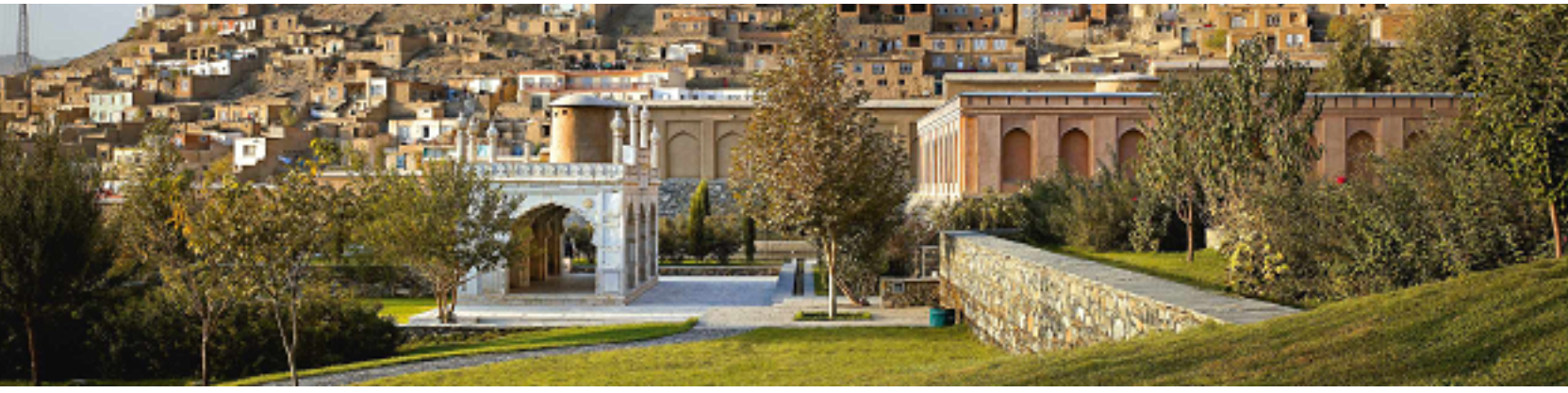


Preface

His Highness the Aga Khan

In 1526, Emperor Babur established Mughal rule in a territory that today extends across parts of Afghanistan, Pakistan and northern India. The Mughal Empire continued until 1857, leaving behind an architectural and artistic legacy of the highest importance, but also an intangible heritage based on the acceptance of different points of view. Succeeding his father Humayun at the age of fourteen, Jalal-ud-din Muhammad Akbar became the Mughal emperor in 1556. He expanded the empire across northern India, and beyond, to the areas of modern Odisha in the east and Gujarat to the west. Successful in politics and diplomacy, Akbar the Great was known as a patron of the arts, and for promoting religious tolerance among his subjects, most of whom were Hindus. He encouraged theological discussions between scholars of different faiths in the Ibadat Khana (House of Worship) built in 1575 at Fatehpur Sikri. Monuments are in some sense the incarnation of ideas, and, where the broad inspiration of the architecture and art of the Mughal Empire is concerned, the words “tolerance” and “pluralism” take on a particular significance in today’s world.

The different organizations of the Aga Khan Development Network have long been active in the lands of the former Mughal Empire. Beginning in 2002, a broadly based initiative was launched in Afghanistan to address some of the problems of post-war reconstruction. Social and economic issues were at the forefront, but the Aga Khan Trust for Culture took on several important cultural projects as an integral component of the overall effort, beginning with the restoration of the historic gardens – Bagh-e Babur – the burial site of the founder of the Mughal Empire.

Our experience in other locations as diverse as the remote parts of northern Pakistan, to Delhi, Zanzibar and central Cairo, is that the restoration of historic communities and important

1

2

cultural assets can serve as a stimulus for sustainable economic development. The restoration activity is a source of direct employment for workers and skilled craftsmen, many of whom live in adjacent neighbourhoods. The refurbished facilities themselves become an attraction for tourists, generating more opportunities. And as the residents of surrounding areas find themselves with new sources of income, they spend some of it improving their own homes and neighbourhoods.

These are the pragmatic reasons for revitalizing a nation's cultural assets. But equally, and perhaps more importantly, these activities restore and preserve historic identity. Afghanistan's rich pluralist heritage has suffered extraordinary stresses in recent decades. Its historic, geographic place at the intersection of the flow of goods, ideas, faiths and cultures between East and West is the very essence of Afghanistan's international distinctiveness. It is also a heritage for the world to cherish.

Conceived in 1997 to commemorate the fiftieth anniversary of India's independence, the restoration of the gardens of Humayun's Tomb in New Delhi was formalized two years later.

Implementation began in 2001 and was completed in 2003. This first initiative of the Aga Khan Trust for Culture in India was followed by a more extensive area programme that has embraced not only the cultural heritage of the area surrounding Humayun's Tomb but also broader social and economic repercussions.

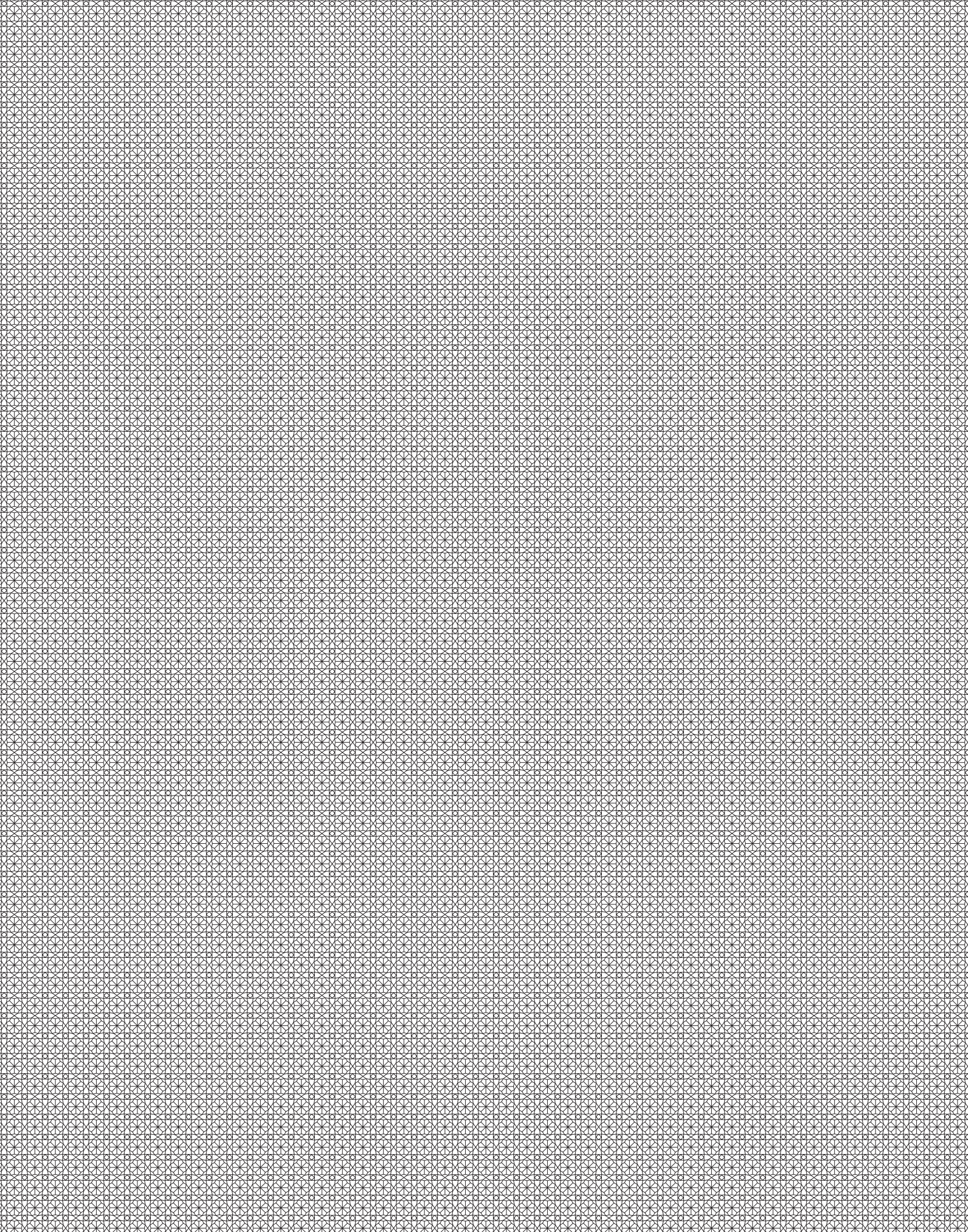
The Humayun's Tomb/Sunder Nursery/Hazrat Nizamuddin Basti Urban Renewal Project, in the heart of Delhi, combines cultural heritage projects with socio-economic initiatives. The overall objective of the scheme is to improve the quality of life for residents in the area while creating an important new green space for the people of Delhi and beyond. In a first application of such principles in India for a cultural project, public, private and institutional partners came together to fund and implement these endeavours. In addition, the vital connection between past, present and future in the built environment was emphasized by such events as the Aga Khan Award for Architecture, held in Delhi in 2004.

The efforts of the Aga Khan Trust for Culture were also joined in Pakistan by local governments, private partners and such organizations as the World Bank in support of a project for the regeneration, renewal and conservation of Lahore's Walled City, which assumed much of its form during the reign of Emperor Akbar. Furthermore, the Trust held its first Award for Architecture Ceremony in the Shalimar Gardens, in Lahore, in 1980, in recognition of the historic status of the city and its numerous landmark sites.

Whether through neglect or wilful destruction, the disappearance of the physical traces of the past deprives us of more than memories. Spaces that embody historic realities remind us of the lessons of earlier eras. As we witnessed in Afghanistan and other countries, the very survival of so much of this heritage is today in jeopardy. What, then, of the deeper values that we risk abandoning under the dust of our own indifference or that might be crushed to rubble by our own destructive force? The tolerance, openness and understanding towards other peoples' cultures, social structures, values and faiths, seen at the height of the Mughal Empire, are now essential to the very survival of an interdependent world. Pluralism is no longer simply an asset or a prerequisite for progress and development, it is vital to our existence. Investing in cultural initiatives represents an opportunity to improve the quality of life for people who live in the vicinity of the remarkable heritage of great civilizations of the past.

|1| Humayun's Tomb, Delhi, India.

|2| A view of the restored plinth of Humayun's Tomb.

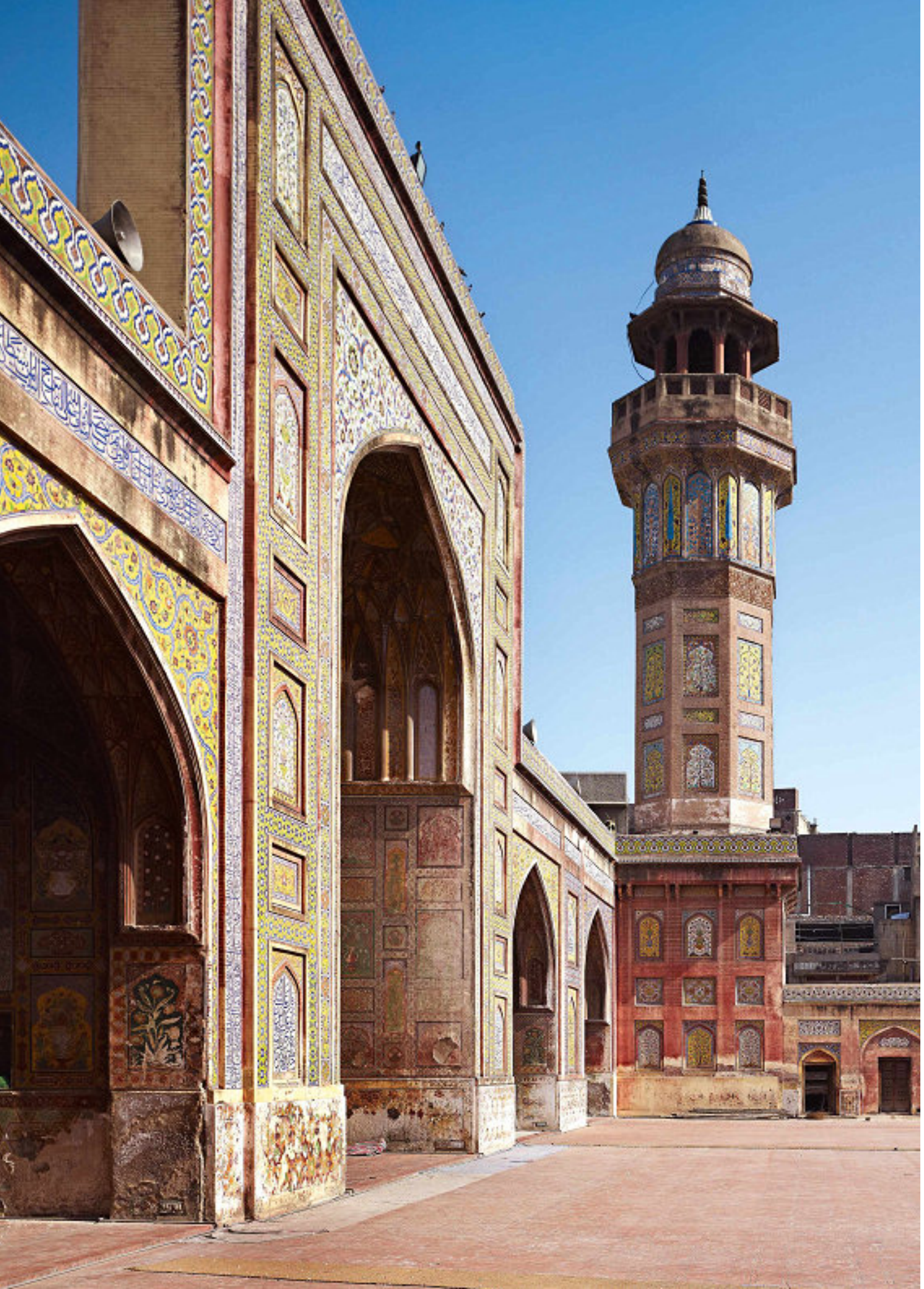


Part I

The Aga Khan Historic Cities Programme: Afghanistan, India and Pakistan

The Relevance of the Mughal Empire Today

The central axis of the Taj Mahal, Agra, India.

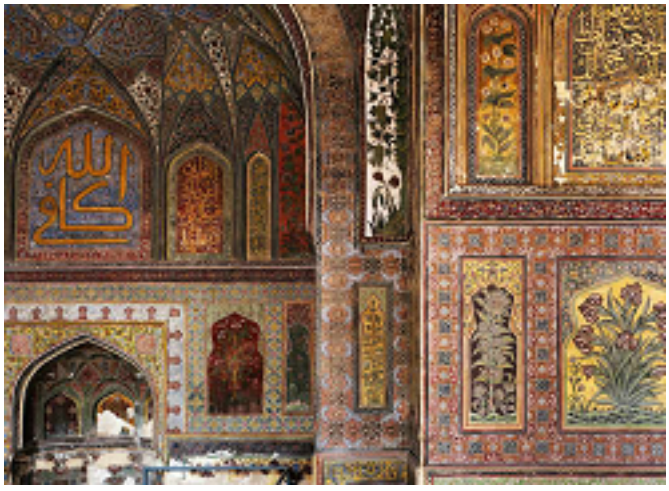


Luis Monreal

This book, *Heritage of the Mughal World*, is based on the work of the Historic Cities Programme (HCP) of the Aga Khan Trust for Culture (AKTC) in three countries. Pakistan, Afghanistan and India each possess unique examples of Mughal architecture. On the frontiers of the Mughal Empire, the Historic Cities Programme has also undertaken restoration projects in Hyderabad, and, further away, is today creating gardens in Canada that echo these traditions in a contemporary language.

The creation of the Mughal Empire was not the result of a grand scheme, but, rather, developed on the basis of geography, time and events. Zahir-ud-Din Muhammad Babur (1483–1530), who descended from Timur and perhaps also from Ghengis Khan, was the first Mughal emperor, capturing Kabul in 1504, occupying Delhi and Agra in 1526. He came from the north, where his own father, Omar Sheikh Mirza, had been ruler of the Fergana Valley, located in modern Uzbekistan. From these lands once conquered by Alexander the Great, Babur and his men brought their own Timurid heritage as well as familiarity with the Persian-influenced architecture of Samarkand and Herat. Babur's son Humayun (r. 1530–40/1555–56) and his grandson Akbar (r. 1556–1605) stretched the empire from Kandahar in the west, to Kashmir in the north and Bengal in the east, leaving in their wake such monuments as the ephemeral capital Fatehpur Sikri (1571–85).

The development of the empire at its outset recalls the military traditions of Islam, not a massive armed advance, but a series of rapid interventions. Timur termed himself a *ghazi*, a warrior who carries out the military raids that are the origin of the more modern term *razzia*. From the early conquest of Kabul to the actual creation of the empire, the march of the Mughals may also recall that of Alexander the Great, who probably did not set out to conquer such a large part of the globe. In both



2

3

|1| Wazir Khan Mosque, Lahore, Pakistan, view along the entrance to the prayer hall.

|2| Detail of the colourful painted and *kashikari* (glazed tile work) interior of the Wazir Khan Mosque.

|3| The arched portico surrounding the courtyard of the Wazir Khan Mosque.

cases, conquests themselves generated the idea of creating a greater political entity. A final historic parallel, though not a source of Mughal thought in any direct sense, is that of the Roman Empire, which carried the art of consolidating conquered territories to new heights. The Mughals placed a high value on social cohesion and sought to assimilate their new territories or to become assimilated by them. Their gift was one of pragmatism, expressed by tolerance for other beliefs and races. Made up of many heterogeneous parts, the Mughal Empire achieved an equilibrium founded on coexistence and tolerance, which was the secret of its longevity. As did the Romans before them, the Mughals created an architectural paradigm, based in large part on the absorption of local traditions in India, and in Central Asia, where the models of Greater Persia gave them sources of inspiration.

The involvement of AKTC in the heritage of the Mughal Empire was also one that developed in several phases. A first step in this direction did not actually concern the lands of the former empire, but, rather, the Northern Territories of Pakistan. The remote valleys of Gilgit-Baltistan, which were once a part of the ancient Central Asian Silk Route, were inaccessible to vehicular traffic until the construction of the Karakoram Highway in 1978. Increased accessibility, coupled with the impact of tourism, introduced a rapid transformation of local customs and economic patterns, which called for new strategic development visions and adapted procedures capable of steering ongoing change. The conservation of Baltit Fort, whose earliest elements date back more than seven hundred years, and the stabilization of the historic core of the village of Karimabad in the Hunza Valley were HCP's first major interventions, completed in 1996. The

4

5

renovation and reuse of historic monuments for modern purposes and the creation of new, sustainable resources for local populations became the modus operandi of the organization.

A first opportunity to work in India, which was to lead to others, came beginning in 1997, with the restoration of the gardens of Humayun's Tomb in New Delhi. This first privately funded restoration of a World Heritage Site in India was completed in March 2003 through the joint efforts of AKTC and the Archaeological Survey of India (ASI), under the aegis of India's National Culture Fund. The objective of the project was to restore the gardens, pathways, fountains and water channels surrounding Humayun's Tomb according to the original plans of the builders. The preservation of historic elements required substantial research, as well as close attention to the living and renewable landscape elements. Site works encompassed a variety of disciplines, including archaeological excavation, the application of conservation science and hydraulic engineering.

As circumstances would have it, a further step towards involvement in the Mughal world came in January 2002 when AKTC signed an agreement with the Interim Administration of

|4| The restored Lakkarwala Burj in Sunder Nursery, Delhi, India.
|5| The central axis in Sunder Nursery, with Sunderwala Burj on the right, Delhi, India.

6

Afghanistan to restore and rehabilitate a number of significant historic buildings and public open spaces in the city of Kabul. Since then, a range of conservation and urban regeneration efforts, living condition improvements, community development programmes and planning initiatives have been implemented in war-damaged neighbourhoods of the Old City of Kabul. A similar initiative commenced in the Old City of Herat in 2005. In early 2003 conservation began of the sixteenth-century Bagh-e Babur in Kabul, where the first Mughal emperor Babur is buried. Now managed by an independent Trust, the restored almost eleven-and-a-half-hectare Garden not only re-establishes the historic character of the site with its water channels, planted terraces and pavilions, but also provides the population of Kabul with a space for recreation and cultural events. These efforts were all part of the larger Aga Khan Development Network (AKDN) initiatives to assist the reconstruction process in Afghanistan with coordinated, broadly based projects.

These successful interventions in Pakistan, Afghanistan and India were at the origin of a request received by AKTC in 2004. The Archaeological Survey of India (ASI) proposed a large number of potential restoration projects in the country. During a visit to Hyderabad in that year, discussions returned to the vicinity of Humayun's Tomb. A Google Earth view of the vicinity showed clearly the wealth of potential points of intervention around the Tomb, including Sunder Nursery and the Hazrat Nizamuddin Basti area, which was to become the focus of an urban renewal project. Although this district was not initially among those proposed by ASI, it was clear that the area offered not only a large number of significant tombs and other monuments in need of restoration but also potential for a significant social dimension in this densely populated district of the nation's capital.

The work of the Historic Cities Programme has clearly established the value of achieving a kind of 'critical mass' for such projects in order to create a real social and economic impact, but also to persuade other participants to join the effort. The result of the initiatives of AKTC teams was the development for the first time in India in a cultural context of a 'Public-Private Partnership Agreement' (PPP), which united partners such as the

|6| The tomb of Hyat Bakshi with the minaret of the Great Mosque visible on the right, Hyderabad, India.

|7| The arcade of Mohammad Quli Qutb Shah's Tomb, Hyderabad, India.

|8| Cluster of Unknown Tombs at the south-west edge of the Qutb Shahi Heritage Park, Hyderabad, India.

Central Public Works Department (CPWD) and the Delhi Development Authority (DDA). Other public and private institutions joined AKTC in contributing in a significant way to the projects. These included the Ministry of Tourism of India, the Sir Dorabji Tata Trust, the European Commission, the World Monuments Fund, the Federal Republic of Germany, the Embassy of the United States and many others. Conceived for AKTC initiatives in Cairo around Azhar Park, both the method and the style of intervention used by HCP in New Delhi represent a significant new development in India. Serving to overcome what can be called a point of inertia, the work in New Delhi has, indeed, created the kind of critical mass that makes such projects economically and socially self-sustaining, while also reinforcing the cultural heritage of the city and the country.

The early work of HCP in Pakistan, but also that in India, led to the more recent projects in Lahore, whose walls were built during the Mughal era. Lahore was capital of the empire from 1585 to 1598. The Walled City of Lahore project was initiated in 2007 by the Government of the Punjab and the World Bank. AKTC entered a 'Public-Private Partnership Agreement' with the provincial government to provide technical and financial assistance for the project and to build capacities in urban heritage conservation. So, too, the revitalization project of the Qutb Shahi Heritage Park in Hyderabad, which began in 2013, can be considered a result of the success of earlier HCP projects in India and elsewhere.

Although today's concern is no longer one of empire building, the progressive development of AKTC projects in and around the countries that were once part of the Mughal Empire has reached a level of coherence and an extent that is more fully explained in the pages of this volume. The lessons of tolerance and social cohesion that can be learned from the heritage of the Mughal Empire are precious ones, to which monuments such as those in the area around Humayun's Tomb in New Delhi stand witness. Far from being a hindrance to modern society, these traces from the past are, in fact, keys to the future. Restored but also placed in their societal context and made into sustainable sources of income, the monuments of the Mughal Empire regain relevance in a time of doubt and change.

7

8

The Case for a Portfolio of Mughal Projects

Babur's Garden after restoration by the Aga Khan Trust for Culture, Kabul, Afghanistan.

Cameron Rashti

Regardless of the particular bias of the viewer, academic or other, there is general agreement that landscape architecture (arising from the creative and organized intercession in nature by human design), by the way it alters and filters the relationship of mankind to nature and opens new vistas to the all-encompassing environment, reaches into a deep level of the human psyche and impacts the common sense of well-being and the quality of life. This is arguably the most pertinent explanation for the Historic Cities Programme's very close association with historic gardens over most of its existence.

In the regions selected by the Programme for particular research and conservation assistance, Mughal garden sites have evolved into a proper subset of projects within its garden portfolio. To date, the Programme has been actively engaged with historic Mughal gardens and sites in Kabul, Delhi and Lahore, many of these sites comprising campus-like settings with multiple complexes and monuments embedded in a wider terrain of landscaping, intricate water systems and places of repose.

In chronological order, this series of major projects commenced in Delhi with the Aga Khan Trust for Culture's first involvement with the rehabilitation of Humayun's Tomb-Garden and then the mausoleum as of 1997. Work on this World Heritage Site was then supplemented by preservation and community redevelopment programmes in the Nizamuddin Basti and Sunder Nursery as of 2007 and continues to this day. The Trust took on the responsibility for the conservation and reuse of Babur's Garden (Bagh-e Babur), Kabul, as of 2002, now a public park operated through the Bagh-e Babur Trust. Finally, in 2007, the Aga Khan Trust for Culture (AKTC) joined ranks with the World Bank and the Lahore Walled City Authority to plan and implement an urban rehabilitation project in the eastern end of the

2

3

|1| Sunderwala Burj, Sunder Nursery, Delhi, an early Mughal tomb in the newly re-landscaped Sunder Nursery.

|2| Isa Khan's Tomb, part of Humayun's Tomb complex, Delhi.

|3| Humayun's Tomb, Delhi, India, an axial view of the garden and its central water channel aligned with the monument.

Lahore Walled City, including work on Mughal elements within the project domain.

More than mechanical landscape conservation exercises, these projects have been approached as platforms for archaeological research, the review of authenticity of later interventions, development of appropriate conservation approaches, urgent repair works, training and the development of new resources. These interventions allow the public at large to comprehend and appreciate the wealth of cultural assets that sites such as these contain. In essence, as stated by His Highness the Aga Khan:

"Large segments of all societies – in the developing world and the developed world – are unaware of the wealth of global cultural resources and, therefore, of the need to preserve the precious value of pluralism in their own and in others' societies."[1]

The comprehension and appreciation by a larger audience of the pluralistic nature of the artistic contributions underlying the development of the Mughal period and its masterpieces of landscape and architecture are the underlying subjects of this volume.

