names which have been mentioned in the text are included in the above list).

* Babur conquered India in 1526.

APPENDIX B

Questionnaire to study:
THE VISUAL IMAGE OF FATEHPUR SIKRI

1. Have you visited Fatehpur Sikri before ?

   (a) Yes____   (b) No____

2. When you think of Fatehpur Sikri what comes to your mind: please identify with the given photographs. You can choose any number of photographs.

   1. Buland Darwaza

   2. Badshahi Darwaza

   3. Salim Chisti's tomb

   4. The Jami Masjid

   5. Panch Mahal

   6. Diwan-i-Khas

   7. Profusely carved pillar of Diwan-i-Khas

   8. Jodhabai Palace

   9. Miriam's Palace

   10. Diwan-i-Amm

   11. Birbal's Palace

   12. Anup Talao

   13. Turkish Sultana

   14. The Skyline

   15. caravanserai

   16. Hiran Minar

   17. Hathi Pol

   18. Naubat Khana

THE QUESTIONNAIRE TO STUDY THE VISUAL IMAGE   303

19. Stables

20. Emperor's private quarters

21. Outer city walls

22. Gates

Comments:_____

_____

_____

_____

ANALYSIS:

THE VISUAL IMAGE OF FATEHPUR SIKRI

1.   (a) Yes = 8 (b) No = 22

2.   List of the monuments respondents considered to be important in constructing their visual image of Fatehpur Sikri:

1. Buland Darwaza = 25

2. Badshahi Darwaza = 16

3. Salim Chisti's tomb = 26

4. The Jami Masjid = 18

5. Panch Mahal = 27

6. Diwan-i-Khas = 12

7. Profusely carved pillar of Diwan-i-Khas = 26

8. Jodhabai Palace = 19

9. Miriam's Palace = 16

10. Diwan-i-Amm = 20

11. Birbal's Palace = 18

12. Anup Talao = 14

13. Turkish Sultana = 15

14. Skyline = 21

15. caravanserai = 7

16. Hiran Minar = 9

17. Hathi Pol = 6

18. Naubat Khana = 8

19. Stables = 7

THE QUESTIONNAIRE TO STUDY THE VISUAL IMAGE   305

20. Emperor's private quarters = 7

21. City walls = 2

22. Gates = 2

Thirty people were surveyed after first ensuring that they were willing to participate in the research. The results of all the respondents were tabulated as above.
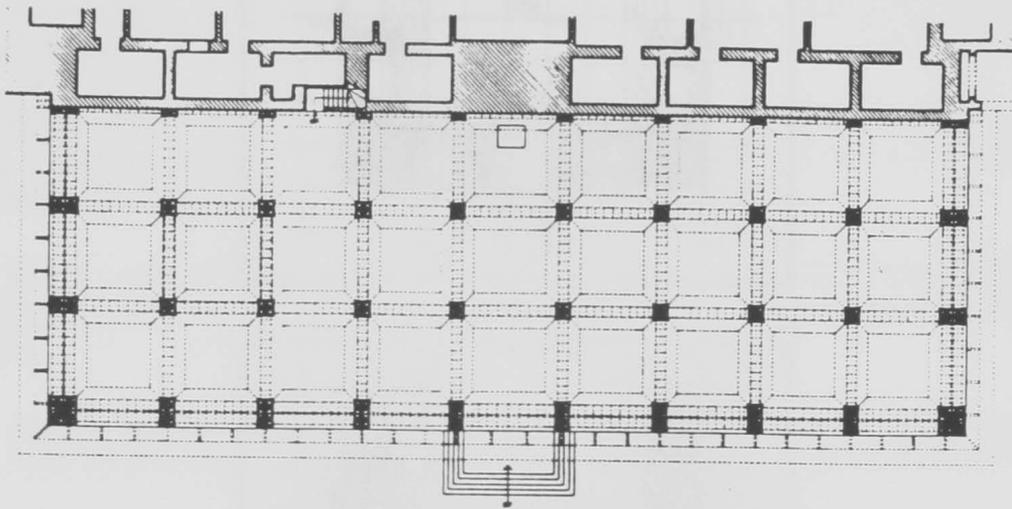
From: Ebba Koch's (1991) Mughal Architecture. p. 109

This spatial structure is created by placing three nine-square grids side by side.

The spatial structure of Diwan-i- Amm at Agra Fort.
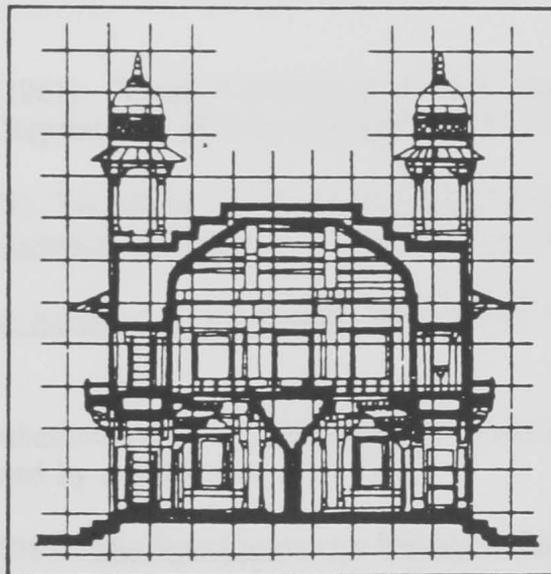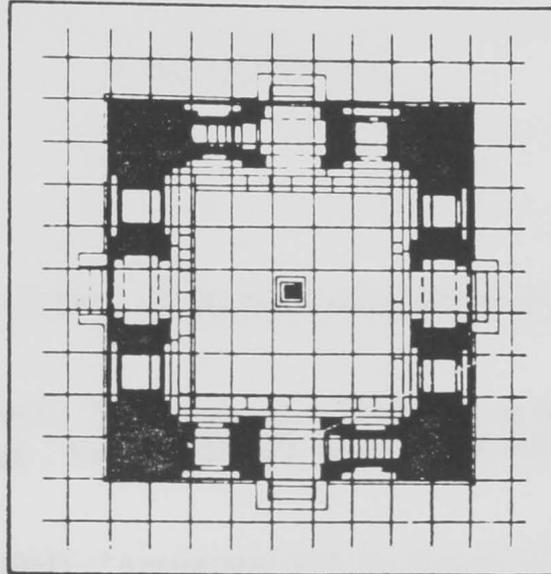
The module grid through the Diwan-i-Khas at Fatehpur Sikri.

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