In an earlier publication – *The Aga Khan Historic Cities Programme: Strategies for Urban Regeneration*[2] – the Programme's overall portfolio was presented with emphasis placed on detailed case studies delineating the relationship of restored historic landmarks and gardens to communities in their midst and the interactive nature of conservation and socio-economic regeneration. The benefits of a 'Public-Private Partnership' (PPP) framework basis for Area Development Projects were explained in the context of the extended time horizons often required for such sites and the importance of multi-year commitments by both public and private partners in carrying out such projects. These factors having already been described, the present publication seeks to deepen the discussion and analysis of the Programme's work on key sites of Mughal heritage, as opportunities to work on such privileged sites do not often occur.

In addition to the rich stock of information these sites contain, there is an increasing awareness of heritage as constituting 'cultural capital'. One leading contributor to the field of cultural economics (an emerging specialty within economics), David Throsby, has advanced a list of values that can guide the analysis of different aspects of heritage: (a) aesthetic value; (b) spiritual value; (c) social value; (d) historical value; (e) symbolic value; and (f) authenticity value.[3] Comparing cultural capital with the more familiar term of natural capital allows the interested public to ponder the issues of 'intergenerational equity' and 'intertemporal distributive justice' in terms of the access to heritage and cultural capital across time and across society. Joined by other scholars, such as Amartya Sen and John Rawls, a new framework is emerging that suggests that the safeguarding of heritage is not only a custodial duty for the protection of heritage itself in a museological sense but also a pressing societal concern in the interest of increased equality of access to the benefits for culture.

These notions, even in their abstract form, solicit attention when considering significant heritage in these and other Mughal sites. Important as these shared values of cultural heritage are, Mughal heritage calls for specific attention on its own terms and in its relationship to what one can term 'universal expressions' of architecture.

4

5

The growth of literature in recent decades about the Mughal period has been considerable, even to those who consider themselves relatively well informed. The movement by the Mughals to leave their imprint on the built environment is often viewed as exemplified by Emperor Babur's lament upon seizing Delhi – "the gardens have no walls, and most places are as flat as boards... there is little running water aside from the great rivers..." – and his consequent decision to reverse the situation, declaring: "Everywhere that was habitable it should be possible to construct waterwheels, create running water, and make planned, geometric spaces".[4]

As this publication corroborates, the Mughals did not start from scratch and they borrowed frequently and widely from many cultures, adapting elements appropriated to their specific new settings. This cross-sharing of knowledge is explored in many aspects in Part II of this book. As a sign of their resilience and value, the resultant Mughal forms of expression have endured and the stimuli Mughal architecture and art have provided to the larger world of South Asia and beyond have been considerable. This is in no small part due to the fact that Mughal architecture became, over time, closely interrelated with the wider urban artefacts of its period, hence confirming what architectural theorist Aldo Rossi once posited:

"Architecture, along with its composition, is both contingent upon and determinative of the constitution of urban artefacts, especially at those times when it is capable of synthesizing the whole civil and political scope of an epoch, when it is highly rational, comprehensive and transmissible – in other words, when it can be seen as a style. It is at these times that the possibility of transmission is implicit, a transmission that is capable of rendering a style universal."[5]

He went on to observe: "All of the great eras of architecture have reproposed the architecture of antiquity anew, as if it were a paradigm established forever; but each time it had been reproposed differently".[6]

Through these select Mughal sites, the Historic Cities Programme project teams have sought to contribute to the base of knowledge about these sites and their link to a broader treatment of architectural and landscape spaces that have been transmitted across the region and had a wide impact. This research is particularly relevant in striking a balanced view in the growing field of garden history and the risk otherwise that

|4| Alamgiri Gate, Lahore Fort, Pakistan, viewed from the exterior.

|5| Aerial view over Hazuri Bagh showing the entrance to the Badshahi Mosque (left) and Alamgiri Gate (right), Lahore, Pakistan.

6

"garden history may inadvertently contribute to a naturalization of Western culture and further its hegemony over everyday life in other cultures."[7]

In many ways, the scope, the organizing principles and the aesthetics that are expressed in these Mughal sites transcend the standard definition of the core of landscape architecture[8] as practised today for new sites. The 'problem' arises in the fact that in the past (prior to at least the 1860s)[9] the term 'landscape design' was not in common use. Landscape design has, in fact, been practiced until recent times and with limited exceptions in large areas of the world for centuries and even millennia without individually identified landscape architects or designers. The presence of knowledge of design and of a strong body of craft persons and technicians who were at the origin of important historical landscaped sites has never been in doubt.

In the search for the origin of the 'paradise garden', Geoffrey Jellicoe has posited that the incidence of "three great forces in history upon which the gardens and indeed the landscape of almost the whole world are based are the Chinese, the Western Asian, and the Greek."[10] In terms of the Persian paradise garden, he further observes:

"What began as no more than an engineer's conception of a functional landscape, became in due course a work of art, and was endowed for very obvious reasons with an almost sacred character. The whole garden, containing fruit trees and cypresses, was symbolic of life and earth. It is certainly the clearest example in history of the progress of landscape from one of pure utility to one within the realms of metaphysics."[11]

The paradise garden no doubt benefited from the habit of highland and lowland living once political control over a large region was established; the tendency to build gardens with enclosure walls and based on subdivisions of a square was perpetuated through time not only in Western Asia and in Mughal gardens but even in Europe, in the form of cloisters.

In Part II of this publication, the contributors reflect on the sources and deeper significance of 'Mughal heritage': Mughal

|6| Shalimar Garden, Lahore, Pakistan, created during Shah Jahan's reign.

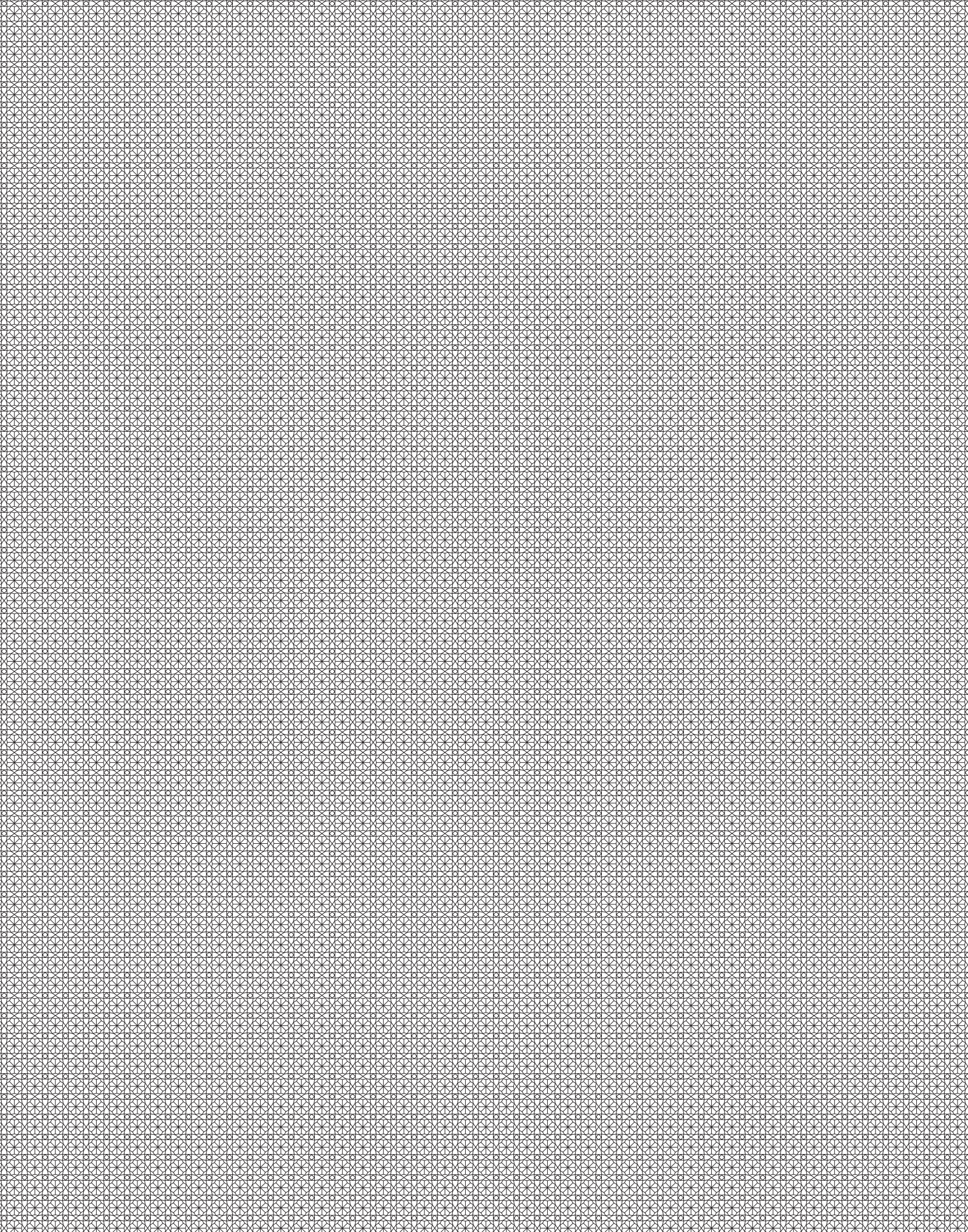
arts, architecture, gardens, painting and poetry. Part III focuses in detail on the actual work of the Historic Cities Programme (HCP) in these specific site interventions. What emerges is the story of a partnership based on the exchange of ideas and artistic talent across the Iranian plateau, Central Asia and the Indian subcontinent. Triggered originally by armed groups seeking territorial domination, this broad movement eventually became sedentary and was sustained for a significant period by a new combination of forms of urban administration and cultural expression. As urban settlements, Delhi, Lahore and Kabul all pre-dated the Mughals, yet they were co-opted and significantly transformed in part during the course of the sixteenth, seventeenth and early eighteenth centuries.

The project sites described in Part III evoke themes and techniques for translating design into reality that became finely honed over the Mughal period. These include: the refinement of the earlier paradise garden model; the fine differentiation and delineation of intra- and extramural territory and cultivated space; the refinement of models for the royal garden, working on flat or terraced land; the highly geometrical demarcation of water and landscaped bodies; the intricacy of various sources and pathways for water; the sophistication of horticultural variety and the raising of horticulture to a museological level (with native and exotic species); and also the desire for connection to the cosmos through seasons, plant varieties and sunlight.

Mughal architecture and garden design were to rapidly mature and enter a zenith of achievement roughly parallel to the corresponding architectural accomplishments in the sixteenth and seventeenth centuries in Safavid Isfahan and Western Europe (with Italian and French classical gardens). Mughal architectural and artistic achievements were themselves a part of a global, if multi-centric, process of transformation of the natural environment by creative and talented designers and sponsors who saw ambitious, large-scale projects of landscape and architecture as key signifiers of a newer and larger purpose of society and cultural expression. It took another two centuries for the profession of landscape architecture to be academically established but, as these and similar works attest, the history of landscape design had already been well and fully established.

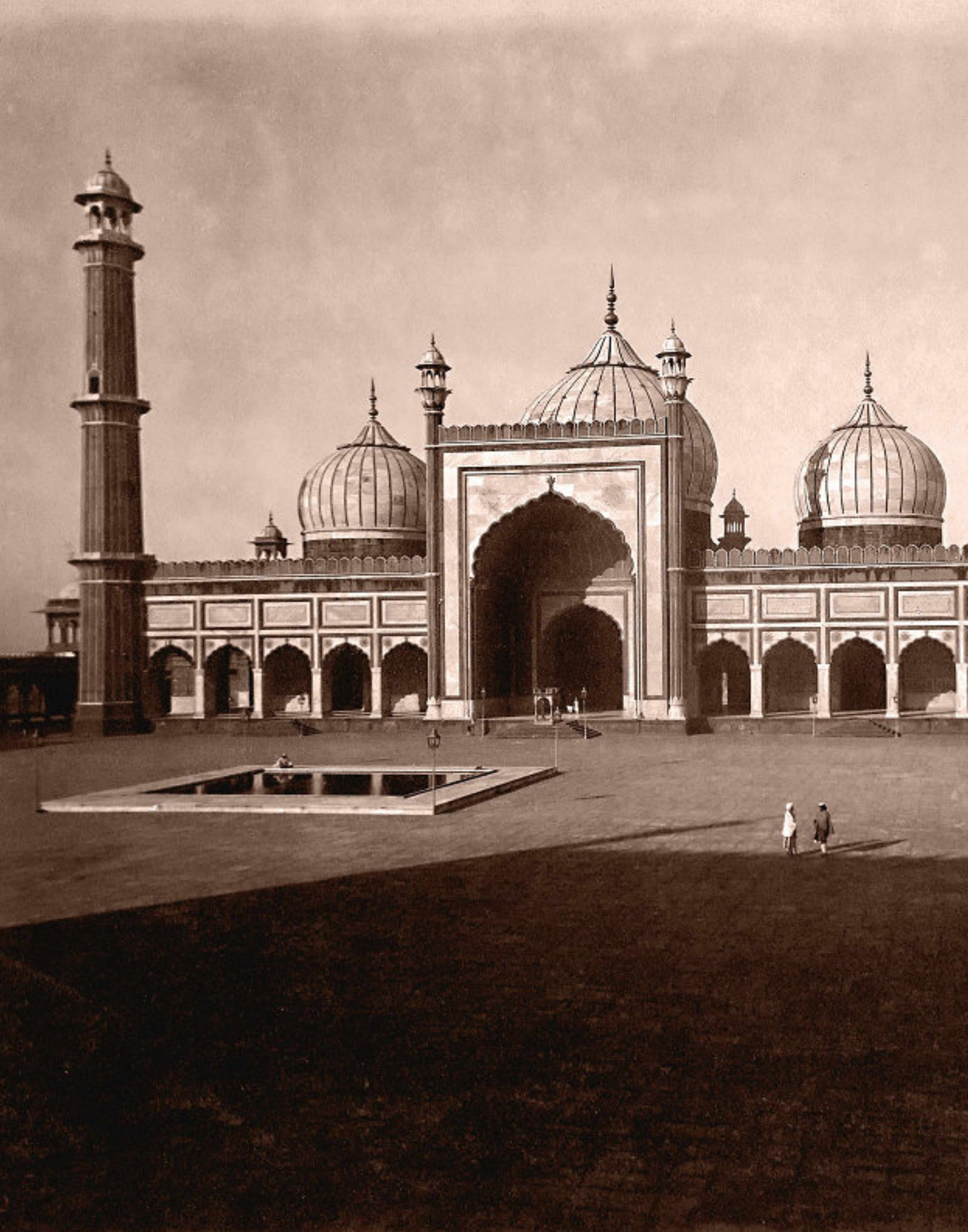
Endnotes

1 From a keynote speech by His Highness the Aga Khan concluding the Prince Claus Fund's Conference on Culture and Development entitled "Enhancing Pluralism", in 2002 (in *Where Hope Takes Root: Democracy and Pluralism in an Interdependent World*, Douglas & McIntyre, Madeira Park, 2008, p. 9).
2 Philip Jodidio (ed.), *The Aga Khan Historic Cities Programme: Strategies for Urban Regeneration*, Prestel Verlag, Munich, 2011.
3 David Throsby, *Economics and Culture*, Cambridge University Press, Cambridge, UK, pp. 9, 84–85. See also his review of the contributions of Sen, Rawls, and others on pp. 55 and 67. The Brundtland Report, entitled *Our Common Future*, published in 1987, was instrumental in focusing world attention on the many social dimensions of the environment and influencing the environmental movement, along with works such as *The Limits to Growth* (1972) by others. Ibid., p. 53.
4 Wheeler M. Thackston (ed. and trans.), *The Baburnama: Memoirs of Babur, Prince and Emperor*, The Modern Library, New York, 2002, pp. 335 and 363.
5 Aldo Rossi, *The Architecture of the City*, MIT Press, Cambridge, MA, 1999, p. 116.
6 Ibid., p. 107.
7 M. Conan, *Introduction to Perspectives on Garden Histories*, Dumbarton Oaks, Washington, DC, 1999, p. 1.
8 For example, the American Society of Landscape Architects (ASLA) provides the following contemporary definition for landscape architecture on their website, but one which seems nonetheless inadequate in the face of such historic sites: "The planning and designing the use, allocation and arrangement of land and water resources, through the creative application of biological, physical, mathematical, and social processes," www.asla.org/nonmembers/licpac99.htm accessed on 29.9.2014.
9 The first instance of use of the term 'landscape architect' or 'landscape designer' in the USA is attributed to the time of appointment of Frederick Law Olmstead and Calvert Vaux by the New York Park Commission in conjunction with the Central Park project. William A. Mann, *Landscape Architecture: An Illustrated History in Timelines, Site Plans, and Biography*, John Wiley and Sons, New York, 1993, and referenced in the International Federation of Landscape Architects (IFLA) Yearbook, 1989, p. 26.
10 Geoffrey Jellicoe, *The Studies of a Landscape Designer Over 80 Years: Volume III*, Garden Art Press, 1996, p. 27.
11 Ibid., p. 30.



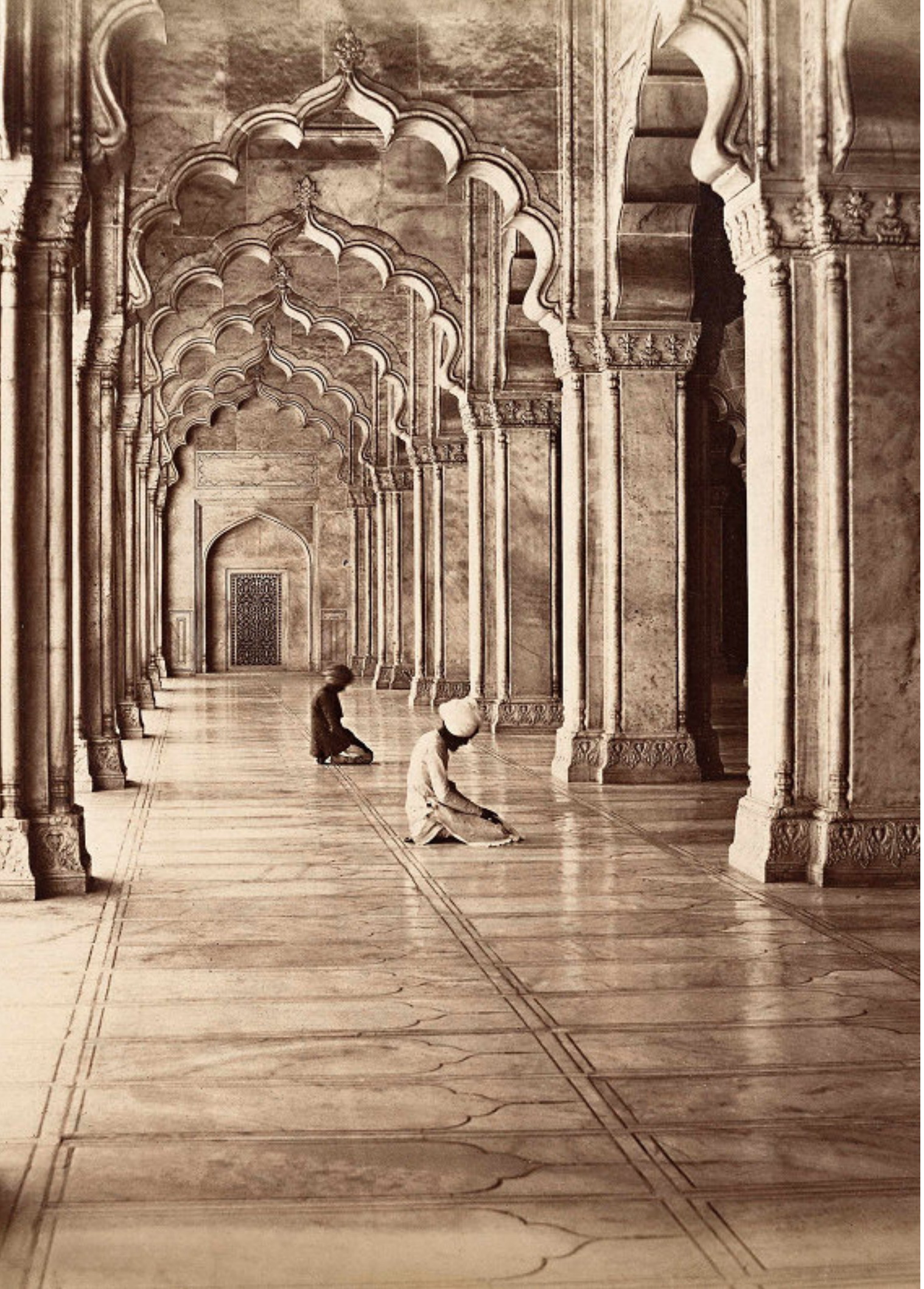
Part II

The Mughal Empire Through the Ages



The Mughal Period: A Pluralist Society

Jama Mosque, Delhi, India, a 19th-century photograph of the courtyard.



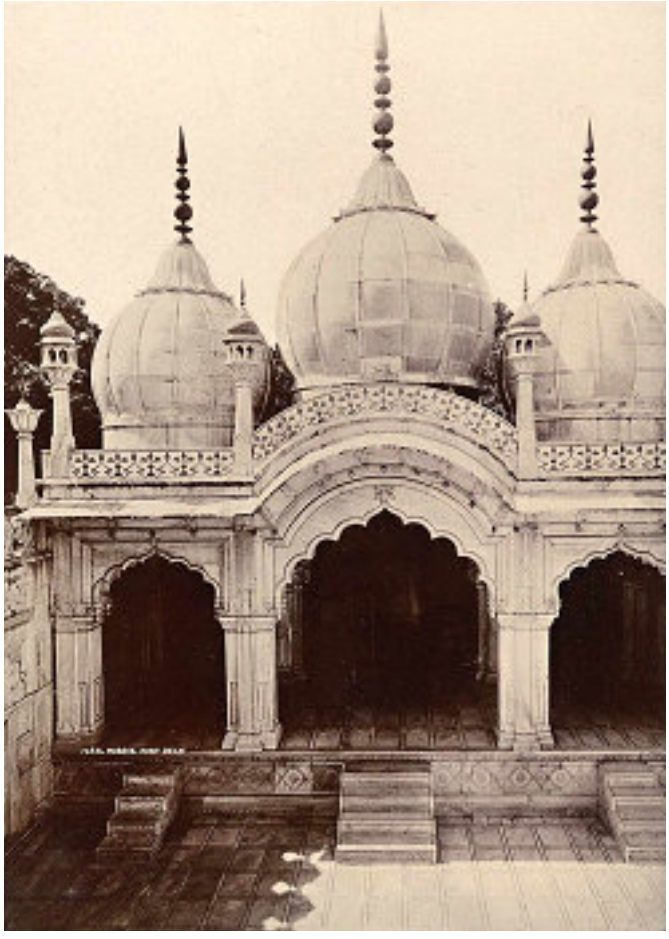
Azim Nanji

Introduction

The Muslim presence in the Indian subcontinent occurred in the context of a region of ancient civilizations, empires, religious traditions, languages and peoples. This was a world with a long history of exchange linked to Central Asia, Iran and the worlds of the Indian Ocean.

Muslim traders first arrived in Kerala in the south, where they settled, integrated and in time established themselves as part of a thriving fishing and trading community. In the north, the Muslim presence was first established by way of conquest. This quest for territory occupied many of the early advances of rival dynasties but was also accompanied by the spread and settlement of Muslims migrating from Central Asia. The first Mughal ruler, Babur, established his authority in 1526. The dynasty ruled for over three hundred years and came to an end in 1858, when the last emperor, Bahadur Shah, was imprisoned and exiled by the British. At its peak in the eighteenth century, the Mughal Empire in the subcontinent extended from Kashmir to the north to Hyderabad in the south, Afghanistan to the west and Bengal to the east. It reflected the full diversity of traditions and practice of the Islamic faith, in both urban and rural settings. Significant conversion of local peoples by Sufi teachers and others had taken place and a tradition of devotional literature and writings existed in a significant number of Indian languages. The use of Persian at court and the teaching of Arabic in institutions of higher learning had attracted scholars and poets, whose writings became influential across the region. Moreover, this growing Muslim population coexisted and interacted with the established majority Hindu traditions, as well as Jainism, Zoroastrianism, Sikhism and other local observances.

While a great deal of scholarly attention has been paid to the nature and history of Muslim conquest, succession rivalries and



2

|1| Moti Mosque, Red Fort complex, Agra, India, a late 19th-century view of the prayer hall.

|2| Moti Mosque, Delhi, India, a late 19th-century image of the courtyard.

conflicts, much less attention has been paid to the cultivation and growth of a parallel civil society and the enabling conditions, particularly in Mughal society, that gave rise to a genuinely pluralistic world. This essay is concerned primarily with tracing those aspects and dimensions in Mughal society that gave rise to a cosmopolitan culture that embraced diverse facets of life and society. These included the promotion of trans-regional trade and commerce, the arts, architecture and cultural production that rivalled any other society of the time and left a permanent and visible mark on South Asian society.

The Enabling Context

Babur's Memoirs[1] set the tone for how the dynasty envisaged its role in creating an intellectual foundation and a visual aesthetic that integrated its vision of a past heritage within the landscape of its new environment. It believed that the ethic of responsibility inherent in its mandate as rulers encompassed, in addition to the obligation to bring peace and harmony to its subjects, a duty to enhance the environment, ornament the landscape, undertake public works and promote learning. The translation of these ideals, under royal aegis, was the key to attracting artists, builders, designers and engineers from neighbouring regions.

Moreover, the Mughals recruited and promoted Hindu soldiers and court officials in their army and administration. Departments related to state revenue and fiscal affairs were led by Hindu specialists. The Mughals built and sustained alliances with Hindu rulers to enable power and influence to be dispersed more broadly and inclusively.

Their collaborative efforts with local cultural and human resources helped pluralize the character of their rule and

3

4

projects. For instance, the second emperor, Humayun, expressed his love and commitment to art and learning by inviting artists, establishing institutions of learning and a library. His successor Akbar, though unschooled, carried the tradition further, filling his court with artists, poets and intellectuals from all communities. Moreover, Akbar married a Hindu princess, ended a tax levied traditionally on non-Muslim subjects and devised policies that extended certain rights to all his subjects. His long reign provided the opportunity to allow for a conscious development of the ideal of sovereignty in which diverse subjects felt a common allegiance to a just ruler and a harmonious state. They were influenced in this regard by works on ethics and governance, such as Nasir al-Din Tusi's well-known philosophical treatise, *Akhlaq-i Nasiri* (*The Nasirean Ethics*),[2] written in 1235, which had a crucial influence on their Timurid and Mongol ancestors. It taught a respect for diversity and values of justice and tolerance. Translated into practice, the judicious and statesman-like leadership exercised by these early rulers, coupled with their investment and active patronage in the pursuit of cultural excellence, was pivotal in making architecture, art, literature and learning key constituent elements in the creation of a pluralistic society. While they cultivated religious scholars and respected the sharia, their rule was guided by pragmatism and inclusiveness, rather than solely by a traditionalist legal framework.

Expressions of Cultural Pluralism Under the Mughals

Accompanying Humayun to India after a period of forced exile were two Iranian artists. After his unexpected and premature death, his successor Akbar employed their services in a large atelier he had built to undertake a massive artistic representation of the famous *Hamzanameh*,[3] the classic folktales about the travels and exploits of the Prophet Mohammed's uncle, Hamza. The 1400-page masterpiece reflected the evolution and maturing of a distinctive Mughal style of painting. The combined talents of Iranian and local Indian artists led to a creative integration, marking an orientation that enhanced rather than diminished the sources of inspiration.

The *Hamzanameh* project was only the beginning of a long period of artistic endeavour that extended to the other fine and decorative arts, such as music, dance, textile and jewellery design and in religious contexts, Qur'anic calligraphy and illumination.

The emperors built libraries to house their collections and other manuscripts. Akbar's Imperial Library had a collection of 24,000 volumes, systematically catalogued according to subject and language. Members of the royal family and the nobility also possessed their own collections. Contrary to stereotype, women of the court received an excellent education and often produced and sponsored works.

The patronage of writers extended to the commissioning of translations of works into Persian, including Hindu classics, like the *Mahabharata*, the *Ramayana* and the *Atharva Veda*. This encouragement of languages spurred an exchange of knowledge, empathy and respect for one another's traditions and literary heritage, and produced a conducive environment for attracting writers. It further stimulated a vigorous literary culture of new writings in several languages, giving impetus to the flowering of Hindi and Urdu literature.

|3| Jama Mosque, Delhi, India, a late 19th-century exterior view.

|4| Lal Qil'a, Delhi, India, a 19th-century image of the Delhi Gate at the Red Fort.

Among the most visible representations of the Mughal legacy are its cities, monuments and gardens. Though initially inspired by Central Asian and Iranian models, Mughal architecture and design responded vigorously to the socio-ecological world in which they lived. The pluralist spirit that marked other cultural expressions carried over to Mughal buildings. The heterogeneity and cultural framing derived from the immediate environment resonates in many of these structures.

The finest surviving examples, such as Humayun's Tomb-Garden in Delhi, the Taj Mahal in Agra or the Shalimar Gardens in Lahore and Kashmir, remain enduring expressions of universal and shared values about the role and relationship of nature to human beings. They also evoke ethical and spiritual notions of beauty and its presence in the design of the built environment, and are a reminder of the responsibility of stewardship while on earth. The combined effect of these monuments and gardens has continued to fascinate and attract people from all walks of life and backgrounds, across the centuries.

Bridging and Connecting Faith Traditions

Mughal society was multi-religious. Though Muslim teaching and historical tradition included respect for the Ahl al-Kitab (People of the Book), generally Jews and Christians, the encounter with Hinduism was more ambivalent. The policies and attitudes of Mughal rulers like Akbar led to greater acceptance and interaction. A critical role in this mutual exchange was played by the Sufi and other esoteric traditions of Islam. Their universalist and pluralist outlook and openness to learning about Hindu philosophy and mystical teachings allowed for a sharing of common spiritual understandings and the development of devotional traditions in several Indian languages. This vast oral and written literature employed a shared conceptual vocabulary and reached beyond the narrow doctrinal interpretations of faith to engage a large segment of both Muslims and Hindus in their respective cultural idioms.

The Mughal ruler Akbar is probably best known for his conscious and public attempt to promote exchanges and dialogue between all the religions of the empire. He made it a practice to host in his palaces regular discussions with religious leaders and scholars of all faiths, who, while engaging in debate and defence of their beliefs, also sought to promote mutual understanding, reconcile views and build common ground. In Akbar's time, such discussions also included Jesuit missionaries from Portugal. Commenting on the promotion of such religious pluralism, a study notes: "In the history of Muslim-Christian relations, few encounters were as tolerant or as culturally rewarding."[4]

Akbar's great-grandson Dara Shikoh built on this tradition by translating the Hindu *Upanishads* into Persian and wrote a book entitled *Majma' al-Bahrayn* (The Mingling of the Two Oceans),[5] seeking to show commonalities and affiliations between Hindu and Muslim spiritual ideals. This accepting spirit was upset during the reign of Aurangzeb, who defeated Dara Shikoh, his brother and rival to the throne, in battle and subsequently had him killed. Aurangzeb reversed many previous Mughal policies and instituted what he perceived to be a more rigorous Muslim form of governance. His actions hindered the momentum of the pluralistic vision of his predecessors but could not undermine the rich and diverse expressions of the Indo-Muslim civilization and its embrace of many ethnicities and religions.

Conclusion

The new generations of Muslims in Mughal society included the descendants of Central Asian, Iranian and Arab migrants, and local populations from all parts of India who had adopted the new faith. The interaction of all these cultural strands found expression in Indian languages, as well as Persian and Arabic. Hindu epics in Sanskrit had been translated into Persian and

6

7

poetry was composed in several Indian languages, widening outlooks, creating empathetic knowledge and encouraging greater mutual understanding. The participation of Hindus in the administration of the state, the expansion of international trade and the development of new technologies and practices of agricultural production had forged a strong mercantile and entrepreneurial culture, which constituted the backbone of the economy benefitting rural and urban populations alike. Encroaching European interests, while driven by expansionist aims, brought new cultural influences that the Mughals often admired and imitated. Even as the long period of Mughal rule was coming to an end, a new, distinctive and cosmopolitan Indo-Muslim society had already taken shape, forged out of a shared heritage of Muslim cultural influences and the indigenous traditions of the subcontinent. This pluralistic legacy remains to our day, a significant feature of South Asian society and daily life.

|5| Preceding pages: the Wazir Khan Mosque and market in the Walled City of Lahore, Pakistan.

|6| Nizammudin Basti, Delhi, India, a 19th-century photograph of Nizammudin Dargah.

|7| Nizammudin Basti, Delhi, India, a recent image of Nizammudin Dargah.

Endnotes

1 Wheeler M. Thackston (ed. and trans), *The Baburnama: Memoirs of Babur, Prince and Emperor*, The Modern Library, New York, 2002.

2 *The Nasirean Ethics*, G.M. Wickens (trans.), Allen & Unwin, London, 1964.

3 *The Adventures of Amir Hamza*, M.A. Faruqi (trans.), The Modern Library, New York, 2012.

4 G.A. Bailey, *Art on the Jesuit Mission in Asia and Latin America*, University of Toronto Press, Toronto, 2001.

5 Dara Shikoh, *Majma' al-Bahrayn*, The Matheson Trust, London, PDF book.

The Syncretic Culture of Hindustan

Floral pattern in marble, Agra Fort, Agra, India.

Assadullah Souren Melikian-Chirvani

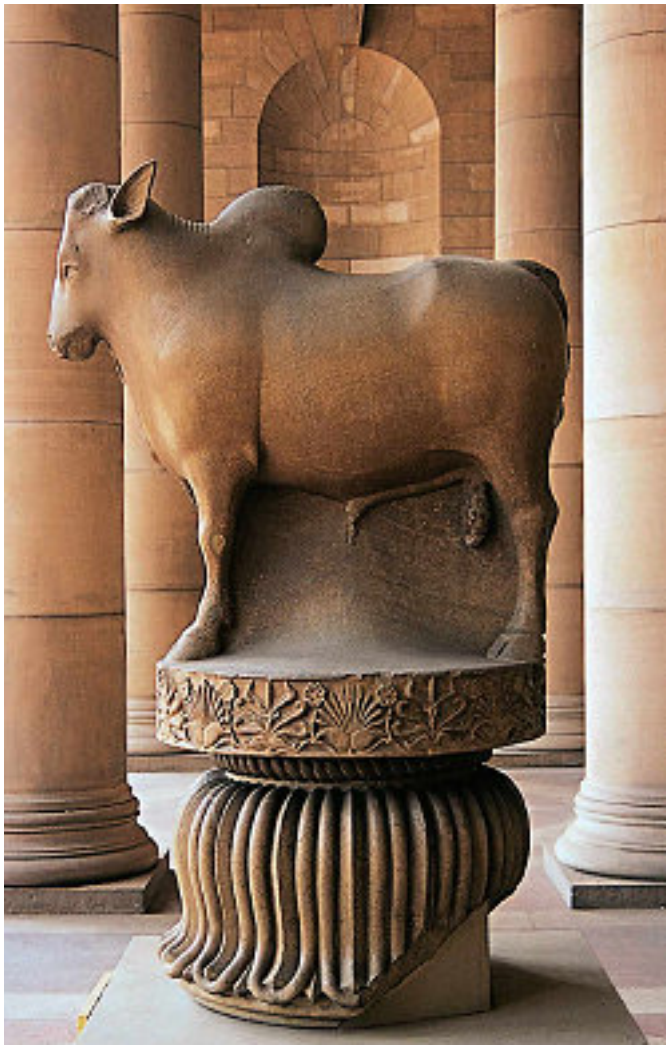
India is often perceived by the general public as an ancient civilization steeped in age-old tradition resistant to outside influence. History shows the very opposite to have been true throughout the ages.

The remarkable aptitude of India at integrating loans and recasting them on its own terms into thoroughly new creations may owe something to the historical process that led to the make-up of its population: the slow penetration, spread over centuries, of Indo-European speakers arriving amid populations ethnically and linguistically unrelated to them.

The Early Making of Hindustani Culture

From the moment we apprehend the history of India with a measure of precision, India's connection with neighbouring Iran is intimate. In the third century BC, the Maurya Empire, the first clearly defined political entity documented by sources, modelled itself on the Achaemenid Empire of Iran. In Pataliputra, the capital of the Maurya dynasty, a royal palace was erected on a plan inspired by that of the Achaemenid palatial hall at Takht-e Jamshid (Persepolis in Western historiography) in southern Iran.[1] As Hellenistic fashions spread across Iran and northern India in the wake of Alexander's conquest, the Achaemenid legacy merged with loans from Greece and gave rise to the first truly syncretic art in India. The Achaemenid type was eventually transformed and integrated into new creations.

One of the earliest masterpieces of Indian art is a third-century BC capital from Rampurva in Bihar |2|.[2] The distant memory of Achaemenid capitals survives, associated with loans from Hellenism and its naturalistic animal style. The sculptural handling of the humped bull could be that of a Greek master of



2

|1| The Sher Mandal Pavilion within the Purana Qila, Delhi, India.
|2| Sandstone capital from Rampurva, Bihar, India, 3rd century BC.

the Classical period. This process of assimilation and fusion of disparate loans was to recur throughout history on the Indian subcontinent.

Buddhism is an Indian philosophy without a god that was born in the Himalayas. As it later extended to East Iranian lands under the Iranian Kushans, who ruled vast areas of eastern Iran and north-western India, Buddhism absorbed Iranian notions. These included the concept of Buddha as the divine Lord of the Universe, central to what effectively became a religion, and, with new ideas, came a whole figural iconography extensively borrowing from Hellenistic Iran.[3]

Against this early background, the remarkable syncretism that characterized artistic developments in Islamic Hindustan comes as no surprise. It manifested itself as early as the ninth and tenth centuries in Sindh, where excavations conducted at Mansurah in the 1960s revealed four monumental bronze door knockers.[4] Grimacing human and animal masks adapted from Hindu sculpture hold rings engraved with Arabic calligraphy in a foliated Kufic script that takes its source in the East Iranian province of Khorasan.

When a Turkic-speaking ruler of eastern Iran, Mahmud of Ghazna, led an invading army into north-western India and integrated parts of it into the Ghaznavid Sultanate in the early eleventh century, the process started afresh on a vast scale.

It is one of the greatest paradoxes of history that a Turk, and the equally Turkic-speaking dynasties who succeeded the Ghaznavid Sultanate, all proceeded to establish Persian as the language of polished usage, literature and administration in their domain, which they called Hindustan.

By the late thirteenth century, Persian was so deeply entrenched that Amir Khosrow, born in Delhi to a Hindu princess and a Turkish amir from Delhi, wrote the greater part of his poetry and his major prose works in Persian.[5]

The Mughals, whose name means "the Mongols" in Persian, were the last of the Turkic-speaking clans to invade the subcontinent. While the Mughals traced their ancestry back to Chingiz Khan (Gengis Khan), their clan had long been linguistically turkicized. Like most Turkic groups from Central Asia, they adhered to Iranian culture. Under Mughal rule, the imprint of Persian as a language became deeper than ever before. It was an important component of the new Indian language, Hindi, which, while Indian in structure, is heavily persianized in its cultural vocabulary.

A huge volume of purely Persian literature was produced in Hindustan during the sixteenth and seventeenth centuries. This ranges from poetry to historical accounts and includes the most remarkable dictionary ever of the Persian language.[6]

The fate of the Memoirs of the very first Mughal ruler, Babur, who established the dynasty after defeating the last Lodi sultan at Panipat in 1526, sums up the ever-widening hold of Persian over Hindustani culture. Written in Turki, Babur's Eastern Turkic mother language, his Memoirs were translated into Persian under the title *Babur-Nameh* in 1589 and 1590 at the request of Emperor Akbar. By then, few at court still understood Turki. Persian effectively remained the *Kultursprache* of Hindustan used even by Hindus and Sikhs. When the tenth Guru of the Sikhs, Guru Gobind Singh, fought back against the Mughal emperor 'Alamgir (known as Aurangzeb), he wrote a versified pamphlet entitled the "Book of Triumph" (*Zafar-Nameh*) which imitates the Persian style and metre of the Iranian "Book of Kings" (the tenth-century *Shah-Nameh*).[7] Persian retained its position as the ultimate language of cultural communication for all Hindustanis until its ban in 1837 by the British colonial authorities.

Hindustani Painting: Where East Meets West

The evolution of art offers a marked contrast with that of language and literature. Throughout the Islamic period, Indian aesthetics subsumed loans from Iran into profoundly different art forms. The paintings and monuments of Hindustan depart more radically from the Iranian models that inspired them than, for example, the pictures and churches of Baroque Germany or France do from those of Italy.

A spectacular demonstration of the assimilation powers of the Hindustani creative genius was provided under the second Mughal ruler, Humayun, the son of Babur. During a brief interlude, Hindustani painting seemed to be heading for total persianization. Humayun had spent seven years in exile at the

Iranian court of Shah Tahmasp before recovering his throne. As he headed for home, the Mughal emperor called in two major masters of Iranian manuscript painting, Sayyed 'Ali and 'Abd os-Samad.[8] They took turns in heading the imperial "House of the Book" (*ketabkhaneh*), an Iranian institution functioning both as the Royal Library and the Royal Painters' Studio.

A self-portrait by Sayyed 'Ali wearing Hindustani attire is strictly composed and painted in his Iranian-period manner |3|.[9] The costume and the formulation of the signature alone reveal that it was executed in Hindustan, which dates the picture to the year 1555.[10]

An elaborate scene by 'Abd os-Samad featuring Humayun and Akbar is similarly done in the Iranian manner (see p. 68 |1|).[11] Aside from the inscriptions, Emperor Humayun's distinctive headdress is the main feature that gives away the connection with the Mughal ruler. At the same time, a startling innovation heralds the revolutionary turnabout that would soon profoundly alter the Iranian component in Hindustani court painting. The sitters' faces have been painted from life. Vividly aware of this extraordinary break with the Eastern tradition of archetypal faces, 'Abd os-Samad penned a Persian quatrain in which he straightforwardly states the fact. The Iranian master simultaneously reveals that he first portrayed the two shahs and then proceeded to paint the entire banquet:

> Shabīh-e Shāh Homāyūn-o Shāh Akbar-rā
> Negāsht khāme-ye 'Abd os-Samad ze rūy-e sar
> Namūd tasvīr āngāh tamām-e īn majles
> Be safhe-ī ke namāyad be-shāh Shāh Akbar
>
> (The pen of 'Abd os-Samad traced the portraits
> Of Shah Humayun and Shah Akbar from nature
> The figural scene [tasvīr] then showed the whole banquet [majles[-e tarab]]
> On a leaf that Shah Akbar shows to the shah)

This no doubt inspired Akbar who later "sat for his likeness, and also ordered likenesses to be made of all the grandees of the realm," as Abo'l-Fazl writes.[12]

3

'Abd os-Samad's innovation was the first step towards the dilution of the Iranian legacy into a very different art that could only have happened in the cosmopolitan environment of the Hindustani court.

At some point, 'Abd os-Samad himself incorporated into his art iconographic details and, more tellingly, Western-inspired shading in order to suggest if not to truly render volume. The rocks in a painting in the *Moraqqa'-e Golshan* are adumbrated in a manner alien to Iran.[13] The name 'Abd os-Samad "Shirin Qalam", calligraphed in beautiful Nasta'aliq, is from the painter's hand.

In a very short time, the influence of the "House of the Book" set up by the two Iranian masters ceased to be clearly identifiable in the composite art that emerged. Hindustani sources state that Sayyed 'Ali and, after him, 'Abd os-Samad oversaw the execution of the volumes of the *Hamzeh-Nameh*, the most ambitious painters' project undertaken under Akbar (r. 1556–1605).[14] The majority of the surviving painted pages reveals the making of a syncretic school still hesitating between barely compatible

|3| Self-portrait by Mir Sayyed 'Ali in Hindustani attire, datable to 1555. LACMA, Los Angeles: M. 90.141.1. Bequest of Edwin Binney 3rd.

trends. The basic principles of Iranian linear painting are maintained in some. The early signs of European influence result in a certain sense of volume in others, while what appears to be the legacy of indigenous Indian painting surges here and there in the rendition of vegetation.

At one end of the stylistic spectrum, the scene featuring 'Alamshah and Qobad conversing under a tent points to the hand of a master trained in the Iranian tradition |4|.[15] At the other end, there is the page that shows Iskandar discovering the infant Darab in a raft (see p. 71 |3|).[16] An early attempt at naturalistic rendition is made in the trees and rocks. The picture is ordained in three slanting parts, almost certainly as a result of the painter's exposure to European art. A Hindustani city looms in the background with a mix of Islamic, West European and Hindu temple architecture, while a river scene defines the foreground. This, too, reveals the seeping European influence that was leading to a new art.

Within two decades, a style emerged in which the lessons of the Iranian masters are no longer clearly perceptible. A certain sense of perspective prevails, closer to that of Flemish art in the mid sixteenth century that the artists discovered through the engravings brought to Akbar's court. The palette has changed. Gone are the Iranian carefully contrasted colours. The pages of the *Babur-Nameh* and the *Akbar-Nameh* painted around the years 1590–95[17] represent the first phase of a new art of the book that would thrive in Hindustan for the next five or six decades.

In a page with two lines that simply mention the arrival of Babur's troops at Kabul through a road buried under snow, the connection with a painting from the *Hamza-Nameh* done in the mid 1570s remains clear.[18] At that point, around 1590, the artist still clumsily struggled to achieve a perspective effect.

Other paintings reveal an astonishing diversity of styles. In some, the integration of perspective effects is definitely more successful. That is the case in a double page in which the lower marginal inscription is contemporary with the script of the page text.[19] This makes the attribution to the two artists, who both have Hindu names, reasonably secure: "design and colour application [*'amal*] by Bishandas, portraiture [*chehreh-nāmī*] by Nanha" |5|.

Intriguingly, one page from the *Akbar-Nameh* shows that Hindustani painting at that stage could have turned outright towards Western art. The scene is about Akbar's attack against the Ranthambhor citadel.[20] An attribution in the lower margin states "composition [*tarh*] by Khīmkaran" and then specifics "design plus colour application [*'amal*] by Khīmkaran". The distant plain that can be seen between the two rocky bluffs and the golden sunlight done in shades of decreasing intensity before allowing the pale blue sky to be visible are rendered in the manner of European landscape painting. However, the stormy clouds amassed at the top betray the Hindu artist's slight misunderstanding of the skies that he obviously copied from Western models. There, threatening stormy clouds would not be seen running above a cloudless golden sunset.

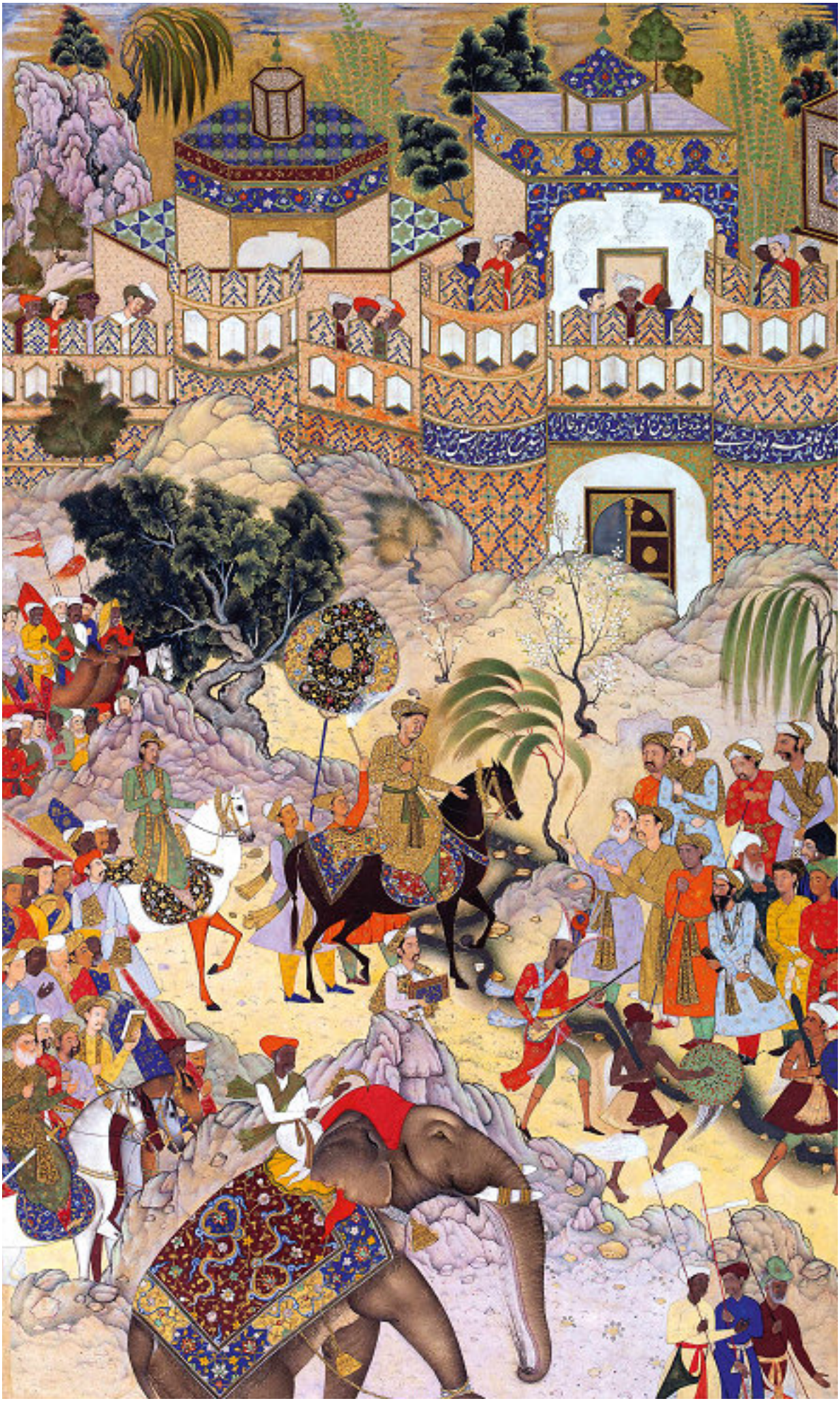
The majority of the artists cited in the lower margins in neat Persian inscriptions written in red ink carry names revealing a Hindu allegiance. Among many typical examples as transcribed in their Persian notation and pronunciation, one reads: "*'amal-e Bhūr* [Bhūra in Hindustani pronunciation?], *chehrehnāmī-e Basāvan*" ("The work of [= designed and painted by] Bhur, portraiture by Basavan").[21] Elsewhere we learn that the plan (*tarh*), that is, the structural disposition and the outlines, are by Kīsū'-e Kalān (Kisu [perhaps pronounced Kīsav/Kīshav by Hindi speakers?] the Elder), and the work (*'amal* = the application of paint) is by Mādhū (Mādhav)-e Kalān (Madhu the Elder).[22]

The participation in the same manuscripts of artists from different backgrounds, Hindus and Muslims, native Hindustanis and Iranian immigrants, accounts for an exceptional mix of markedly different styles.

In this new environment, the likelihood of the Iranian tradition surviving unadulterated was remote. An *Akbar-Nameh* page in the Victoria and Albert Museum, London, credited in the margin to the Iranian painter Farrokh Beg, offers a rare case of almost total faithfulness to the Iranian principle of balanced composition |6|. Several details are typical of Iranian iconography.[23] The postern and the ramparts in the background could be those of an Iranian city, with their brickwork geometrical patterns and the frieze in white Nasta'aliq lettering on deep blue ground, beautifully calligraphed. Farrokh Beg was evidently a

|4| A painted page from the *Hamzeh-Nameh*: 'Alamshah and Qobad conversing. Fitzwilliam Museum, Cambridge: PD. 203.1948.

خوب می نماید خیلی باغ خوبی طرح شده و در طرف جنوب
کوه سفید سنگهار واقع شده در میان سنگهار و شکش واسطه



6

skilled calligrapher, and that training ensured the flowing quality of the linear design that characterizes his composition.

However, even this conservative Iranian artist indulged in innovations that run counter to the principles of Iranian painting. On the one hand, colour is laid flat to fill crisply traced contours in the best Iranian tradition. On the other hand, shading is used to render the volume of the elephant's form. The lively expression of the beast's eye also points to the Iranian master's awareness of Western art. Farrokh Beg even makes a misguided attempt at rendering perspective by reducing the size of Akbar's retinue on the left and increasing that of the bystanders watching Akbar's entry into the city of Surat on the right. The artist apparently succumbed to the fashionable Hindustani trend towards realistic effects without being quite able to understand them, so alien were these to the conceptual art of Iran.

Hindu painters took a further step in the assimilation of European models by copying as well as interpreting Christian and mythological scenes from Western Europe. Tracings were used to achieve the flawless accuracy that some copies display. "The Martyrdom of Saint Cecilia" drawn after an engraving by Hieronymus Wierix in mirror reverse was apparently based on a tracing inadvertently turned over |7|.[24] An intriguing attribution in the lower margin ascribes it to a certain "Ni-Ni", otherwise unknown. The mood in these paintings varies from the formally tragic to the slightly spoofy. The fashion of European derived paintings launched under Akbar continued unabated under Jahangir. A Crucifixion scene in the Aga Khan Museum probably done around 1600–05 interprets a North European work, possibly Netherlandish or German, with tongue-in-cheek naïveté.[25]

Basavan, who is credited for his role in some *Babur-Nameh* and *Akbar-Nameh* pages, also signed a drawing in grisaille of an allegorical figure looking up at the Apparition of God, which is loosely inspired by the frontispiece of the "Polyglot Bible" printed in Antwerp in 1572 |8|.[26]

Sankar (as the Hindi name Shankar is explicitly transcribed in Persian) also took part in planning (*tarh*) or colouring (*'amal*) *Akbar-Nameh* paintings[27] and he too signed drawings in grisaille.[28]

The works of Basavan and Sankar epitomize the astounding versatility of Hindu masters. These were held in highest regard both in court circles and by the Iranian literati familiar with their work. 'Abd ol-Baqi Nahavandi writing his chronicle about the Mughal prince 'Abd ul-Rahim has this to say on a painter called Madhu: "Mādhū *pictor* [*naqqāsh*] is one of the Hindus. In portraiture [*shabīh-sāzī*], 'figural scenes' [*tasvīr*], painting [*naqqāshī*] and structural outlining [*tarrāhī*], he is the Mānī and the Behzād of his time. He has executed superb scenes [*majāles*] and peerless tableaux [*tasāvīr*] for most of this writer's [Nahavandi's] books. He works in the style of those employed in this House of the Book [that is, the one set up by 'Abd ul-Rahim]."[29]

Hindustani syncretic art entered a classic phase covering the reigns of Jahangir (1605–27) and the first twenty years or so of Shah Jahan's rule. At its apex, the rendition of perspective was greatly improved and came together with a touch of true portraiture that had not yet been seen in the art of the East. A likeness of Shah Jahan enthroned with the young princes of the blood standing in front of him offers a perfect example of the art in its more intimate version |9|.[30]

Syncretism in Architecture

Comparable syncretic tendencies characterized the evolution of Hindustani architecture under the Mughals, with one difference – the structures show no trace of European influence until the middle of Shah Jahan's rule. The impact of European ornament on carved wall patterns was stronger.

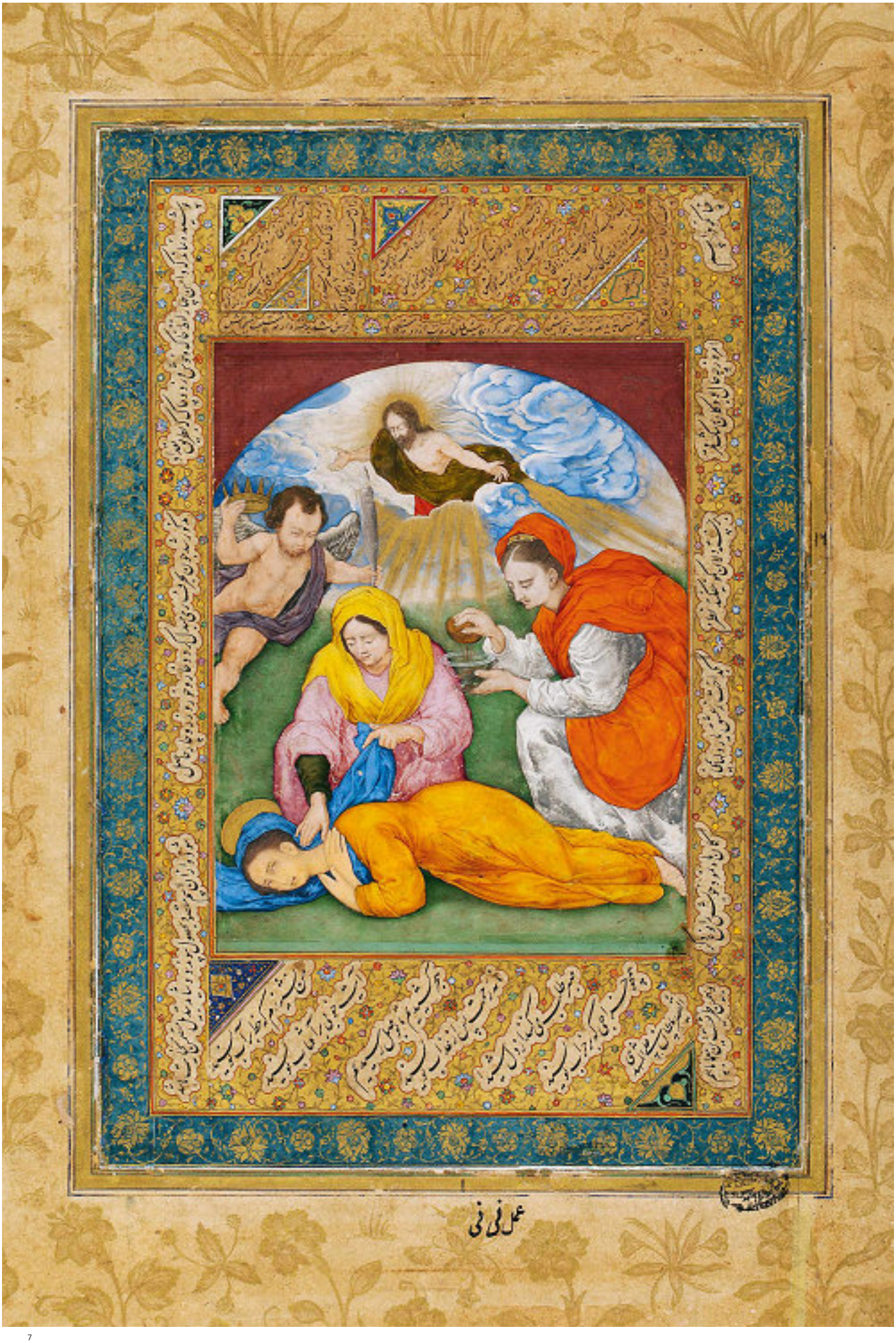
Architecture had deep roots in the vernacular traditions of the subcontinent. The early mosques, minarets and mausoleums in the areas where Islam took hold are quintessentially Indian monuments even when the concept comes from Iran. The Qutb Minar in Delhi, which follows an East Iranian type, does not remotely look Iranian with its massive scale and its richly carved detail.[31] The Arhai-din-ka Jhompra at Amjir built in the early 1200s and the tomb of Iltutmish in Delhi, which dates from 1235, are the creations of an accomplished syncretic art that bears the stamp of Indian aesthetics |10|.[32]

In the Arhai-din-ka Jhompra, the aisles supported by intricately carved pillars adapt the vocabulary of Hindu temple

|5| Double composition from the *Babur-Nameh*, designed and coloured by Bishandas, with individual characters' faces portrayed by Nanha. Victoria and Albert Museum, London: IM.276&a-1913.

|6| A page from the *Akbar-Nameh*, *c.* 1590–95. "Akbar enters the city of Surat" painted by Farrokh Beg. Victoria and Albert Museum, London: IS. 2:117-1896.

|7| "The Martyrdom of Saint Cecilia after Hieronymus Wierix" by a Hindustani artist. Attributed in the margin to a certain "Ni-Ni", otherwise unknown. Victoria and Albert Museum, London: IM.139-1921.



عمل فی فی

10

architecture to the requirements of an Islamic religious building. Elements from Hindu structures are actually incorporated into the fabric of the mosque. While the facade with its majestic gate is Iranian in concept, Indian aesthetics account for the vibrant movement of the polylobed arches ending in sinuous cusps and for the carved detail.

Things could have changed under Babur, but did not. Eager to celebrate his 1526 victory, the founder of the Mughal dynasty erected the following year a Friday Mosque at Panipat.[33] The adoption of "arch-netted pendentives," as Ebba Koch puts it, in order to simulate structural squinches reveals the intention to conjure the image of Samarkand monuments.[34] Catherine Asher, in her comprehensive history of Mughal architecture matched by a close analysis of structural characteristics, aptly calls it an "Indian translation" of the type represented in Samarkand by the Mosque of Bibi Khanum.[35]

Nevertheless, Babur's Mosque at Panipat has a typical Hindustani look and Ebba Koch notes the discrepancy between Babur's intention to follow the Iranian Timurid model and his surviving constructions.[36] The artistic character of a monument is essentially determined by proportions, forms and building materials. All are alien to Iran.

The pavilion known as the Sher Mandal within the Purana Qila in Delhi could be seen as a more successful attempt at building in the Iranian style |1|.[37] It dates from Humayun's reign as Abo'l-Fazl makes clear in the *Akbar-Nameh* (The Book of Akbar).[38] The octagonal plan and the proportions are Iranian. What is not, is the *chattri*, the outsized lantern topped by a very Indian-looking finial. Add the dressed stone and no one could ever mistake the Sher Mandal for an Iranian monument.

Even when Iranian architects were called in, the monuments that they designed took on a character of their own. Humayun's mausoleum erected in Delhi under Akbar is the supreme achievement of Iranian-style architecture in sixteenth-century Hindustan |11|.[39] It was completed in 978/5 June 1570–25 May 1571 "under the care of Mirak Mirza Ghiyas after eight or nine

|8| A grisaille drawing signed by Basavan: an allegorical figure looks at the Apparition of God, after the frontispiece of the "Polyglot Bible" printed in 1572 in Antwerp. Musée Guimet, Paris.

|9| Shah Jahan and the young princes of the blood, painting by an unidentified Hindustani artist, *c.* 1630–35. Aga Khan Museum, Toronto: AKM 124.

|10| The tomb of Iltutmish, Delhi, India, 1235.

years," as 'Abd ol-Qader Bada'oni reports in "Selections from History" (*Montakhab al-Tavārīkh*) before expressing the admiration that it inspires.[40]

Another source states that the mausoleum was completed after the architect's death by his son. Whatever the case, the basic design is assuredly Iranian. Catherine Asher considers that "its Timurid appearance must be credited to its Iranian architect".[41]

However, the monument is unlike any Iranian structure. Even from a distance, the scale is gigantic. For another, the white marble that covers the dome and the sandstone of which the walls are made utterly modify its appearance. Add that *chattris* here, too, introduce another eminently Hindustani feature. Whether or not these were part of the initial design, they strengthen the Hindustani character of Humayun's mausoleum.

The other monuments erected under Akbar are even further removed from the then contemporary Iranian architecture. Their originality says all about the profound impact of Hindustan surroundings on artistic creation even when Iranian masters held the lead role in their conception.

The mausoleum of Atgah Khan in Delhi ranks among the great achievements in the Hindustani-Iranian style during Akbar's rule. The name of the architect, Ostad ("Master" in Persian) Khoda-Qoli is recorded |12|.[42] It points to the Turkic-speaking, possibly Central Asian background, of the artist who was undoubtedly trained in the Iranian tradition of Samarkand and Bukhara. The calligrapher, Baqi Mohammad of Bukhara, represents the Iranian school of Central Asia at its highest.[43] But the stone polychromy and the way in which the patterns, geometrical or not, are handled have no parallel in Iran.

Monuments designed in a style clinging to the heritage of the preceding Lodi period have an even more markedly Hindustani character. The mausoleum of Adham Khan, who murdered Atgah Khan and was executed forthwith at Akbar's behest, stands south of Delhi.[44] Catherine Asher points out that the octagonal plan and the stucco revetment go back to the architectural practice of the Lodi period.[45] In her view, these leftovers from the previous dynasty, which the Mughals loathed, reflect Akbar's intention to express his extreme disapproval of Adham Khan's crime.

A simpler explanation is perhaps more plausible in the context of Hindustani art. The mausoleum of Adham Khan represents a conservative trend versus a modernist movement. It closely matches the design of Mubarak Shah's mausoleum erected in Delhi over a hundred years earlier (Mubarak Shah died in 1434).[46]

11

12

|11| Axial view of the mausoleum of Humayun, Delhi, India. Erected "under the care of Mirak Mirza Ghiyas".

|12| The mausoleum of Atgah Khan, Delhi, India.

13

Be that as it may, the structure remains impressive despite its imperfect state of preservation. The square piers supporting the arches of the octagonal colonnade, the double drum and, most of all, the dome with its profile make it a quintessential Hindustani monument even if the concept of the funerary abode originated in Islamic Iran.

The juxtaposition of two fundamental strands in Hindustani architecture, one striving to follow Iranian models and the other steeped in Hindustani aesthetics, culminated under Akbar. It found its most spectacular expression at Sikri, the village where Akbar's son, who would succeed him as Emperor Jahangir, was born in 1569. An imperial decree made it the capital of Hindustan until 1585, when Akbar moved the seat of his empire to Lahore. The new name of the location Fat'hpūr Sikrī – now spelt Fatehpur Sikri, "Sikri the City of Victory", made up from the Arabic loanword in Hindi *Fat'h* plus the Hindi suffix *-pūr*, "city" – itself sends back an echo of the juxtaposition of two radically antithetic architectural traditions and their frequent merger into stylistically hybrid structures.

The Jami Masjid (Congregational Mosque) retains extensive elements of the Iranian architectural models |13|.[47] These are disguised under their Hindustani garb. The truly imperial scale, the colour scheme of the stone masonry and the adjunction of Hindustani features transform them. Innumerable *chattris* create a rhythm that is unknown in the Iranian world.

Even structures that follow Iranian models relatively closely, such as the Boland Darvazeh (Buland Darwaza in the East Iranian pronunciation prevalent in Hindustan), could not be mistaken for Iranian monuments |14|.[48] The pink and white palette of the masonry and the *chattris* poised on top metamorphose out of recognition the Buland Darwaza as all the other Iranian-type constructions.

While there were many degrees in the assimilation of loans, syncretism forever guaranteed the profound originality of architecture in the Persianate India that Hindustan represented.

Syncretism could not have led to successful formulae had it not been for the unique eclecticism of the Hindustani artistic milieu that was presumably shared by its practitioners and patrons alike. Erecting monuments based on drastically opposed traditions in the same location at the same time apparently posed no difficulty for its architects.

The Panch Mahal with its five superposed levels is a revolutionary creation that surely draws on the heritage of vernacular construction in Sind |15|.[49] The Diwan-i Khass or Private Council

|13| Jami Masjid, Fatehpur Sikri, India, view of the long horizontal facade, with the white marble tomb of Salim Chishti to the left.

|14| Buland Darwaza, Fatehpur Sikri, India.

15

Hall obviously owes its richly carved central pillar supporting simulated sinuous beams to Hindu architecture (see p. 73 |5|). These must originally have been conceived to withstand the destructive climate of Gujarat. The sinuous S-shaped brackets rising from the pillar of the portico in Sheykh Salim Chishti's tomb proceed even more clearly from a tradition of wooden architecture.[50]

Interestingly, the interiors in some of the Fatehpur Sikri monuments that would seem to be exclusively rooted in the Indian tradition display syncretic carved decoration, some of which is no doubt based on designs produced in the imperial "House of the Book" (*ketabkhaneh*). A stone panel in the so-called "Turkish Sultana's House" depicts a stylized park carved in low relief |16|.[51] The palm trees and a big plant with long leaves must surely be derived from an Indian tradition of mural painting art, possibly through its adaptation to manuscript painting.

The bold juxtaposition of Iranian architectural loans and Indian-inspired structures so striking at Fatehpur Sikri and typical of Akbar's reign did not continue after his death. With the accession to power of his son Jahangir in 1605, Iranian ideals often prevailed, only to be transformed in the Hindustani environment.

The ultimate example of this metamorphosis is the mausoleum erected in 1631 over the tomb of Shah Jahan's Iranian spouse, Arjomand Banu Begom known as Mumtaz Mahal. Now known as the Taj Mahal, the monument only briefly evokes an Iranian

|15| Panch Mahal, Fatehpur Sikri, India.
|16| Stone panel carved with a stylized park or *bagh* in the so-called "Turkish Sultana's House".

model, although it was intended to do so, if only in deference to the Iranian origin of Shah Jahan's consort.[52]

Indeed, the two masters primarily involved in its execution were closely connected to Iran. The architect who designed it, Ostad Ahmad Lahori, was born in Lahore to an immigrant from Herat.[53] The author of the admirable calligraphy reproducing Qur'anic verses in the Solos (Thuluth) script, 'Abd ol-Haqq of Shiraz, proudly states his origin on the gateway of Akbar's tomb where he signs himself 'Abd ol-Haqq-e Shirazi.[54] In the Madrase-ye Shahi Mosque at Agra, his signature at the bottom of the south *mihrab* reads "Amanat Khan ash-Shirazi", with the qualifier identifying his hometown appended to the honorific name of address "Amanat Khan" that Shah Jahan had granted him.[55]

But the endeavours of the architect and the calligrapher did not result in a monument that could pass for Iranian.

White marble covers the Taj Mahal. Its fine polished surface has a gleam that brings to mind the handling of marble in Baroque Italian architecture. The polychrome inlay is derived from the Florentine *pietra dura* technique and the carved floral sprays on the plinths reveal a marked naturalistic tendency that takes its source in European art.[56]

Not least, the vast platform that elevates it above the formal park as if lifting it towards the sky has no equivalent in Iran. Indeed, the monument is unique by any standard.

In the Hindustani environment, the Iranian masters were left free to break from the established rules of tradition, and to turn to every ornamental repertoire and technique that caught the fancy of the internationalist Mughal court.

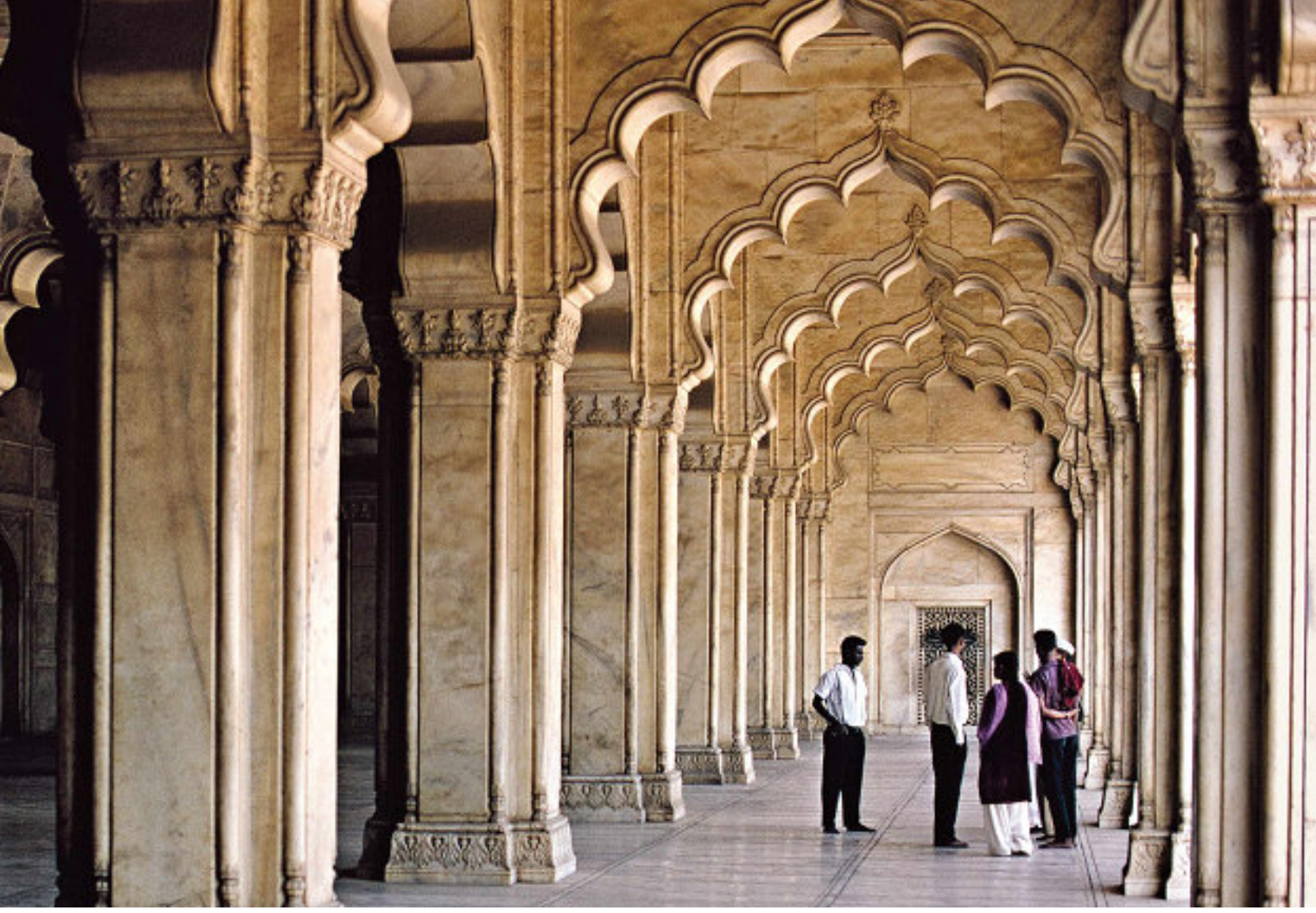
16

As time went on, a further jump was made away from the Iranian tradition. Hindustani architecture veered towards an exaggeration of form and a flourish of ornamentation that once more defined a Baroque trend. The domes became more bulbous, often disproportionately so. Polylobed arches with a cusp at the top were made to look like dainty lace carved out of marble. The Diwan-i Khass and the Diwan-i Am in Agra Fort, the Dawlat Khana-i Khass in Shahjahanabad, Delhi (see p. 90 |24|), and the Badshahi Mosque in Lahore all illustrate the trend.[57] It varied in its degrees of fantasy, from the relatively restrained and powerfully majestic, as in the interior galleries of the Moti Masjid |17|, in Agra Fort, to the bombast of the facade of the same mosque.[58] In all, European motifs were integrated into the ornamental panels, as in the marble screen in the Shahjahanabad Fort with its Scales of Justice that interpret a European model.[59]

The eclecticism of architecture became extreme. It is as if any sense of direction had been lost. The third chamber of the Jahangiri Mahal in Agra is, in the words of Martin Hürlimann, "constructed completely in the architectural style of the Hindu Princes".[60] Outside, the gateway is a Hindustani interpretation of the Iranian model.[61]

The Art of the Object

Tellingly enough, this evolution is paralleled in the art of the object. Metalwork reveals comparable trends. The West Iranian style was so faithfully cultivated under Jahangir and during the early years of Shah Jahan that its brass and tinned copper wares actually made in Hindustan have been consistently confused with those of Safavid Iran.[62] This applies to some tinned copper



17

bowls with tall sinuous sides of a type called *badiyeh* in the Persian verses engraved on them and is equally true of some wares cast in golden brass.

The names of historical characters alone disclose the Hindustani provenance of some of the pieces which, on closer inspection, is discreetly borne out by tiny details in the engraved patterns. One of these, in the Hindustan Collection, is inscribed in a single panel of calligraphy to the name of Khwajeh Mohammad Sadeq, and dated AH 1026 (AD 9 January–28 December 1617) |18|.[63] This is presumably Khwajeh Mohammad Sadeq, the successor of Khwajeh 'Abd ul-Rahim who died in 1036/1627, or perhaps the year before.[64]

A group of large wine bowls engraved with figural scenes follows the corresponding model from Safavid Iran. But here no confusion is possible with Iranian wares. Iconographic details give away the Hindustani provenance.[65] They are all engraved with Shiite prayers and, like the *badiyehs*, reproduce verses by Hafez |19|. This suggests that they were destined for Shiite members of the emperor's inner circle or perhaps also as gifts for envoys from Iran.

On one of the three large wine bowls so far recorded, the scenes relate to the *Khamseh* romance genre.[66] Khosrow watching the sculptor Farhad hacking at a rock is thus followed by the episode of Bahram Gur taking his aim at wild asses or onagers. Like the verses by Hafez, their visual reference to the *Khamseh* genre implies that those to whom the wine bowls were destined were at home with Persian literature. This perfectly fits the circle of literati surrounding Nur Jahan.

The same circles may also have patronized the masters who designed bronze wares associating Hindustani forms with calligraphy of the highest order.

An unpublished bowl cover in a private collection which is made of the fine golden multiple alloy conventionally referred to here as 'brass' offers an example of the trend, dated 1027/29 December 1617–18 December 1618, one year after the bowl made for Khawej Mohammad Sadeq |20|.[67]

|17| The interior galleries of the Moti Masjid in Agra Fort, Agra, India.

|18| Hindustani wine bowl (*badiyeh*). Tinned copper engraved in the West Iranian Safavid style. Commissioned by Khwajeh Mohammad Sadeq in AH 1026 (AD 1617). The Hindustan Collection, London.

|19| Wine bowl (*jam*). Tinned copper engraved in the West Iranian Safavid style, inscribed with Shiite prayers and Persian verses by Hafez, *c.* 1620–30. Aga Khan Museum, Toronto.

|20| Wine bowl cover (*sarpush*), brass hammered, spun, engraved with a Shiite prayer and a Persian couplet by 'Ali-Qoli Bek, who commissioned it in AH 1027 (AD 1618). The Hindustan Collection, London.

The profile of the object reproduces on a miniature scale a type of Hindustani architectural dome with a recessed upper section that conjures the image of a parasol.

The sole ornament is the band of Nasta'aliq calligraphy. As on the three wine bowls, the Shiite prayer beginning "*Nādi 'Ali-yyan Maz'har al-'ajāyib* [so spelt]" ("Call Unto 'Ali, the epiphany of wonders") is thus represented. The triple invocation to 'Ali at the end appears to echo the patron's Shiite fervour. It is followed by a Persian quatrain in the first person singular |20|. Apparently coined by the patron himself, it records his presence in front of "the Prophet's House" (*Beyt-e Peyk*) [in Madina]:

Ānkeh māndeh qedam-be Beyt-e Peyk
Bande-ye Shāh 'Alī-Qollī Bēk[68]

(He that stood in front of the Prophet's House
The servant of the Shah, 'Ali-Qolli Bek)

An amir called 'Ali-Qoli Durman, alternatively named Ali-Qoli Bek Durman, is mentioned by Emperor Jahangir in his diary of events titled *Jahangir-Nameh*, "The Book of Jahangir".[69] If "Bek" is dropped once, this is because it is not actually part of the name, but a Turkish title appended to it.

This invites speculation that another "Ali-Qoli" included by the historian 'Abd ol-Baqi Nahavandi among the poets that he records in the *Ma'āser-e Rahīmī* might have been the patron who commissioned the bowl cover.[70] The historian describes 'Ali-Qoli as a fervent Shiite who enjoyed "a supreme and exceptional prestige among the Qizilbash," the Turkic-speaking fanatic militants who supported the Safavid ruler.[71] That would fit the fervour that comes out in the triple invocation to 'Ali at the end of the "Nadi 'Ali" prayer given such prominence on the cover.

Not least, 'Ali-Qoli was a recognized poet. That makes him the more plausible as the possible patron of the brass cover as it would take the skills and inclinations of a poet to pen a couplet in a highly personal tone.

18

19

20

The details that Nahavandi gives about the poet's life provide additional reasons for identifying him as the owner of the brass piece. 'Ali-Qoli was a Qizilbash descended from an illustrious family whose members had been part of the inner circle of the Aq-Quyunlu shahs of Iran in the fifteenth century. Later his grandfather had been close to Shah Tahmasp of Iran. 'Ali-Qoli was fifteen years old when he left Khorasan for "Eraq" (= 'Erāq-e 'Ajam, that is, western Iran) in 999/30 October 1590–18 October 1591. From there, the young man went to Hindustan where he entered the service of Emperor Akbar.[72] The Mughal ruler granted him a domain (*jāgir*) in Burhanpur in the northern tip of the Deccan. Nahavandi notes that 'Ali-Qoli fought heroically in Khandis on 10 Ramadan 1019/5 December 1610 during the campaign led by Prince Parviz who conquered the Deccan.[73] Nahavandi later observes: "Today in 1024/31 January 1615–19 January 1616, he has entered his [the Emperor Jahangir's] inner circle... He is one of the royal amirs living in Burhanpur. He uses the nom de plume 'Ali and has finished a Dīvān [a volume of collected poems] of ghazals and qasīdehs."[74]

This punchline to Nahavandi's biographical account of the poet 'Ali-Qoli was thus written in the year following the date inscribed on the bowl cover.

The title "Bēk" was needed at the end of the couplet in order to rime with "Peyk" ("Messenger", the Persian semantic of Arabic *Rasūl*, "Prophet") in the first hemistich. This would explain why the prince (*Mīrzā* in Nahavandi's own words, used repeatedly) chose to refer to himself with this title. As he was a Turkic-speaking Qizilbash, he would have had an additional reason for using the Turkic title "Bēk" in preference to the Persian "Mīrzā".

Needless to say, further evidence is necessary before a definitive conclusion can be reached one way or the other.

What remains certain at this stage is that the cover was made for a Shiite patron who wrote Persian poetry. In other words, the patron belonged to the same highly placed Shiite group of men in the imperial entourage who commissioned the large wine bowls based on Iranian models with royal iconography and inscribed with verses by Hafez. In contrast with these, the brass cover illustrates the association of a Hindustani shape with Persian calligraphy of the highest order. In metalwork as in architecture syncretism flourished alongside trends that were strictly dependent on the Iranian tradition and others that drew primarily on the ancient repertoire of Indian shapes. The latter were left uninscribed, possibly to make them more attractive to Hindus. However, they were by no means solely owned by them.

A small unpublished ewer in the Hindustan Collection cast in copper is engraved on the sides in extremely fine cursive script inlaid with black paste |21|.[75] The shape of the body, typically Hindustani, is associated with a neck reproducing in miniature size a model from Safavid Iran. The inscription merely gives a name, Molla Borhan, that points to a member of the Muslim literate elite.

Much remains to be discovered in the field of Hindustani metalwork and more broadly *objects d'art* in all media. Few items have reached the West. Many more probably lie, unidentified, across Kashmir, Pakistan and India mistaken for Iranian art of the Safavid period due to their inscriptions – Arabic if religious and Persian if poetical.

As Hindustani metalwares made for the Muslim circles come to be better known, they are bound to shed further light on syncretism in Hindustan. The full scope of the internationalism inherent in the make-up of India may then be apprehended.

|21| Ewer, copper, cast, formerly tinned and engraved with the name of the owner, Molla Borhan. The Hindustan Collection, London.

A note on Transcription

The transcription of all Persian names follows standard Persian pronunciation according to the system adopted in Assadullah Souren Melikian-Chirvani, *Islamic Metalwork from the Iranian World 8th–18th centuries* (Victoria & Albert Museum, London, 1982). See "Conventions and Standards" pp. 10–11. All sites and monuments are, however, cited in their current English spelling in India and Pakistan: "Buland Darwaza", not "Boland Darvazeh"; "the mausoleum of Humayun", not "Homayun"; and "Mughal" has been adopted instead of "Moghul".

Endnotes

1 Monumental capitals carved with the foreparts of bulls back to back excavated at Pataliputra bear a striking resemblance to the Persepolitan model.
2 Leigh Ashton (ed.), *The Art of India and Pakistan*, Faber and Faber, London, 1950, p. 10 and pl. 2 to no. 26.
3 Assadullah Souren Melikian-Chirvani, "Recherches sur l'architecture de l'Iran boud-dhique. I. Essai sur les origines et le symbolisme du stupa iranien", in *Le Monde Iranien et l'Islam* (Paris-Geneva, 1975, III), pp. 1–61. See particularly pl. III and caption.
4 Ahmad Nabi Khan, *Al-Mansurah. A Forgotten Arab Metropolis in Pakistan* (Government of Pakistan, Department of Archaeology & Museums, Karachi, 1990), pls. 77–80. The Hindu source of one of the masks is duly noted, p. 59.
5 See Amir Khosrow Dehlavi, *Dīvān-e Kāmel* [The Complete Divan], Sa'id Nafisi (ed.) (Tehran, 1343/1964); and *Khamseh*, Amir Ahmad Ashrafi (ed.) (Tehran, 1362/1983). Amir Khosrow's important chronicle of the reign of Sultan 'Ala ad-Din Khalji (16 Ramadan 695 to the year 711) (see English preface p. 13) is written, typically enough, in Persian: *Khazāyen al-Fotūh*, Mohammad Wahid Mirza (ed.) (Calcutta, 1953).
6 Mir Jamal od-Din Hoseyn Inju Shirazi, *Farhang-e Jahāngīrī*, Rahim 'Afifi (ed.) (Mash'had, 1351/1972 – Tehran, 1354/1975, three volumes).
7 Assadullah Souren Melikian-Chirvani, "The Shah-Name Echoes in Sikh Poetry and the Origins of the Nihangs' Name", in *Bulletin of the Asia Institute* (Bloomfield Hills, Michigan, USA, 2006) vol. 16 (for the year 2002), pp. 1–23.
8 On Mir Sayyed 'Ali, see Assadullah Souren Melikian-Chirvani, "Mir Sayyed 'Ali: Painter of the Past and Pioneer of the Future", in Asok Kumar Das (ed.), *Mughal Masters: Further Studies* (Marg, vol. 49, no. 4, Mumbai 1998), pp. 30–51, where the works by Sayyed 'Ali authenticated by holograph signatures reproduced in full are gathered for the first time. On 'Abd os-Samad, see Milo Cleveland Beach, *The Imperial Image: Paintings for the Mughal Court* (Washington, 1981), pp. 166–167; and Sheila Canby, "The Horses of 'Abd os-Samad", in Das, *Mughal Masters* op. cit., pp. 14–29.
9 On the self-portrait and the holograph signature published for the first time, and Persian couplet, previously misread and utterly misunderstood, see Melikian-Chirvani, "Mir Sayyed 'Ali" op.cit., p. 30, pls. 1 and 37.
10 The Hindustani attire proves that the self-portrait was done in Hindustan, not in Kabul, a Persian-speaking city where Iranian customs and fashions prevailed. It is therefore not earlier than 1555. The wording of the signature, on the other hand, proves that Humayun (who died in early January 1556) was still alive. The self-portrait is therefore not later than 1555.
11 *Shāhkārhā-ye Negargārī-e Īrān* [Masterpieces of Iranian Painters]/ *Masterpieces of Persian Painting* (as translated on back cover). Catalogue of the exhibition curated by Mohammad 'Ali Rajabi (Tehran Museum of Contemporary Art, Tehran, 1384/2005): p. 70 of the *Moraqqa'-e Golshan*.
12 Susan Stronge, *Painting for the Mughal Emperor. The Art of the Book 1560–1660* (V&A Publications, London, 2002), p. 100.
13 *Shāhkārhā-ya Negārgarī-e Īrān* op. cit., p. 453: p. 151 of the *Moraqqa'-e Golshan*. Sheila Canby in "The Horses of 'Abd us-Samad" op. cit., p. 17, pl. 2, cautiously considers it to be "ascribed to al-'abd shikasteh raqam 'Abd us-Samad shirin qalam".
14 See latterly, John Seyller, *The Adventures of Hamza. Painting and Storytelling in Mughal India* (Smithsonian Institution in association with Azimuth Editions, London, 2002), pp. 32–36, where a detailed account is given of the Persian sources describing the execution of the manuscript.
15 Milo Beach, *Early Mughal Painting* (Cambridge, MA-London, 1987), p. 87, pl. 61, Fitzwilliam Museum, Cambridge, PD 203-1948; and Seyller, *The Adventures of Hamza* op. cit., pp. 90–91, no. 23.
16 *Asiatic Art in the Museum of Fine Arts* (Museum of Fine Arts, Boston, 1982), no. 165; and Seyller, *The Adventures of Hamza* op. cit., pp. 172–173, no. 56 (MFA 24-129).
17 Stronge, *Painting for the Mughal Emperor* op. cit., pp. 42–45.
18 Ibid., p. 87, pl. 56 (V&A IM.271-1913).
19 Ibid., pp. 90–91, pl. 59 (V&A IM.276 & a–1913).
20 Ibid., pp. 36–37, pl. 22. I transcribe the names as they are noted in Persian in the lower margin (V&A: IS. 2-1896 73/117).
21 Ibid., p. 51, pl. 34 (V&A IS.2-1986 80/117).
22 Ibid., p. 46, pl. 30 (V&A IS.2-1986 20/117).
23 Ibid., p. 56, pl. 37 (V&A IS.2-1986 117/117). The name Farrokh Beg, although finely calligraphed, is not introduced by any specification such as "*tarh*" or "*'amal*".
24 Ibid., pp. 103 and 112–113, pls. 78 and 79.
25 Unpublished.
26 See Amina Okada, *Miniatures de l'Inde Impériale. Les peintres de la cour d'Akbar* (Musée Guimet exhibition catalogue, Paris, 1989), pp. 188–189, pl. 54; colour plate on p. 36. The single name Basavan, not preceded by any noun, breaks up the ruling, proving that it was calligraphed by the artist himself or a calligrapher while the grisaille drawing was being done.
27 Beach, *Early Mughal Painting* op. cit., p. 120, pl. 82 (margins with librarian attributions not shown); and Stronge, *Painting for the Mughal Emperor* op. cit., p. 49, pl. 32 and pp. 68–69, pl. 46.
28 For a highly important grisaille Biblical scene by Sankar see Christie's, *Art of the Islamic and Indian Worlds* (London, 17 April 2007), pp. 162–163, signed *'amal-e Shankar* in impeccable Nasta'aliq calligraphy.
29 'Abd ol-Baqi Nahavandi, *Ma'āser-e Rahīmī*, *bakhsh-e sevvom*, Abd ol-Hoseyn Nava'i (ed.) (Anjoman-e Āsar-o Mafakher-e Farhangi, Tehran, 1381/2002), p. 937.
30 See Sheila Canby, *Princes, Poets and Paladins: Islamic and Indian Paintings from the Collection of Prince and Princess Sadruddin Aga Khan* (British Museum Press, London, 1998), pp. 147–148, where attributed to Manohar. The mauve strip under the image where the signature and caption appear was cut out from another page in the twentieth-century art trade. It does not belong with the painting. It is therefore no longer necessary to suppose that a portrait originally meant to be Jahangir was later modified by the artist. The painting actually shows no trace of alteration. The hypothesis of the emperor's face alteration is repeated in all subsequent publications of the painting, including the Aga Khan Development Network exhibition catalogues, for example Sheila Canby, "India and the Mughals" in *Treasures of the Aga Khan Museum. Masterpieces of Islamic Art* (Benoît Junot and Verena Daiber [eds.], Nicolai, 2010), p. 249, no. 191.
31 Percy Brown, *Indian Architecture (Islamic Period)* (Calcutta, 1942; Bombay reprint 1956; sixth reprint 1975), pl. V, figs. 1 and 2.
32 Ibid., pl. VI, figs. 1 and 2 and pl. VIII.
33 Catherine B. Asher, *Architecture of Mughal India (The New Cambridge History of India, Vol. 1.4)* (Cambridge University Press, Cambridge, 1992), pp. 27–28 and pl. 8.
34 Ebba Koch, *Mughal Architecture* (Prestel, Munich, 1991), p. 32 and pl. 1.

35 Asher, *Architecture of Mughal India* op. cit., p. 28.
36 Koch, *Mughal Architecture* op. cit., p. 32.
37 Asher, *Architecture of Mughal India* op. cit., p. 33 and pl. 11.
38 Ibid., citing Abo'l-Fazl in H. Beveridge's translation.
39 Brown, *Indian Architecture* op. cit., pp. 89–90 and pl. LXII for the superb aerial view of the site taken by Indian Air Survey and Transport; Martin Hürlimann, *Delhi, Agra, Fatehpur Sikri* (Thames & Hudson, London, 1965, English version of the German original), pls. 34 (close-up view) and 36 (aerial view); and Asher, *Architecture of Mughal India* op. cit., pp. 43–46.
40 Asher, *Architecture of Mughal India* op. cit., p. 44, n. 4, cites the translation of Badaoni's chronicle by G. S. A. Ranking, W. H. Lowe and W. Haig: Al-Badayuni, *Muntakhab al-Tawarikh* (Patna reprint, 1973, three volumes), vol. II, p. 135. The text in 'Abd ol-Qader Bada'uni, *Montakhab at-Tavārīkh*, Mowlavi Ahmad 'Ali Saheb (ed.) (Tehran, 1380/2001, three volumes), vol. II, p. 90, says: "This is a monument that only leaves on the eye of spectators as they study it a burden of amazement" ("*ān 'emaratist-ke dide-ye nozaregi dar motale'-ye ān gheyr az heyrat bar na-mi dahad*").
41 Asher, *Architecture of Mughal India* op. cit., p. 44.
42 Ibid., pp. 42 and 43, pl. 16; and Brown, *Indian Architecture* op. cit., pl. XXI.
43 Or both Khoda-Qoli and Baqi Mohammad. Asher, *Architecture of Mughal India* op. cit., p. 42.
44 Koch, *Mughal Architecture* op. cit., p. 52, pl. 35; and Asher, *Architecture of Mughal India* op. cit., pp. 42–43.
45 Asher, *Architecture of Mughal India* op. cit., p. 43.
46 Mausoleum of Sayyed Mubarak Shah: Brown, *Indian Architecture* op. cit., pl. XVI, fig. 2.
47 Asher, *Architecture of Mughal India* op. cit., pp. 52 and 56, pl. 25. Superb plates of Fatehpur Sikri in Hürlimann, *Delhi, Agra, Fatehpur Sikri* op. cit., pls. 126–141. Attilio Petruccioli, *Fathpur Sikri. La Città del sole e delle acque* (Carucci Editore, Rome, 1988) is highly important for its study of the urban complex, its photographs giving new views of well-known monuments. See for example p. 77, pl. 60, for a lateral shot of the Buland Darwaza showing the detail of the grooved engaged columns. Jami Masjid: Asher, *Architecture of Mughal India* op. cit., pp. 53–55 and 56, pl. 25; and Hürlimann *Delhi, Agra, Fatehpur Sikri* op. cit., pl. 140, magnificent view of the west side of the courtyard.
48 Brown, *Indian Architecture* op. cit., pl. XXIV, I (exterior facade) and L (interior facade); Koch, *Mughal Architecture* op. cit., pl. V (exterior facade), and p. 65, pl. 60 (inner facade); and Asher, *Architecture of Mughal India* op. cit., pp. 52–53 and 54, pl. 23.
49 Central pillar: Brown, *Indian Architecture* op. cit., pl. LXXII, 2a; Koch, *Mughal Architecture* op. cit., p. 60 and pl. 50; and Asher, *Architecture of Mughal India* op. cit., pp. 62–63 and 64, pl. 32.
50 Brown, *Indian Architecture* op. cit., pl. LXXIII, 2, showing pillar of portico; Hürlimann, *Delhi, Agra, Fatehpur Sikri* op. cit., pl. 138 (entrance) and pl. 139 (general view); Koch, *Mughal Architecture* op. cit., pp. 56–57 and 58, pl. 44 (general view of time); and Asher, *Architecture of Mughal India* op. cit., pp. 52–53, pl. 26 (outside), and p. 64, pl. 32 (central pillar).
51 Asher, *Architecture of Mughal India* op. cit., p. 61, pl. 29.
52 Brown, *Indian Architecture* op. cit., pl. LXII, I (western facade) and 2 (important aerial view by Indian Air Survey and Transport); and Koch, *Mughal Architecture* op. cit., pl. III (photo 1989). Fundamental study of historical sources accompanied by outstanding photography: W. E. Begley, Z. A. Desai, *Taj Mahal. The Illumined Tomb* (Aga Khan Program for Islamic Architecture and the University of Washington Press, Cambridge, MA, 1989). The reference book is now: Ebba Koch, *The Complete Taj Mahal and the Riverfront Gardens of Agra* (Thames & Hudson, London, 2006).
53 Begley, Desai, *Taj Mahal* op. cit., introduction, XLII.
54 Ibid., introduction, XXXVII. See pp. 251–252 for reproductions of his signature.
55 Ibid., p. 253, pl. 145 where the photographic plate reads "*Katabahu Amānat Khān ash-Shīrāzī*". The English translation already misplaced misleadingly reads: "Amanat Khan, the year 1046".
56 Koch, *The Complete Taj Mahal* op. cit., pp. 219–221; and Brown, *Indian Architecture* op. cit., XCIII, I (Badshahi Mosque).
57 Asher, *Architecture of Mughal India* op. cit., p. 198, pl. 121 and p. 199, pl. 122 (Dowlat Khane-ye Khass, Shahjahanabad); and Hürlimann, *Delhi, Agra, Fatehpur Sikri* op. cit., pl. 111 (Diwan-i Am, Agra), pl. 112 (exterior of the Diwan-i Khass, Agra), pp. 202 and 257, 258, pl. 162 and p. 259, pl. 163 (both Badshahi Mosque, in Shahjahanabad in Delhi).
58 Hürlimann, *Delhi, Agra, Fatehpur Sikri* op. cit., p. 101 (interior of Moti Masjid); and Asher, *Architecture of Mughal India* op. cit., p. 256, pl. 160 (facade of Moti Mosque) and p. 257, pl. 161 (detail of ornament).
59 Asher, *Architecture of Mughal India* op. cit., pl. 122.
60 Hürlimann, *Delhi, Agra, Fatehpur Sikri* op. cit., pl. 106 (third chamber) and p. 141 caption to pl. 106.
61 Ibid., pl. 104.
62 Assadullah Souren Melikian-Chirvani, "The Iranian Style in North Hindustan Metalwork", in Françoise "Nalini" Delvoye (ed.), *Confluence of Cultures: French Contributions to Indo-Persian Studies* (Manohar, New Delhi, Tehran, 1994), pp. 54–81, twenty-two plates, and pp. 58–59 and pl. 3.
63 Ibid., p. 58 and pl. 3. And pp. 65–76.
64 Mohammad Saleh Kanbu, *'Amal-e Sāleh/Shāh Jahān-Nāmeh*, Gholam Yazdi (ed.) with preface by Vahid Qorayshi (Lahore, 1958, three volumes), vol. I, p. 262; and Melikian-Chirvani, "The Iranian Style in North Hindustan Metalwork" op. cit., pl. 18.
65 Iran-Zamin Collection, London.
66 Melikian-Chirvani, "The Iranian Style in North Hindustan Metalwork" op. cit., pp. 72–79, fig. 17.
67 Ibid., pp. 52–59 and fig. 3.
68 Ali-Qoli's name must be spelt and pronounced with a geminated *lam* (L letter) to respect the metre.
69 Nur ad-Din Mohammad Jahangir Gurkani, *Jahāngīr-Nāmeh (Tūzok-e Jahāngīrī)*, Mohammad Hashem (ed.) (Tehran, 1359/1980), pp. 84, 201ff.
70 Nahavandi, *Ma'āser-e Rahīmī* op cit, pp. 888ff.
71 Ibid., p. 889: "*az ghāyat-e 'olow-e hasab va semow-e nasab dar miyān-e Qezelbāshiyeh momtāz-o mostasnast*" ("Owing to his extremely high rank and his exalted ancestry, he is distinguished and outstanding among the Qizilbash").
72 Ibid., p. 891.
73 Ibid., p. 892.
74 Ibid., p. 895.
75 Height 18.1 cm.

The Image of Mughal Architecture

The construction of Fatehpur. Opaque watercolour and gold on paper. Folio from the *Akbar-Nameh*, *c.* 1590–95. Composition by Tulsi, painting by Bhawani. 32.7 × 19.5 cm. Victoria and Albert Museum, London: IS.2-1896: 86 (detail).

پیشکش همایون پادشاه اکبر را
نگاشته عبدالصمد زرین رقم
نمود تصویر این مجلس بصفحه که نماید پادشاه اکبر

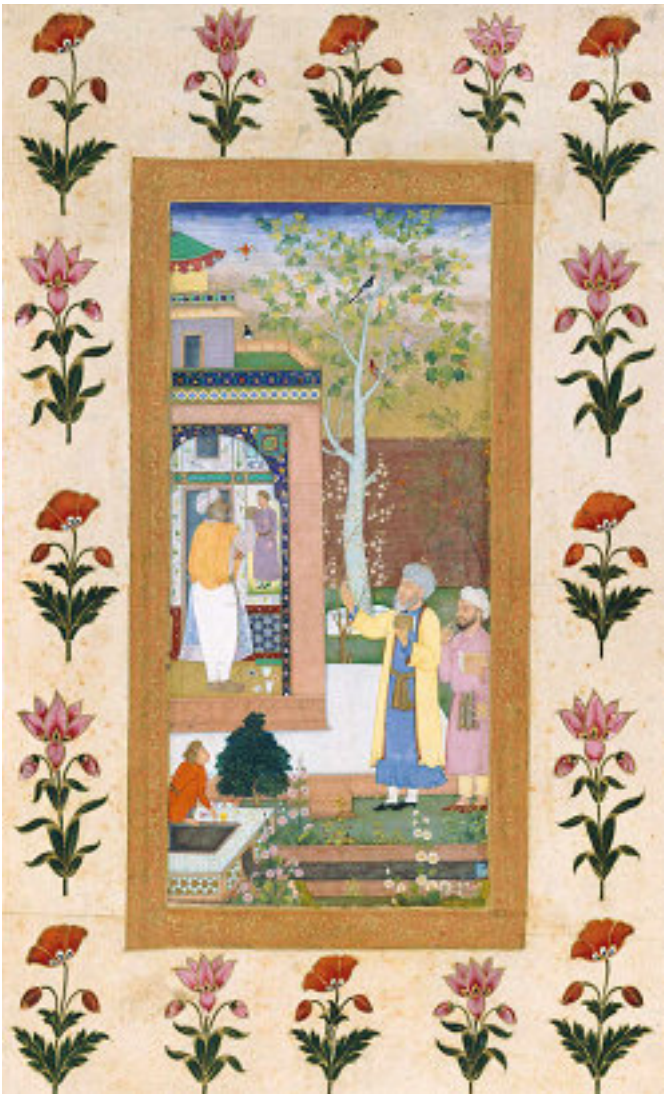
Susan Stronge

The architecture depicted in paintings of the Mughal emperors plays a significant role in reflecting the changing fortunes of a dynasty across two and a half centuries, from the sixteenth to the mid eighteenth century.

Some aspects of the structures relate to those in the real world, occasionally providing invaluable information about the appearance of buildings that have long since been destroyed. More often, the architecture is a crucial part of an allegorical setting that projects a carefully contrived imperial image. Towards the end of Mughal rule, it delineates the enclosed world of a court that had become powerless.

One of the earliest depictions of the court shows Emperor Humayun in a tree house being presented with a painting of the same scene by his young son, Akbar. In the pavilion next to them, set in a beautiful garden, preparations for a banquet are underway to the accompaniment of music |1|. The exclusively Iranian garb of the participants in this gathering, or *majles*, suggests that it took place in Kabul during Humayun's exile from Hindustan. In 1539 he had been driven out of the lands conquered by his father Babur only thirteen years earlier, and fled to Iran. With the support of the Safavid ruler Shah Tahmasp he established himself in Kabul, and from there launched several attacks on Delhi before finally regaining his kingdom in 1555.[1]

While in Kabul, probably before 1551, Mir Sayyed 'Ali and 'Abd os-Samad, two master artists whom the ousted ruler had met in Iran, joined his service.[2] The conventions in which they trained are seen in the *majles* done by 'Abd os-Samad. It has the high viewpoint, stylized rendition of perspective, and figures conveying emotion through standard gestures rather than the facial expression of Iranian book painting. The scene presents an idyllic image of a highly refined milieu, with small details reflecting contemporary reality.



2

|1| *Majles* of Humayun and Akbar. Opaque watercolour and gold on paper. From Jahangir's *Morraqa'-e Golshan* (Rose Garden Album). By 'Abd os-Samad, *c.* 1552–55 with borders *c.* 1600–10. Golestan Palace Library, Tehran: Manuscript No. 1663, folio 70.

|2| An artist decorates a pavilion. Opaque watercolour and gold on paper. *c.* 1600 with 18th-century borders. Painting: 22 × 10.6 cm; Page: 35.6 × 24.5 cm. Victoria and Albert Museum, London: IS.48-1956 folio 56a.

On the interior wall of the pavilion, hunting and feasting scenes are painted on an ivory ground on the upper level of the pavilion and on lilac-blue below, with angels in the architraves bearing a gold vessel and salver on one side, and a musical instrument on the other. Decoration like this was certainly found on Mughal buildings: 'Abd os-Samad himself would later paint the walls of at least one Mughal structure, and throughout the early Mughal period court artists working on paper also decorated the walls of monuments |2|.[3]

The Iranian masters accompanied Humayun to Delhi in 1555. Only months later, the emperor was dead. The thirteen-year-old Akbar succeeded him, ruling at first under the guidance of Humayun's close friend and leading general, the aristocratic Bayram Khan.

Although Akbar never learned to read or write, he grew up to be a highly cultivated man with a keen intellect, energetic curiosity and prodigious memory. He added extensively to the royal library, and knew the contents of his books by having them read out to him. Works from other languages including Sanskrit, Hindi and Kashmiri were translated into Persian, the language of the educated elite which had long been the administrative language of the Hindustani Sultanates.[4] Akbar also commissioned a large number of new illustrated manuscripts from the royal *ketabkhaneh*, or "House of the Book", the institution of the royal household which included the library as well as producing manuscripts.[5] Mir Sayyed 'Ali and 'Abd os-Samad were successively superintendents of the *ketabkhaneh*, and together oversaw a revolution in the Indian art of the book as dramatic as that seen in architecture during Akbar's reign.

The calligraphers, illuminators, painters, binders and others in the *ketabkhaneh* were initially occupied in creating the multiple volumes of the *Hamza-Nameh*, describing in words and vivid pictures the adventures of the Muslim hero Hamza. Akbar probably gave the order for the tales to be written down and illustrated in the early 1560s. It would take fifteen years for the multiple volumes with 1400 painted pages to be finished.[6]

The dramatic events of the narrative take place in an otherworldly landscape, inhabited by dragons, giants and fairies, as well as humans. The buildings depicted in these pictures are loosely inspired by structures within the Mughal Empire, though their densely covered surfaces, like those in 'Abd os-Samad's *majles*, often seem closer to manuscript illumination than any plausible architectural decoration. However fanciful the buildings may be, they have the hue of the red sandstone then being used to construct the fortified palaces of Agra and Delhi, and Akbar's new city at Sikri, known today as Fatehpur Sikri. The paintings also reproduce the trabeate construction of many of the monuments, which is combined on the page and in the cities with domes, vaulting and arcuate features. The most characteristic elements of the new buildings – *chattris* (domed kiosks on pillars), sharply angled projecting eaves (*chajjas*) and perforated stone screens (*jalis*) – are all replicated in the *Hamza-Nameh*. Very occasionally, obviously Hindu structures appear, like the shrine with its stepped, angular roof at the corner of the walled citadel in the episode where a fisherman rescues a new-born baby |3|.[7] The women carrying water pots and the goatherd with his animals provide a glimpse of rural life in the Mughal Empire of the 1560s and 1570s.

A striking architectural feature in one scene can be linked directly to Fatehpur. When Hamza's spies silently enter the fort of an enemy, they murder the sleeping guards who are supposed to be protecting him |4|.[8] The platform of the watchtower on which the victims slumber is supported by corbels resting on a thick column. The watchtower calls to mind the intriguing column standing at the centre of the so-called Diwan-i Khass, or Hall of Private Audience, whose function remains unclear |5|.[9] In 1572–73 Akbar had led his army to spectacular victories in the Muslim kingdom of Gujarat and, on his return, changed the name of Sikri to Fatehpur, or "City of Victory". The expansion of the empire allowed new influences to enter the Mughal architectural vocabulary, brought by stonemasons and others from the conquered regions. Here, the form of the watchtower derives ultimately from fifteenth-century Gujarat.[10] This is reflected in the history of the reign. When Akbar's official chronicler Abo'l-Fazl praised the new fort at Agra, he wrote: "It contains more than five hundred buildings of masonry after the beautiful designs of Bengal and Gujarat, which masterly sculptors

|3| The fisherman Iskandar finds the infant Darab in the water. Gouache and gold on cotton backed with paper. A folio from the *Hamza-Nameh*, *c.* 1562–77. 68.5 × 52 cm. Museum of Fine Arts, Boston: Horace G. Tucker Memorial Fund and Seth Augustus Fowle Fund, 24.129.

and cunning artists of form have fashioned as architectural models".[11]

After the completion of the *Hamza-Nameh*, the emperor commissioned a series of illustrated histories that led to the creation of his most famous manuscript: in 1589, Akbar ordered the history of his own reign to be written. By now, the role of the Mughal emperor was firmly established. Abo'l-Fazl meticulously researched the events of the past to provide an accurate account, but also used them to present the figure of the emperor as the ideal ruler appointed by God. The concepts of sovereignty he draws on are those of the ancient Iranian world that carried through into the Islamic period. In addition, he states that the history is explicitly intended as a moral and ethical treatise.[12] All this is reflected in the illustrations to the incomplete manuscript now in the Victoria and Albert Museum which was almost certainly the presentation copy.[13] The text covers the years 1560 to 1577, divided by chapters covering a single regnal year. Each chapter has an overarching theme in the life of the sovereign who is presented as the intermediary between the material and the spiritual world. The paintings depict major events, but also relate to the principle of kingship in the relevant chapter.

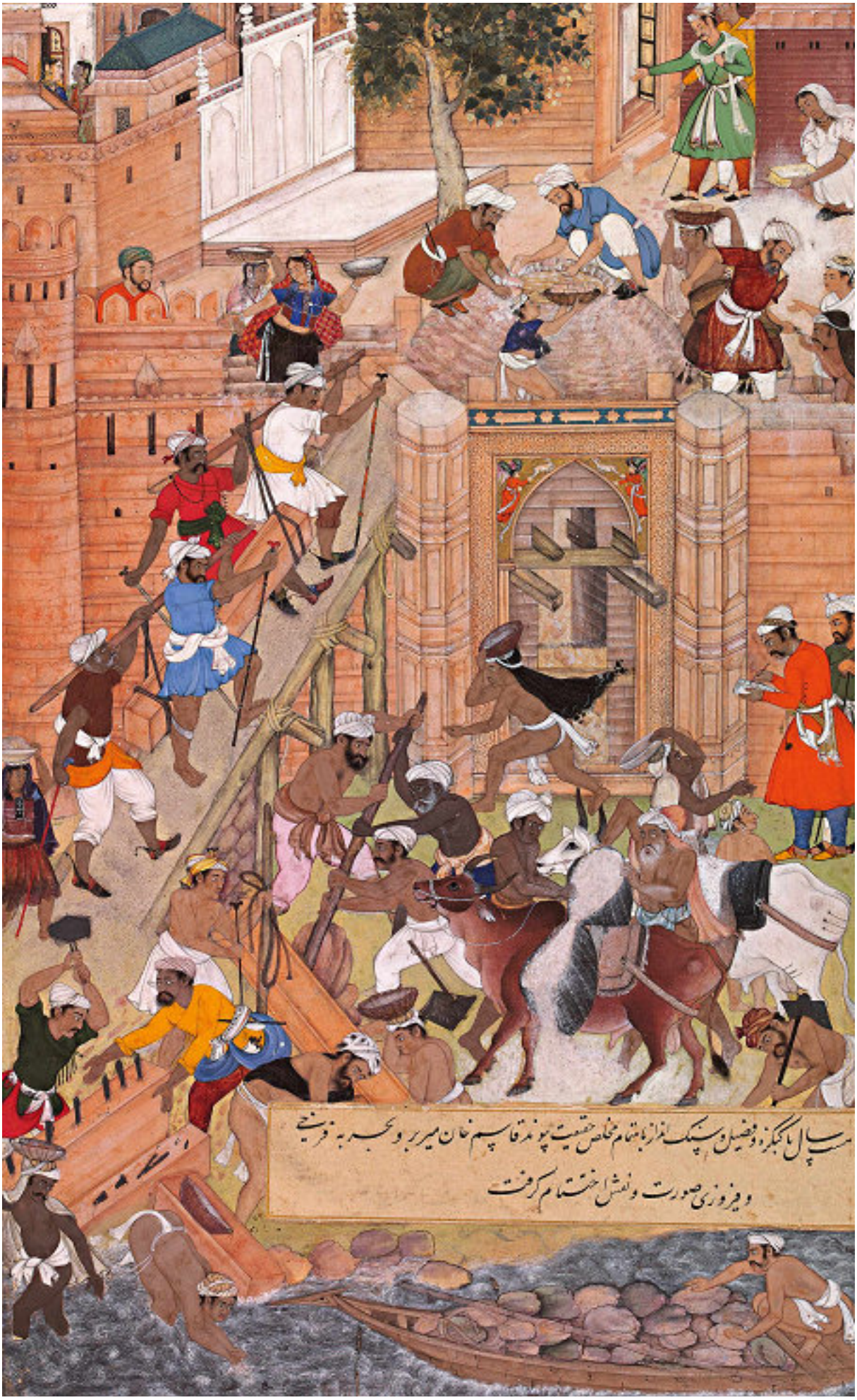
The historian stresses that each aspect of sovereignty can only occur at its proper time. Thus, huge undertakings such as the construction of the palace at Agra |6| and the entire city of Fatehpur (see p. 66) can only begin when Mughal power has become securely established. The walls of the old fort at Agra, described as being "at the centre of Hindustan," were torn down in 1565. Akbar's mathematicians and architects devised strong foundations for structures that would be as stable and permanent as the rule of the royal family. Four gateways opened out towards the four quarters of the world, meaning that the emperor occupied the centre of the universe.[14] Similarly, Akbar's order for the construction of Fatehpur allows the historian to describe the emperor, the "Khediv [lord] of the world", as an architect of the spiritual as well as the physical world. The city had beautiful gardens, schools and religious buildings, all of which would rest on foundations as solid as those supporting the system of justice under this Solomon-like emperor.[15]

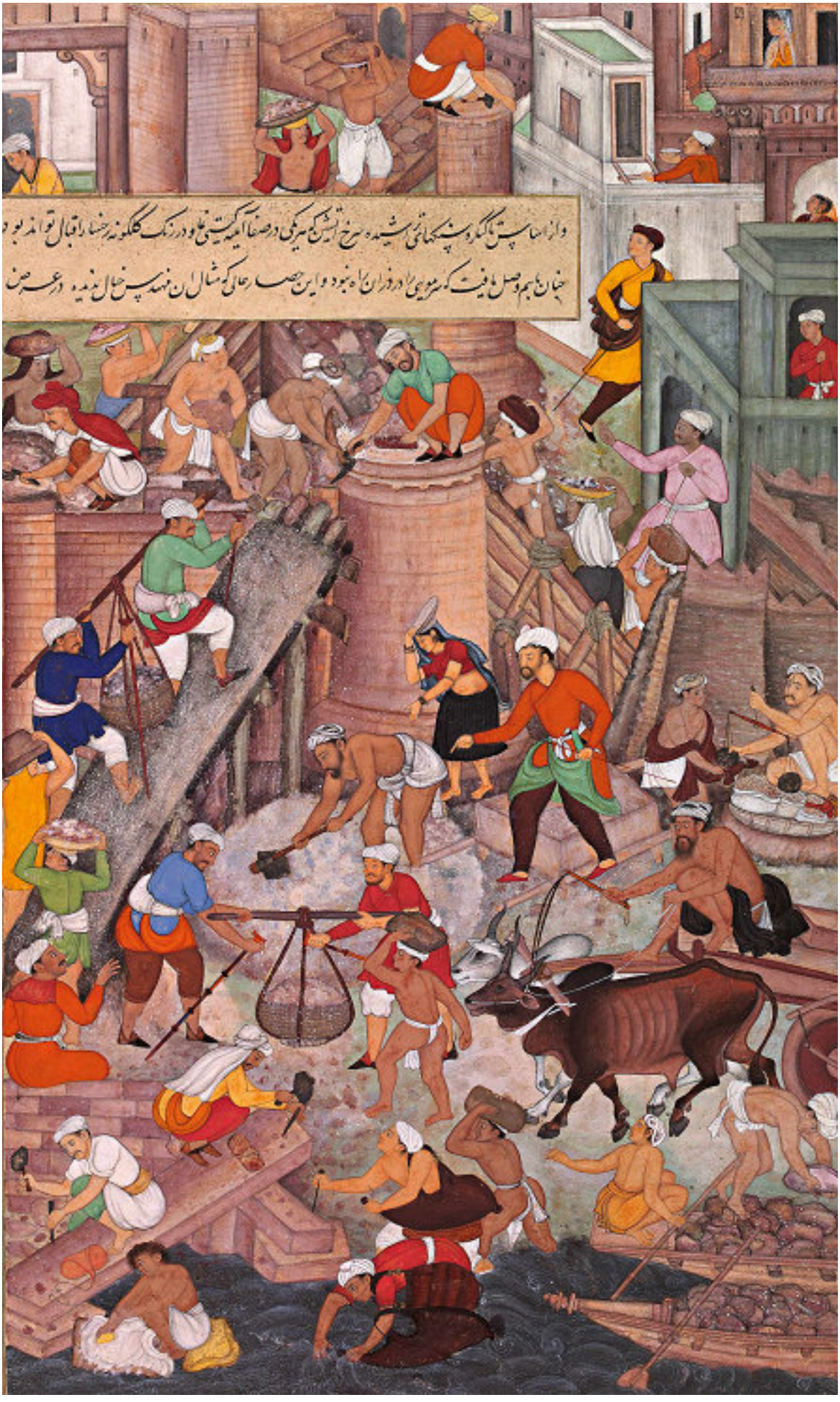
5

In the illustrations accompanying the text, the artists again include small details observed from life, some of which can still be seen in India today. The stonemasons squat on the ground to chisel or split the blocks of sandstone; women labourers carry on their heads baskets of stones to be broken up into yet smaller pieces. The tethered elephants at the gatepost must have been there to help move heavy masonry, and would be replaced by sculpted forms in keeping with indigenous Indian tradition, where all forts have gateways associated with elephants.[16]

|4| Hamza's spies steal into Qimar's city and kill his sleeping guards. Gouache and gold on cotton backed with paper. A folio from the *Hamza-Nameh*, *c.* 1562–77. 67.6 × 51.1 cm. MAK-Austrian Museum of Applied Arts/ Contemporary Art, Vienna: B.I.8770/25.

|5| The pillar in Akbar's Diwan-i Khass at Fatehpur Sikri, India.


سپال باتگذرد وفیل سنگ انداز باهتمام مخلص حقیقت پیوند قاسم خان میر بر و بحر به فرنجی
وفیروزی صورت ونقش اختتام گرفت



The paintings also include small details of painted decoration that can no longer be seen on any surviving structure, though faint traces at Fatehpur confirm that it was originally present. On the gold ground of the architraves of the gateway being completed at Agra are angels (*paris*), and the supervisor giving orders to workmen in a pavilion next to the water wheel in Fatehpur sits in an interior painted with *trompe l'oeil* niches filled with gold and glass vessels.

Despite all these intrusions from the real world, the composition is as formulaic in its own way as that of 'Abd os-Samad's *majles* scene. The scale of the monument in relation to the humans bears no relation to the actual size of the gateway, which would have dwarfed those walking through it. The painting primarily represents a concept.

Similar considerations are suggested by the illustrations to the various copies of the Memoirs of Akbar's grandfather Babur, the founder of what would become a great dynasty. The highly literate Central Asian prince loved architecture, as is apparent from his Memoirs when he describes his pleasure at seeing the beautiful monuments of Herat, before the Timurid cultural capital was lost to the Uzbeks in 1507. He wrote in Turki, a language understood by few in the Mughal Empire of the late sixteenth century, and Akbar therefore ordered a translation to be made into Persian. The finished work entitled the *Babur-Nameh* was presented to Akbar in the autumn of 1589, only days after the emperor had visited Babur's tomb in Kabul.[17] Four illustrated versions are known to have been made in the next decade or so.[18]

Babur's fascination for the wildlife, trees and flowers of his new conquest was not matched by admiration for the urban landscapes of Hindustan. He famously disliked most of its architecture, comparing it very unfavourably with that of Kabul and its environs. However, he admired Hindustani artisans, and quickly set them to work:

"In Agra alone there were 680 stonemasons at work ... every day. Aside from that, in Agra, Sikri, Bayana, Dholpur, Gwalior, and Koil, 1491 stonemasons were labouring on my buildings. There are similar vast numbers of every type of craftsman and labourers of every description in Hindustan."[19]

Finally, Agra was transformed:

"In unpleasant and inharmonious India, marvellously regular and geometric gardens were introduced. In every corner were beautiful plots, and in every plot were regularly laid out arrangements of roses and narcissus."[20]

The royal author wrote that the city's inhabitants now called it "Kabul", the highest accolade.

When Akbar's artists added their paintings to the Persian text of the Memoirs, they transformed the cities through which Babur travelled, whether Samarkand, Herat or Kabul, into those of late sixteenth-century Hindustan.

In a scene of an assembly that took place in Fergana immediately after the death of Babur's father to discuss who should succeed him, the anonymous artist has included Mughal structures with clustered columns that seem to be hewn from the same red sandstone as Akbar's imperial cities |8|, and the three-pronged finials are the *trisula*, the sacred weapon of the Hindu God Shiva. The clothes of the participants are those of Iranians depicted visiting Akbar's court, with a few purely Mughal turbans also in evidence, worn by onlookers inside and outside the chamber.

When Babur visited Herat in AH 912 (AD 1506–07) he describes a wine party given for him by his cousins.[21] In the *Babur-Nameh*, the pavilion in the Bagh-i Safid, or White Garden, where it took place, is done in a fantasy 'foreign' manner. Features such as the small dome with blue finial resting on an implausibly narrow drum have no parallel in Herati architecture of any period |9|.

Despite Babur's general dislike of most Hindustani architecture, he did admire Gwalior Fort |7|, which he visited in 1528.[22] In the painting of the event, the structures are in a stylized manner that nevertheless does suggest the real fort.

Babur's love of nature and architecture were combined in the gardens he laid out in and around Kabul, and in many places in his new empire. These were *chahar-baghs*, set within a built perimeter, divided into four smaller squares or rectangles by watercourses or paths and sometimes terraced.[23] The *Babur-Nameh* paintings of the emperor in his various gardens are almost certainly intended to evoke a standard metaphor.

|6| The construction of Agra Fort. Opaque watercolour and gold on paper. Double-page composition from the *Akbar-Nameh, c.* 1590–95. Composition by Miskina with painting by Sarwan (right side) and Tulsi Khord (left side). Right side: 32.8 × 19.6 cm; Left side: 32.8 × 20 cm. Victoria and Albert Museum, London: IS.2:45-1896 (right) and IS.2:46-1896 (left).

|7| Gwalior Fort, Madhya Pradesh, India.

در خیال او این گذشته باشد که سلطان احمد میرزا پادشاه کلانست
بلشکر بسیار که بیاید امرا امرا و ولایت را پادخواهند سپرد مرا باور کند

9

Abo'l-Fazl mentions Humayun's desire to reconquer Hindustan as inspired by wanting to remove "weeds from that garden," and he later compares Akbar's sovereign role to that of a gardener judiciously arranging trees, shrubs and plants.[24] An inscription on the gateway to Akbar's tomb proclaims: "He sowed the seed of goodness in the garden of the world, and reaped the fruit of it in the gardens of paradise."[25]

In his Memoirs, Babur describes one of his gardens in the foothills of the mountains near Kabul. Plane trees provided shade for the beautiful setting, and a stream meandered through the middle |10|. Timur's grandson, Ulugh Beg, had confiscated it from its original owners, to whom Babur paid compensation.[26] He now straightened the stream by making it flow through stone channels, creating order and harmonious symmetry in the manner of Abo'l-Fazl's ideal sovereign.

Akbar's son Salim succeeded him as Emperor Jahangir in 1605. Like Babur, he wrote an account of his life. The *Jahangir-Nameh* recorded public and private events, including the alterations to the palaces in Agra and Lahore that he ordered immediately after his accession.[27] His artists depicted some of the events and unusual or interesting phenomena he came across in his travels across the empire.

There are marked differences of style between paintings done for Akbar and for his successor. Jahangir's artists introduced a greater naturalism, and focused more closely on their subjects. Both factors allow small details in a general setting to be seen with considerable clarity. In rare instances, this provides an unprecedented view of lost imperial architecture.

In 1607 Jahangir visited Kabul, and was entertained in the mansion of his son Khurram, the future emperor Shah Jahan. Many such princely mansions were built; few survive from any period. Jahangir recorded his pleasure in the house and garden in the *Jahangir-Nameh*, and an anonymous artist recorded the scene where the emperor bestowed for the first time the honour

|8| Begs holding a council after the death of Babur's father in AH 899 (AD 1494). Opaque watercolour and gold on paper. Folio from the *Babur-Nameh*, *c.* 1595. Page: 25.7 × 15.7 cm; Painting: 18 × 10 cm. State Museum of Oriental Art, Moscow: II 1546.

|9| Babur's feast in the palace of Muzaffar Mirza in the White Garden in Herat in AH 912 (AD 1506–07). Opaque watercolour and gold on paper. Folio from the *Babur-Nameh*, *c.* 1595. Page: 25.9 × 17.3 cm; Painting: 17.8 × 9.8 cm. State Museum of Oriental Art, Moscow: II 574.

10

11

of a birthday weighing ceremony on his eldest son |11|. A degree of authenticity is suggested by the similarity between the bases of the pillars in the painting, and those of a surviving pavilion in Lahore Fort, in the "Jahangiri Quadrangle".[28]

The rest of Khurram's house seems to be brick built, covered with plaster and painted decoration, as was usual in Mughal architecture in the northern provinces. The depiction of the interior, with its painted dado, gold brocade-covered bolster resting on a day bed, fine carpet and niches containing sixteenth-century Chinese white porcelain *blanc-de-chine* statuettes, reveals in detail the luxury furnishings of the private quarters of a member of the royal family.

Another *Jahangir-Nameh* page moves attention away from the architectural setting of the court to emphasize those standing within it |12|, though the *jharoka* itself has convincingly been identified as Jahangir's addition to pre-Mughal structures in the royal city of Mandu.[29]

Such paintings focus on the opulence of the court, where plain structures were adorned with carpets, wall hangings and canopies lined with sumptuous Chinese, Iranian or European textiles. All were an intrinsic part of imperial life, whether the court resided in the great cities or in the encampment. Here, the small wall painting of the Virgin above Jahangir's head represents the Christian themes of decoration in his monuments in Agra, Ajmer and Lahore.[30]

In Jahangir's court assemblies, his face is always in full profile, his gaze never connecting with anyone in his presence. In a scene depicting one of the most important formalities in the daily life of the court he is even more aloof |13|.[31] The ceremony of *darshan*, "beholding", was derived from Hindu ritual and introduced by Akbar as one of the syncretic practices he adopted as the Muslim ruler of a predominantly Hindu population. Imperial architecture therefore included a high balcony or *jharoka* in the palace walls from which the emperor appeared

|10| Babur watching the water channels being straightened in his garden in Istalif in AH 910 (AD 1504–05). Opaque watercolour and gold on paper. Folio from the *Babur-Nameh*, *c.* 1595. Page: 24.2 × 15.3 cm; Painting: 18 × 10 cm. State Museum of Oriental Art, Moscow: II 1539 (cat. 21).

|11| Jahangir weighing Khurram in the prince's mansion in the Orta Bagh in Kabul in 1607. Opaque watercolour and gold on paper. Folio from a *Jahangir-Nameh* manuscript, *c.* 1615. Page 44.3 × 29.5 cm; Painting 30 × 19.6 cm. British Museum, London: 1948, 1009, 0.69. Bequeathed by P.C. Manuk and Miss G. M. Coles through the Art Fund.

12

every day at daybreak to the populace outside.[32] It became the focus of many paintings of Jahangir's successor.

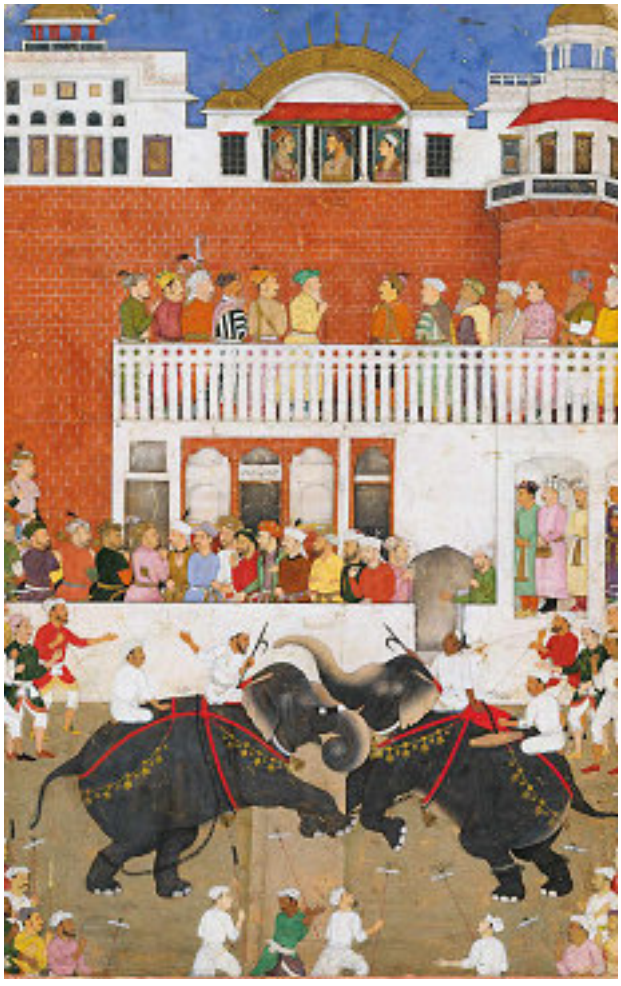
A depiction of Shah Jahan witnessing an elephant fight is strikingly similar in its composition to the *jharoka* scene of Jahangir. Here, too, Shah Jahan is a static figure in a symbolic setting, rather than the leading protagonist of a specific incident in a continuing narrative, as had been the case under Akbar |14|. The nobles, again identified by minute inscriptions, are ranged meticulously according to their rank within the rigidly hierarchical Mughal Empire, with those of highest status honoured by their proximity to the emperor.[33]

After his accession, Shah Jahan began to sweep away most of what had been built by Akbar and Jahangir in the royal cities, and ordered the construction a new city in Delhi called Shahjahanabad. He was also forced to build a tomb for his beloved wife Mumtaz Mahal after she died in childbirth in 1631. The Taj Mahal became his most famous architectural legacy, though many other imperial structures have survived.[34] His daughter, Jahanara, and other nobles also commissioned major monuments. Little of this prolific building is seen in paintings definitely produced in his reign.

In the few contemporary illustrations to the *Padshah-Nameh*, the history written by Abdul Hamid Lahori, a single structure predominates.[35] The emperor – Shah Jahan, or his father in the retrospective scenes depicting Shah Jahan's life as a prince – sits in a *jharoka* beneath a stone canopy which has projecting cloth canopies lined with sumptuous textiles. There is a general verisimilitude in the architecture, combined with occasional very precise detail, all recognizable from existing structures.[36] As in earlier court scenes, the courtiers are arranged according to rank, with the most senior standing inside the golden railings that denote their exalted status. However, as the distinguished architectural historian Ebba Koch points out, the assembly is now arranged with the same rigidly

|12| Court assembly of Jahangir. Opaque watercolour and gold on paper. Folio from a *Jahangir-Nameh* manuscript, *c.* 1615–20. 35 × 29 cm. Museum of Fine Arts, Boston: 14.654. Francis Bartlett Donation and Picture Fund.

13



14

bilateral symmetry that characterizes Shah Jahan's imperial architecture |15|.[37]

The canopy above his head usually has a sun motif at its centre, indicating that it represents the sky, and by extension the universe. The emperor is the embodiment of his title: the "King of the World" (*shah-e jahan*), as architectural inscriptions also proclaim.[38]

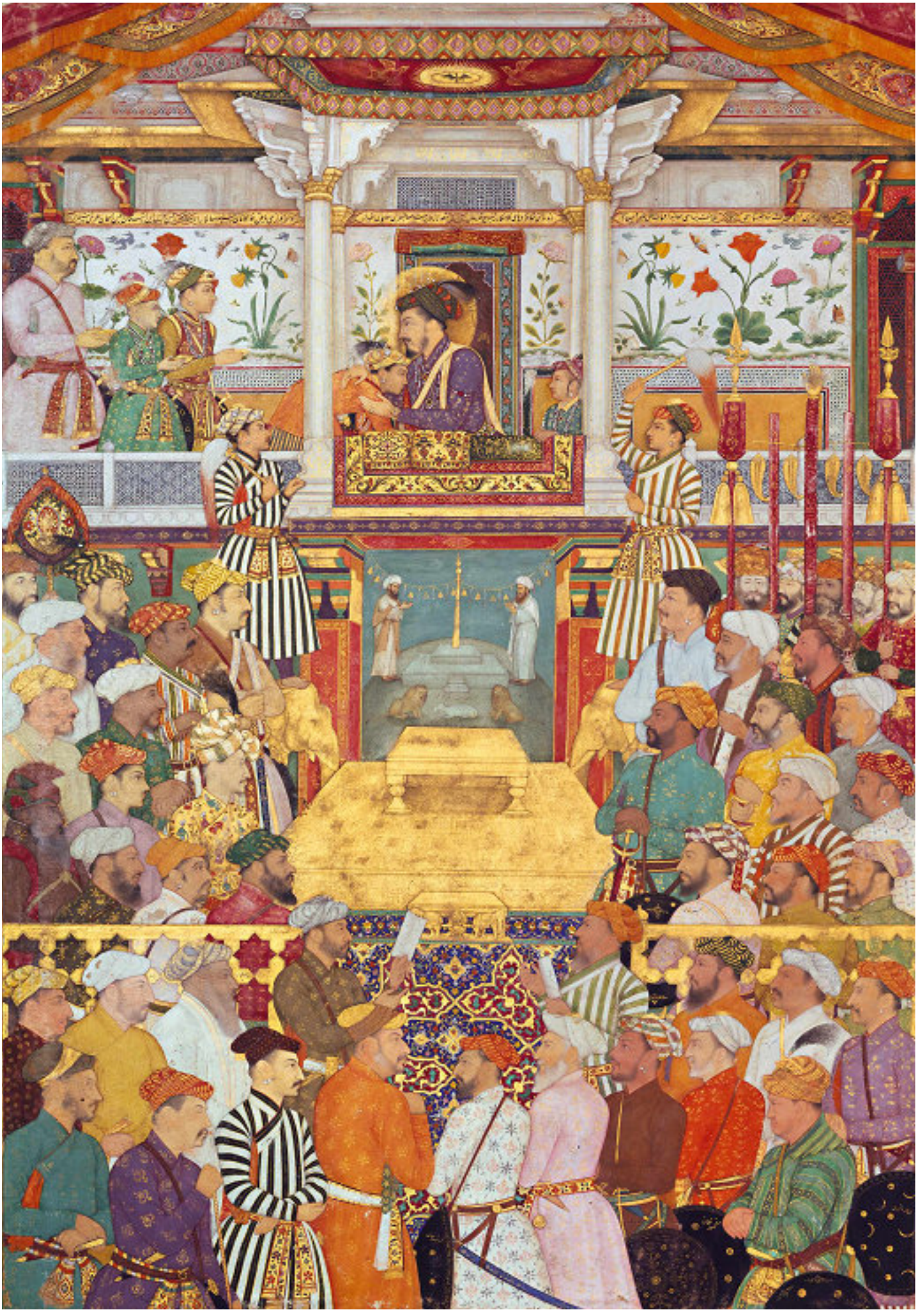
The decoration of this allegorical court space emphasizes his kingship as emphatically as did the ornamentation of the real palaces. The flowers painted on the wall behind the emperor, like those painted on real walls, or inlaid in vividly coloured semi-precious stones into white marble and carved in relief in stone, all project the same notion. Under the just and benign rule of Shah Jahan, "Hindustan became the flower garden of the earth," as his historian Muhammad Saleh Kanbu states.[39]
The calm atmosphere projected by paintings of Shah Jahan's court was abruptly interrupted in 1658 when he was deposed by his son Aurangzeb, who seized the throne and adopted the title 'Alamgir. Although the opulence of court ritual continued for a time, 'Alamgir's increasing piety made him gradually eliminate the more extravagant ceremonials, and there is little evidence of his patronage of the art of the book.[40] In 1681 the emperor left Shahjahanabad to lead military campaigns against the sultanates of the Deccan and never returned to the north. After his death in 1707, bloody wars of succession as well as raids on Delhi by Afghans, Marathas, Jats and Sikhs ensured that the series of weak emperors stayed away from Shahjahanabad. Real power devolved to the increasingly autonomous governors of the empire's provinces.[41]

Paintings were still produced by traditional Mughal artists who harked back to the golden age of the empire under Shah Jahan. The royal figures painted by artists such as Bhavani Das have all the conventional attributes of royalty, from jewelled thrones to turban ornaments |16|.[42] However, as in other

|13| Jahangir appearing to courtiers from a *jharoka* window. *c.* 1615–20. Ascribed to Nader az-Zaman, the Wonder of the Age (Abo'l Hasan). Opaque watercolour and gold on paper. Page 55.9 × 35.1 cm Painting 31.2 × 20.6 cm. Aga Khan Museum: M.141.

|14| An elephant fight in the presence of Shah Jahan and his sons. Opaque watercolour and gold on paper. Signed by Bolaqi, son of Hoshang. Dated AH 104[?9] (AD 1639–40). 38.2 × 24.7 cm. Metropolitan Museum, New York: 1989.135. Harris Brisbane Dick, Louis V. Bell, Pfeiffer and Dodge Funds, 1989. Formerly in the collection of Nasr al-Din Shah of Iran.

|15| Shah Jahan receives his three eldest sons, and his brother-in-law Asaf Khan, during his accession ceremonies in March 1628. Opaque watercolour and gold on paper. A page from the *Padshah-Nameh*. *c.* 1630–40. Signed by Bichitr. Painting 30.8 × 21.1 cm. Royal Collection Trust: RCIN 1005025.k (folio 50b).



17

paintings of the time, the symbolic architectural setting has contracted to a generic terrace overlooking a garden, and a single canopy.

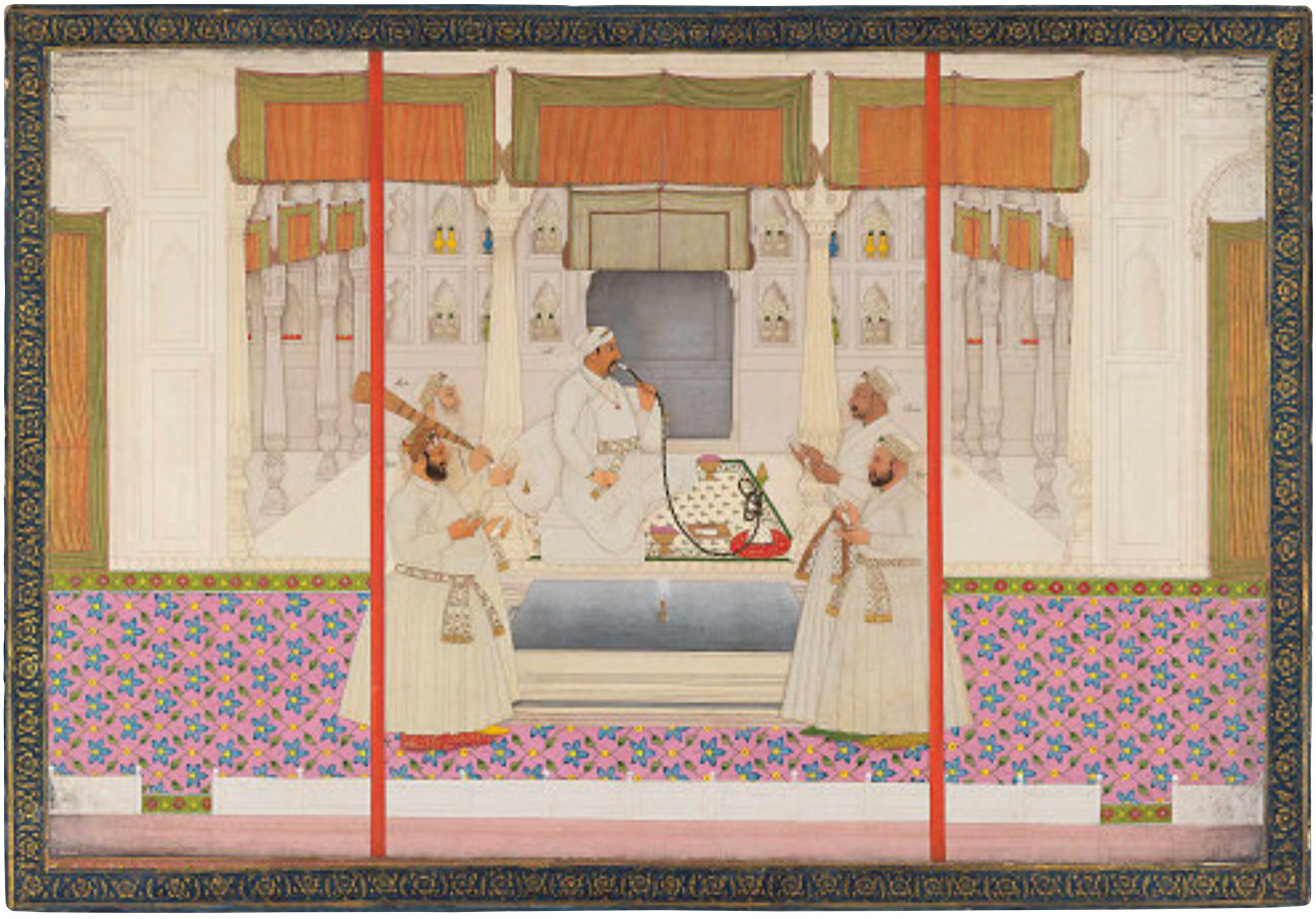
With the accession of the seventeen-year-old Mohammad Shah (1719–48), the cultural life of the Mughal court miraculously revived, despite the political background of turmoil, warfare and general corruption. In Shahjahanabad, his artists resuscitated many conventions of traditional Mughal portraiture.[43] Nevertheless, when the emperor is shown in a garden next to a pavilion with floral decoration and white stone columns |17|, the architecture is not specifically that of the palace of Shahjahanabad.[44] And when he is portrayed in a formal assembly with the symmetrical arrangement of paintings of Shah Jahan's reign, the architectural space has shrunk to a small chamber |18|. The hierarchical arrangement of a large gathering can no longer be shown: the system whereby everyone was given an extremely precise *mansab*, or rank, and land grants to provide income, had now become completely corrupted. Titles were conferred on more than one person at a time in absolute contravention of earlier protocol, leading a historian of Mohammad Shah's reign to remark: "*mansab* and title have absolutely no value".[45]

The devastating raid of Nadir Shah of Iran on the Mughal capital in 1739 fatally weakened Mohammad Shah's rule. The invader carried off Mughal treasures including the Koh-i nur diamond and the fabulous Jewelled Throne made for Shah Jahan. Court artists now seem to have dispersed to safer regions and richer patrons, not least the Iranian-born nawabs of Avadh who lived in Faizabad and Lucknow, in de facto independence, but kept strong Delhi connections. So did artists living in Avadh, who worked for royal or aristocratic patrons.[46]

By the late eighteenth century, they also worked for Europeans. Among those hoping to make their fortune in the cosmopolitan court of Avadh was the Swiss-French engineer Antoine-Louis-Henri Polier, who was seconded in 1773 from the East India Company to Faizabad, and was for a short time the nawab's Chief Surveyor and architect.[47] Polier's library was full of Persian and Arabic manuscripts, and he collected Indian paintings. He also commissioned new works from local artists, including copies of paintings from earlier periods and various different regions of India.[48] All this seems to have generated a short-lived fashion in the representation of landscapes

|16| The sons and grandsons of Shah Jahan. Opaque watercolour and gold on paper. Delhi or Avadh, *c.* 1700–10. Signed by Bhavani Das. 48.9 × 34 cm. San Diego Museum of Art, Ed Binney 3rd Collection: 1990:365.

|17| Mohammad Shah in a palanquin. Opaque watercolour and gold on paper. Delhi, *c.* 1730. 38.3 × 42.5 cm. Museum of Fine Arts, Boston: 26.283. Arthur Mason Knapp Fund.



18

and buildings. For the first time in Mughal painting scientific conventions of Western perspective are strictly followed in a highly distinctive style.[49]

The real and imaginary scenes that suddenly appear in the late 1770s with the characteristic bird's eye view sweeping along a central axis over a landscape that seems to stretch into infinity can be linked directly to Polier. Many are preserved in his own albums or were given by him to friends. The landscapes are ultimately inspired by engravings of the great vistas (*grandes perspectives*) that characterized seventeenth-century French landscape architecture, particularly in the garden designs of André Le Nôtre for Versailles, Vaux-le-Vicomte and Chantilly |19|.[50] Such engravings would easily have been found in Faizabad or Lucknow when Polier lived there: his close friend, the French adventurer Claude Martin, had a library of over 4000 European printed books that included volumes on architecture, reflecting his keen interest in the subject.[51]

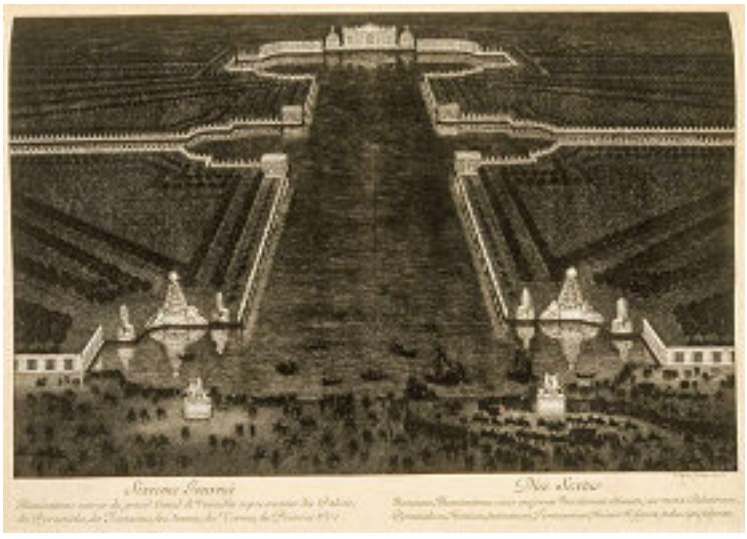
Polier, like others in the cosmopolitan circle of Lucknow, employed local artists such as the Delhi exile Mihr Chand. When Polier temporarily entered the service of the emperor Shah 'Alam II (r. 1759–1806) in Delhi between 1776 and 1780, Mihr Chand is thought to have returned to the capital with him, and to have produced vistas of the Red Fort, Jami Masjid and the imperial encampment.[52] Other artists copied these works: one of four closely similar views of the Red Fort is signed by Mohammad Yusof Khan, who dated his work to the twenty-second regnal year of Shah 'Alam II (1759–1806), or 1781.[53] In all these versions, the tiny figure of the emperor who had returned to Delhi in 1772 after an absence of fourteen years can be made out in the Hall of Private Audience to the right in the foreground |20|. Polier recorded that "the King's possessions are confined mostly to the environs of Delhy" and that his court, never "even in the best times very brilliant," now lacked any grandeur.[54]

In 1803, when the British East India Company took over Agra and Delhi, Shah 'Alam II's fortunes had fallen still further. Blinded by an enemy in 1788 and desperately impoverished, he now became a pensioner of the Company, his domain limited to the Red Fort in Delhi. The occupiers, and others who wielded the

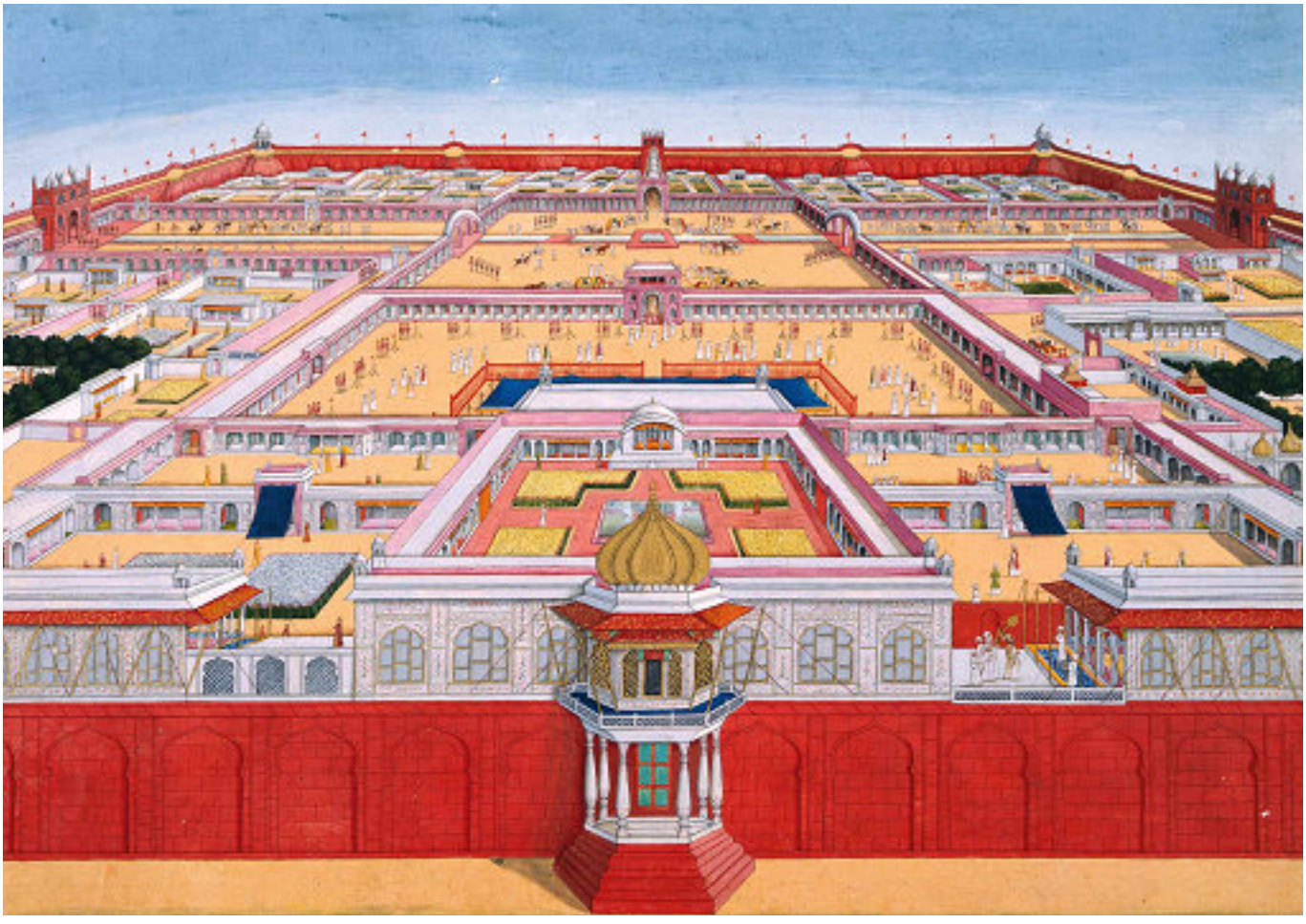
|18| Mohammad Shah with four courtiers. Opaque watercolour and gold on paper. Delhi, *c.* 1730. 31.2 × 46.8 cm. Bodleian Library, Oxford: MS Douce Or.a.3, folio 14.

|19| Engraving of "Illuminations autour du Grand Canal de Versailles". British Museum, London: 1889, 1218.150.

|20| Bird's eye view of the Red Fort, Delhi. Watercolour on paper. Delhi or Lucknow, *c.* 1780. Page 32.5 × 44.5 cm; Painting 29.2 × 41.5 cm. British Library, London: Add.Or.948.



19



20

22

23

|21| Darbar of Akbar II in the presence of his sons and the British resident Sir David Ochterlony. Gouache and gold on paper. Delhi, *c.* 1818–22. 48.3 × 40.6 cm. British Library, London: Add.Or.3079.

|22| Sir David Ochterlony in Indian dress watching a *nautch* in his house in Delhi. Watercolour and body colour. Delhi, *c.* 1820. 22.2 × 31.8 cm. British Library, London: Add.Or.2.

|23| Bahadur Shah II, the last Mughal emperor, with his sons. Signed "Done by the hereditary slave Ghulam 'Ali Khan the portraitist, resident at Shahjahanabad", Delhi, dated regnal year 1, AH 1253 (AD 1837). 31 × 36.5 cm. The Art and History Collection. Courtesy of the Arthur M. Sackler Gallery, Smithsonian Institution, Washington DC: LTS1995.2.105.

24

real influence, had themselves depicted by local artists in the guise of rulers.[55]

Sir David Ochterlony, the first British Resident of Delhi, was given the title Nasir ad-Daula by Shah 'Alam II and an award of revenue-producing land (*jagir*).[56] He settled into Indian life and had his own harem. A portrait shows him in the Neoclassical architecture of his Delhi house with its European paintings. Yet, he wears Indian dress, and the setting projects his own powerful role: it includes attributes commonly given to the emperor, and now to nawabs in their own contemporary portraits, notably a royal flywhisk, hookah, spittoon and decorated spice box |22|.

The rapidly encroaching influence of Europeans led to the production of topographical studies for French, and then British patrons. The large-scale documentary drawings made by Indian artists of famous monuments and their architectural ornamentation leave the conventions of Mughal painting behind.[57]

Within Shahjahanabad, royal patronage continued to flicker until the very end of the Mughal Empire. Akbar II (1806–37), like Mohammad Shah, commissioned illustrated copies of the histories of Shah Jahan's reign. He, too, was depicted in court assemblies in the manner of his ancestor, but Shah Jahan's Jewelled Throne, popularly known as the Peacock Throne after the bejewelled and enamelled birds on its canopy, had left Hindustan long before. Akbar II's replacement is probably made of painted and gilded wood |21|.[58]

He was succeeded by the dignified and cultured Bahadur Shah II. His accession portrait is signed by the artist Ghulam 'Ali Khan who describes himself as a resident of Shahjahanabad |23|. The emperor is enthroned in the heart of the palace in the Red Fort, beneath the emblematic Scales of Justice carved into the white marble wall, all faithfully reproduced by the artist in this new age of realistic representation |24|. Ghulam 'Ali's notations on the painting describe this as an image of "His Divine Highness, caliph of the age, Padshah as glorious as Jamshid, surrounded by hosts of angels, prince shadow of God… scion of the dynasty of the Saheb-Qiran [Timur], greatest emperor, mightiest king of kings, emperor son of emperor [etc, etc]".[59] In reality, the "King of the World" is now simply the powerless "King of Delhi", sitting on a plain wooden chair, his face full of melancholy. With the uprising of 1857 his reign, and the Mughal Empire, came to an end.

|24| The white marble Scales of Justice panel in the Red Fort, Shahjahanabad, Delhi, India.

Endnotes

1 For the general history of the Mughal emperors, see R.C. Majumdar (ed.), *The Mughul Empire* (Bharatiya Vidya Bhavan, Bombay, 1974); and John F. Richards, *The Mughal Empire* (Cambridge University Press, Cambridge, 1993).

2 For the very precise date of their arrival in the month of Shawwal, AH 959/AD 1552, which Humayun mentions in a letter quoted by the sixteenth-century historian Bayazid Bayat, see Michael Brand and Glenn D. Lowry, *Akbar's India: Art from the Mughal City of Victory* (The Asia Society Galleries, New York, 1985), p. 24; S. Verma, *Mughal Painters and Their Work. A Biographical Survey and Comprehensive Catalogue* (Oxford University Press, Delhi, 1994), pp. 40–1; and A.S. Melikian-Chirvani, "Mir Sayyed 'Ali: Painter of the Past and Pioneer of the Future", in Asok Das (ed.), *Mughal Masters. Further Studies* (Marg, vol. 49, no. 4, Mumbai, 1998), p. 31. However, other evidence suggests they arrived as early as AH 956/AD 1549 (H. Beveridge, *The Akbar Nama of Abu-l-Fazl [History of the reign of Akbar including an account of his predecessors] translated from the Persian* [Ess Ess Publications, Delhi, 1977, 3 vols.], vol. I, p. 552; H. Blochmann [trans.], *The A'in-i Akbari by Abu'l-Fazl 'Allami* [second edition revised and edited by Lieut. Colonel D.C. Phillott, 3 vols, Oriental Books Reprint Corporation, New Delhi, 1977; reprinted from the second edition of 1927 published by the Asiatic Society, Calcutta], vol. I, p. 555; see also Canby in Milo Beach, Eberhard Fischer and B. N. Goswamy [eds.], *Masters of Indian Painting* [Artibus Asiae Publishers Supplementum, 48 I/II, 2011], vol. I, pp. 99–100). The earliest evidence for their work done while in Humayun's service is a signed work by 'Abd os-Samad, dated AH 959/AD 1551. One of the figures wears the typical turban of Humayun's reign (reproduced, for example, in Beach, Fischer, Goswamy [eds.], *Masters of Indian Painting* op. cit., vol. I, p. 102, fig. 2).

3 Jahangir's Memoirs frequently mention that he ordered artists to decorate new structures.

4 Blochmann, *The A'in-i Akbari by Abu'l-Fazl 'Allami* op. cit., vol. I, pp. 110–113. See also Susan Stronge, *Made for Mughal Emperors* (Roli Books/Lustre Press, New Delhi, 2010), chapter II.

5 Blochmann, *The A'in-i Akbari by Abu'l-Fazl 'Allami* op. cit., vol. I, pp. 109–113.

6 Most art historians, including most recently J.P. Losty and Malini Roy, *Mughal India. Art, Culture and Empire* (The British Library, London, 2012), p. 15, follow the dating of *c.* 1562–77 originally suggested by Pramod Chandra in 1976. John Seyller (*The Adventures of Hamza. Painting and Storytelling in Mughal India*, Smithsonian Institution in association with Azimuth Editions, London, 2002, pp. 32–41), followed by Milo Cleveland Beach (*The Imperial Image: Paintings for the Mughal Court*, Mapin Publishing, Ahmedabad, 2012), proposes an earlier dating, but his identification of the numerals on some paintings as dates is not universally accepted (Melikian-Chirvani, "Mir Sayyed 'Ali", op. cit.; and Faridany-Akhavan, forthcoming).

7 Seyller, *The Adventures of Hamza* op. cit., cat. 56 for the translation of the Persian text on the reverse, and of the caption to the picture.

8 Ibid., cat. 58.

9 Attilio Petruccioli, *Fathpur Sikri. La Città del sole e delle acque* (Carucci Editore, Rome, 1988), p. 119; Catherine B. Asher, *Architecture of Mughal India (The New Cambridge History of India, Vol. I:4)* (Cambridge University Press, Cambridge, 1992), pp. 62–64; and Bianca Alfieri, *Islamic Architecture of the Indian Subcontinent* (Laurence King Publishing, London, 2000), pp. 212–215, offer or summarize different interpretations.

10 Ebba Koch, *Mughal Architecture* (Prestel-Verlag, Munich, 1991), p. 60.

11 Beveridge, *The Akbar Nama of Abu-l-Fazl* op. cit., vol. II, p. 191. See Koch, *Mughal Architecture* op. cit., pp. 54–55, and Asher, *Architecture of Mughal India* op. cit., pp. 50–51 for precise influences of Bengal, Gujarat and elsewhere on Akbar's monuments.

12 Beveridge, *The Akbar Nama of Abu-l-Fazl* op. cit., vol. III, p. 464.

13 Susan Stronge, *Painting for the Mughal Emperor. The Art of the Book 1560–1660* (V&A Publications, London, 2002), pp. 36–85.

14 Beveridge, *The Akbar Nama of Abu-l-Fazl* op. cit., vol. II, pp. 372–373.

15 Ibid., pp. 530–531.

16 Asher, *Architecture of Mughal India* op. cit., pp. 58–59. See Ratish Nanda in J.P. Losty (ed.), *Delhi. Red Fort to Raisina* (Lustre Press/Role Books, New Delhi, 2012) for a photograph taken between 1870 and 1880 of one of the two stone elephants that originally stood outside Agra Fort.

17 Beveridge, *The Akbar Nama of Abu-l-Fazl* op. cit., vol. III, pp. 858, 862.

18 M. S. Randhawa, *Paintings of the Babur Nama* (National Museum, New Delhi, 1983), pp. 12–13; and S.N. Vorobieva and I.I. Sheptunova, *Baburnama. Minyatiuri iz Sobraniya gosudarstvennovo Muzeya Vostoka* (Baburnameh. Miniatures from the Collection of the State Museum of Oriental Art) (Agni House Editions, Samara, 2005).

19 Wheeler M. Thackston (ed. and trans), *The Baburnama: Memoirs of Babur, Prince and Emperor* (Oxford University Press, New York, 1996), pp. 351–352.

20 Ibid., pp. 359–360.

21 Ibid., p. 234.

22 Ibid., pp. 403–418. For the dating of this *Babur-Nameh* manuscript see Randhawa, *Paintings of the Babur Nama* op. cit., p. 14 and n. 3, quoting Rai Krishnadasa.

23 Asher, *Architecture of Mughal India* op. cit., p. 37; and Ebba Koch, *Mughal Art and Imperial Ideology. Collected Essays* (Oxford University Press, New Delhi, 2001), pp. 203–228.

24 Beveridge, *The Akbar Nama of Abu-l-Fazl* op. cit., vol. I, p. 543; vol. II, pp. 332 and 487. See also Asher in Attilio Petruccioli (ed.), *Mughal Architecture. Pomp and Ceremonies* (Environmental Design. Journal of the Islamic Environmental Design Research Centre, IXth Year, no. 11, 1988), pp. 46–53; and Stronge, *Painting for the Mughal Emperor* op. cit., p. 89.

25 Edmund W. Smith, revised by W.H. Nicholls, *Akbar's Tomb, Sikandarah, near Agra* (Archaeological Survey of India, vol. XXXV, Allahabad: F. Luker, Supdt., Govt. Press, United Provinces, 1909), p. 35 (Persian text and English translation).

26 Wheeler M. Thackston (ed. and trans), *The Jahangirnama. Memoirs of Jahangir, Emperor of India* (Oxford University Press, New York, 1999), pp. 178–179.

27 Translated into English by Rogers and Beveridge: Alexander Rogers and Henry Beveridge (eds. and trans.), *The Tuzuk-i Jahangiri, or Memoirs of Jahangir* (Royal Asiatic Society, London, 1909 [vol. I] and 1914 [vol. II]); and Thackston, *The Jahangirnama* op. cit.

28 Asher, *Architecture of Mughal India* op. cit., pl. 59, p. 114.

29 Ghulam Yazdani, *Mandu: the City of Joy* (1929), followed by Brand in Petruccioli (ed.), *Mughal Architecture* op. cit., pp. 14–16.

30 There is an extensive literature on Western influence on Mughal art. Engravings, paintings and objects were initially brought by a series of Jesuit missions to the court from Portuguese Goa. For a broad introduction to the subject, with good illustrations and excellent bibliography, see Jorge Flores and Nuno Vassallo e Silva, *Goa and the Great Mughal* (Calouste Gulbenkian Foundation in association with Scala Publishers, Lisbon, 2004).

31 Sheila Canby, *Princes, Poets and Paladins: Islamic and Indian Paintings from the Collection of Prince and Princess Sadruddin Aga Khan* (British Museum Press, London, 1998), cat. 105, pp. 141–142, gives a full bibliography of this painting, updated in Beach, Fischer and Goswamy (eds.), *Masters of Indian Painting* op. cit., vol. I, p. 214.

32 See Koch in Milo Beach and Ebba Koch, *King of the World. The Padshahnama* (with new translations by Wheeler Thackston, Azimuth Editions, London, 1997), pp. 133–137.

33 For the artist, see Milo Cleveland Beach, *The Imperial Image: Paintings for the Mughal Court* op. cit., p. 204; for the painting and its inscriptions see Beach and Koch, *King of the World* op. cit., pp. 184 and 204.

34 For a broad summary of architecture in the reign see Asher, *Architecture of Mughal India* op. cit., chapter 5; see also Koch, *Mughal Architecture* op. cit. Alfieri, *Islamic Architecture of the Indian Subcontinent* op. cit., devotes a chapter to Shah Jahan's reign in her detailed summary of Mughal architecture from 1526 to the nineteenth century, with extensive colour illustrations. For the definitive account of the Taj Mahal see Ebba Koch, *The Complete Taj Mahal and the Riverfront Gardens of Agra* (Thames & Hudson, London, 2006). Excellent colour illustrations of Shah Jahan's monuments are in George Michell and Amrit Pasricha, *Mughal Architecture and Gardens* (Antique Collectors' Club, Martlesham, 2011).

35 The *Padshah-Nameh* manuscript in the Royal Library, Windsor Castle, is signed by the calligrapher Muhammad Amin of Mashhad and dated AH 1067/AD 1656–57 (see Beach in Beach and Koch, *King of the World* op. cit., p. 15, who converts the date to 1657–58). In 1799 the nawab of Avadh presented it to Lord Teignmouth, Governor-General of India, for King George III. Beach points out that the paintings and text are not contemporary: the margins are later additions and there are peculiarities in the way the paintings have been inserted in the text (ibid., pp. 15–19). He concludes (pp. 126–129) that the manuscript was assembled after Shah Jahan's death in 1666, but that all the paintings in the volume date to the emperor's reign. It seems more likely that the entire volume was substantially altered in Avadh at the end of the eighteenth century, with paintings of Shah Jahan's reign being made into double-page compositions by the addition of new paintings and new episodes. Some of the seventeenth-century pictures give the impression of having later embellishments, but a scientific analysis of these pages remains to be carried out. The same observation may be made of an equestrian portrait of Jahangir now in the Chester Beatty Library, where Akbar's tomb in the background looks like a later addition. This painting also has an Avadhi connection: it was mounted in an album of Shuja al-Dawla, nawab of Avadh from 1754–75 (Elaine Wright, *Muraqqa' Imperial Mughal Albums from the Chester Beatty Library, Dublin*, Art Services International, Alexandria, Virginia, 2008, cat. 24, pp. 258–259).

36 See, for example, Koch in Beach and Koch, *King of the World* op. cit., p. 208.

37 Ibid., especially pp. 167–168, 191, 199 and 204.

38 For the proclamation of the emperor as "King of the World" in Persian inscriptions even on religious monuments see Wayne Begley, "The Symbolic Role of Calligraphy on Three Imperial Mosques of Shah Jahan", in Joanna G. Williams (ed.), *Kaladarsana. American Studies in the Art of India* (Oxford & IBH Publishing Co, in collaboration with American Institute of Indian Studies, New Delhi, Bombay and Calcutta, 1981).

39 Koch in Beach and Koch, *King of the World* op. cit., p. 200.

40 See, for example, Losty and Roy, *Mughal India* op. cit., p. 85, though the austerity did not extend to music being completely banned. See Katherine Butler Brown, "Did Aurangzeb Ban Music? Questions for the Historiography of His Reign" (in *Modern Asian Studies* 41, no. 1, 2007), pp. 77–120; and William Dalrymple and Yuthika Sharma (eds.), *Princes and Painters in Mughal Delhi, 1707–1857* (Asia Society Museum, in association with Yale University Press, New Haven and London, 2012), p. 2.

41 Richards, *The Mughal Empire* op. cit., pp. 273–278.

42 For Bhavani Das see Navina Haidar in Beach, Fischer and Goswamy (eds.), *Masters of Indian Painting* op. cit., vol. II, pp. 531–546.

43 See Terence McInerney, "Mughal Painting During the Reign of Muhammad Shah" (in Barbara Schmitz (ed.), *After the Great Mughals. Painting in Delhi and the Regional Courts in the 18th and 19th Centuries*, Marg Publications, Mumbai, 2002), pp. 16–17, for the first major reassessment of painting under Mohammad Shah.

44 Ibid., pp. 13–33; and Dalrymple and Sharma, *Princes and Painters in Mughal Delhi* op. cit., cats. 6–14, for depictions of the emperor.

45 Zahiruddin Malik, *A Mughal Statesman of the Eighteenth Century. Khan-i-Dauran. Mir Bakhshi of Muhammad Shah 1719–1739* (Aligarh Muslim University, Aligarh, 1973), p. 48; the chapter "Crisis of the Old Order 1707–1725", pp. 42–53, gives a detailed account of the process based on contemporary Persian sources.

46 Schmitz (ed.), *After the Great Mughals* op. cit., provides the first major reassessment of painting of the period; and Stephen Markel and Tushara Bindu Gude, *India's Fabled City. The Art of Courtly Lucknow* (Prestel, New York, 2010) give an overview of Lucknow's art and culture at this period, with extensive bibliography. See Beach, Fischer and Goswamy (eds.), *Masters of Indian Painting* op. cit., vol. II, chapters V and VI; and Losty and Roy, *Mughal India* op. cit., chapters 3 and 4, for later Mughal painting. Chanchal Dadlani, "The 'Palais Indiens' Collection of 1774. Representing Mughal Architecture in Late Eighteenth-Century India" (in Smithsonian Institution, *Ars Orientalis*, vol. 39, *Globalizing Cultures: Art and Mobility in the Eighteenth Century*, 2010), deals specifically with representations of architecture.

47 For an account of Polier see Pratul C. Gupta (ed.), *Shah Alam II and His Court. A narrative of the transactions at the court of Delhy from the year 1771 to the present time by Antoine Louis Henri Polier* (The Asiatic Society, Calcutta, 1989); Lucian Harris, "The Exploration of Nawabi Culture by European Collectors in 18th-Century Lucknow" (in Rosie Llewellyn-Jones [ed.], *Lucknow Then and Now*, Marg Publications, Mumbai, 2003); and Sanjay Subrahmanyam, "The

Career of Colonel Polier and Late Eighteenth-Century Orientalism" (in *Journal of the Royal Asiatic Society of Great Britain & Ireland*, vol. 10, 2000). Muzaffar Alam and Seema Alavi (trans. and eds.), *A European Experience of the Mughal Orient: the I'jaz-I Arsalani (Persian Letters 1773–1779) of Antoine-Louis Henri Polier* (Oxford University Press, New Delhi and New York, 2001), provide an English summary of his letters in Persian.

48 Jean-Marie La Font, "The French in Lucknow in the Eighteenth Century", in Violette Graff (ed.), *Lucknow. Memories of a City* (Oxford University Press, New Delhi, 1997); R. D. Gadebusch, "Celestial Gardens: Mughal Miniatures from an Eighteenth Century Album" (in *Orientations*, vol. 21 no. 9, November 2000); Harris, "The Exploration of Nawabi Culture by European Collectors in 18th-Century Lucknow" op. cit.; and Almut Von Gladiss, *Albumblätter. Miniaturen aus den Sammlungen indo-islamischer Herrscherhöfe* (Edition Minerva, Berlin, 2010). Malini Roy, "Origins of the Late Mughal Painting Tradition in Awadh" (1999; unpublished PhD thesis, in Markel and Gude, *India's Fabled City* op. cit., pp. 176–178) and "Some Unexpected Sources for Paintings by the Artist Mihr Chand (fl. c. 1759-86), Son of Ganga Ram" (in *South Asian Studies*, vol. 26, No. 1, March 2010), has made the most detailed study to date of the artists in Polier's circle, notably Mihr Chand.

49 Losty, *Delhi. Red Fort to Raisina* op. cit., who nevertheless does not suggest this specific source of inspiration.

50 Patricia Bouchenot-Dechin and Georges Farhat (eds.), *Andrée Le Nôtre in Perspective* (Editions Hazan, Paris, 2013).

51 For Martin, see especially Rosie Llewellyn-Jones, *A Very Ingenious Man. Claude Martin in Early Colonial India* (Oxford University Press, New Delhi, 1992).

52 Roy, "Some Unexpected Sources for Paintings by the Artist Mihr Chand" op. cit.

53 Sold at auction in Paris on 9 June 2011: Pierre Bergé & associés, *Art d'Orient – Miniatures – Objets de vitrine*, lot 39 (http://www.pba-auctions.com/html/fiche.jsp?id=1880669). Another copy, by Nidha Mal, is in the Royal Ontario Museum, Toronto (personal communication from Malini Roy): ROM2004-1040-5.

54 Gupta, *Shah Alam II and his Court* op. cit., pp. 62, 64.

55 For an account of Delhi at this period see Dalrymple and Sharma, *Princes and Painters in Mughal Delhi* op. cit.; and Losty, *Delhi. Red Fort to Raisina* op. cit.

56 Dalrymple and Sharma, *Princes and Painters in Mughal Delhi* op. cit., cat. 28, p. 102.

57 Dadlani, "The 'Palais Indiens' Collection of 1774" op. cit., provides an excellent analysis of French patronage and its influence on architectural representation in Delhi and Avadh, as well as giving a comprehensive bibliography on the same process in the British milieu slightly later.

58 For detailed descriptions of the painting see Dalrymple and Sharma, *Princes and Painters in Mughal Delhi* op. cit., no. 35; Losty, *Delhi. Red Fort to Raisina* op. cit., fig. 71; and Losty and Roy, *Mughal India* op. cit., pp. 210–213.

59 Translated by Wheeler Thackston in Abolola Soudavar, *Art of the Persian Courts. Selections from the Art and History Trust Collection* (Rizzoli, New York, 1992), pp. 358–359.

Mughal Gardens: History, Geography and Culture

Nishat Bagh garden on Dal Lake, Kashmir.

James L. Wescoat Jr

Few cultures have as strong a connection among gardens, territory and identity as the Mughal Empire of South and Central Asia in the late fifteenth to the mid nineteenth century. It is interesting to reflect on how Mughal gardens continue to be a defining part of that heritage in the twentieth and twenty-first centuries. The emphasis on gardens in the Memoirs of the first Mughal ruler, Babur (1483–1530), established a strong foundation |1|. *The Baburnama* recalled the garden legacy inherited from Timur (1336–1405) in Samarkand and Babur's descendants in Herat whom he consciously emulated in Kabul. Grand surviving sites, beginning with Humayun's Tomb-Garden in Delhi, built upon that foundation in enduring ways. The *hasht bihisht* (eight paradises) layout of Humayun's Tomb-Garden was spatially intertwined with the shrine of the fourteenth-century Sufi saint Hazrat Nizamuddin Auliya (1253–1325). Nizamuddin's close disciple, Amir Khusrau, also buried here, composed a famous *Hasht Bihisht* poem (*The Eight Paradises*).[1] The significance of gardens in Mughal culture continued to resonate with garden enthusiasts in India and elsewhere long after the Mughal Empire was defeated by the British, inspiring contemporary garden design as well as conservation efforts. All of these factors, along with a modest body of scholarship, help explain the continuing salience of Mughal garden heritage in modern cultures.[2]

The Historic Cities Programme (HCP) projects in this volume present the state of the art in garden and urban heritage conservation. They also prompt new research questions about the history, geography and culture of Mughal gardens. How exactly were these gardens sited, laid out and designed? How did they relate to larger territorial projects and processes? How were they experienced by different social groups? It is challenging to return to the historical sources with these questions in mind. Not all Mughal garden events bespoke beauty, grandeur or virtue.

2

|1| Babur's Tomb-Garden, known as Bagh-e Babur, in Kabul, Afghanistan.
|2| Babur's Lotus Garden at Dholpur, India.

Some were associated with conquest and refuge in Mughal as well as modern terms.[3] However, most Mughal garden history remains unknown, literally buried under metres of silt, as was the Moonlight Garden (Mahtab Bagh) in Agra until it was excavated in the 1990s; or lying unexamined in collections of manuscripts, paintings and poetry. While all of the arts change over time, gardens are especially dynamic, over the seasons of the year and the lifespans of plantings, disappearing rapidly in the absence of care. At present, one can only scratch the surface of these dynamic processes when surveying the history of Mughal gardens.

Origins and Antecedents

The earliest reference to gardens in Mughal history occurs in the first pages of *The Baburnama*, which offer a sumptuous geographic description of Fergana province in what is now Uzbekistan. "The Andizhan River passes through the area around Osh and goes on to Andizhan. On both its banks are gardens, all of which overlook the river. The violets are beautiful, there is running water, and in the spring when many tulips and roses blossom, it is quite nice."[4] This memory of a childhood landscape would be replicated in Babur's garden designs in Kabul and India, culminating in Agra. *The Baburnama's* first reference to a historic garden event occurred in a tenuous context: "When the accident happened to Umar-Shaykh Mirza [his father], I was in the *chahar-bagh* of Andhizan".[5] His father's death triggered a precarious succession that led Babur on his path towards Samarkand and beyond.

The origins of Mughal garden culture began much earlier. The immediate historical precedents came from Babur's famous ancestor Timur (1336–1405). References to gardens in Timurid histories are usually metaphorical or poetic, but a near-contemporary biography by Sharafuddin Ali Yazdi, known as the *Zafar-nama*, recorded Timur's orders to construct a massive square Dilkusha Bagh garden with symmetrical paths, tile-covered corner dovecotes and a central building. This garden was built outside Samarkand in honour of a new wife in 1396, and it was followed by charitable philanthropy at a shrine and a spontaneous garden project called the 'Takht-i Qaracha', which was "... laid out there in such a way that the sweet waters of the river would flow through the garden in remembrance of the divine words 'beneath which rivers flow'".[6] This recurring phrase in the Qur'an underscores that the original garden was that of the creation and the final one would be that of paradise. European travellers amplified the description of Timur's gardens in this world.

3

4

Babur tried to emulate Timur's garden model during his brief capture of Samarkand, but he failed to sustain it, fleeing and taking refuge in gardens before settling in Kabul. Another set of Timurid relatives in the city of Herat created a garden culture that Babur enjoyed but did not fully respect. They inspired him to combine garden construction with territorial expansion – linking gardens and geography – first in the Kabul region and then eastward in the territory known as Hindustan. At least two of Babur's small gardens survive, one known as the Takht-i Baburi (throne of Babur) in the Salt Range of Punjab, Pakistan, and another called the Lotus Garden (Bagh-i Nilufar) at the village of Dholpur in northern India |2|.[7]

Unlike Timur's sack of Delhi in 1398 after which he returned to Samarkand, Babur chose to relocate his capital to Agra after defeating the Lodi dynasty in 1526. This decision faced opposition from local people and his own nobles who were unused to the heat and plains. In response, Babur and other nobles "...built geometric and beautifully planned gardens and ponds [...] they made running water with waterwheels [...] Since the people of India had never seen such planned or regular spaces they nicknamed the side of the Jumna on which these structures stood 'Kabul'."[8] Over the course of the next two centuries, Mughal riverfront gardens extended along both sides of the Yamuna River at Agra, which foreign travellers compared with Paris and London.[9]

This burst of garden building at the end of Babur's short life in India cycled back to his early gardens at Kabul, and to even earlier childhood memories of Fergana and the inherited legacy

|3| Fatehpur Sikri, Uttar Pradesh, India.

|4| The central axis of Humayun's Tomb complex, Delhi, India.

from Samarkand. Kabul was the main reference place for early Mughal garden design, and it thus seems fitting that Babur was reburied in Kabul in the Bagh-e Babur garden. Bagh-e Babur has gone through many transformations since that time, most recently in its restoration as an HCP project that serves as a haven for contemporary Afghan society |1|. The second and third Mughal rulers, Humayun and Akbar, also passed through Kabul during precarious periods of their lives.

Early Garden Experimentation

Humayun's garden legacy is one of ephemeral innovation. Although few of his historical gardens survive, Humayun's experiments with garden form, experience and meaning imaginatively broadened the art of garden design for those who followed. He commissioned floating gardens, a zodiac carpet and a circumcision garden party outside Kabul to name a few.[10]

Poor governance led Humayun to spend much of his time in other people's gardens, most notably his brother and archrival Kamran, the site of whose garden survives on an island in the Ravi River in Lahore, where it has been renovated often from Mughal to modern times. While in exile in Shah Tahmasp's Persia, Humayun experienced first-hand a garden legacy that would become linked with that of Mughal India through garden arts, poetry and design.[11]

Monumental Tomb-Gardens and Citadels

Humayun's accidental death shortly after returning to Delhi opened the way for monumental urban gardens and geographic expansion during the reign of his son Akbar (r. 1556–1605). Two major developments stand out, the first of which was the construction of Humayun's Tomb-Garden with its bold scale and layout |4|. There were earlier partial precedents, such as Sikandar Lodi's square tomb-garden in Delhi, but nothing like the scale or design of Humayun's Tomb-Garden. The Garden was commissioned and overseen by Humayun's son Akbar and wife Haji Begum, who brought back scholars from the Hadhramaut who may have resided in the Arab ki Serai near the tomb. Academic debate continues over the respective roles of Akbar and Haji Begum, but the joint patronage of Timur and his noble women provides a possible model.[12] Design of the project has been convincingly attributed to a family of landscape architects from Herat and Bukhara.[13] They were associated with the only surviving Timurid horticultural treatise known as the *Irshad al-Zira'a*, one chapter of which describes the *chahar-bagh* layout of a garden. Scholarly efforts to reconstruct the *chahar-bagh* layout diverge from the conventional square fourfold garden, and from each other.

Humayun's Tomb-Garden thus established a new model for Mughal funerary gardens. It was unique in its integration of the *chahar-bagh* (fourfold) and *hasht bihisht* (eightfold) garden layouts, a synthesis that was repeated in the tomb's architecture and ornamentation. Variations on this design recurred throughout the Mughal Empire, culminating in the Taj Mahal. The last monumental version of this genre occurred at Safdarjung's tomb-garden (1708–54) at the opposite end of Lodhi Road from Humayun's Tomb in Delhi.

Akbar's second major contribution brought Mughal garden design into the cities and citadels of Agra, Fatehpur Sikri and Lahore.[14] Earlier gardens had been temporary encampments at favourable sites. Akbar's urban gardens had strong architectural frames and paved courtyards. They were graced with water features and carved vegetal decoration, as at the Jahangiri Mahal in Agra Fort and the Anup Talao in Fatehpur Sikri |3|. Recent research at Fatehpur Sikri has documented over two dozen garden remnants in a range of settings from central courtyards to suburban plots.[15] Garden-like paved courtyards continued throughout the later history of Mughal architectural and urban design. They may not have been gardens per se, but their features evoked garden forms and aesthetics.[16] On a grander geographical scale Mughal rulers regarded their empire as a garden.[17]

Gardens and Exquisite Naturalism

Akbar's son and successor Jahangir (1569–1627) could not hope to match his father's extraordinary state-building accomplishments over the course of half a century. But, like his father, one of his first projects upon succession was to supervise construction of Akbar's tomb-garden at Sikandra, a fascinating

|5| Virnag garden waterworks in Kashmir.

multi-tiered structure centred within a monumental fourfold garden. Large floral decoration on its gates was unique among Mughal tomb-gardens. Jahangir already had a record of patronage as a prince at projects such as the Hiran Minar's tower, water tank and grave for a favourite antelope near Sheikhupura Fort west of Lahore.

He renewed Babur's passionate and personal autobiographical writing, and his finely attuned naturalism and artistic expression. It was this fascination with nature that attained a highly refined sense of beauty in painting as well as planting.[18] Jahangir constructed at least two great garden design projects in Kashmir at Virnag |5| and Shalimar |6|11|. At Virnag he wrote of the historically sacred spring-fed pool at the top of the garden, set within an octagonal arcade that spilled into a water channel, cascading through garden terraces below. Shalimar Garden was likewise terraced from the shore of Dal Lake up to its mountain water source. It realized the Timurid dream of building gardens flanking a running stream, though Timur never had a prospect as majestic as that overlooking Dal Lake. Jahangir also managed to bring this model down to the plains at a garden near the town of Hasan Abdal, known as Wah (crudely translated as "Wow!").

He was accompanied in these garden design projects by his wife Nur Jahan and her family, who further transformed Mughal garden form and beauty. Nur Jahan's mother was said to have developed the production of rose oil (attar) based on her garden observations.[19] Nur Jahan herself commissioned the first white marble riverfront tomb-garden with polychrome marble inlay in Agra for her parents, known today as Itimad ad-Daula's tomb, which provided a partial precedent for the Taj Mahal. Her brother, Asaf Khan, constructed palace gardens in Lahore as well as the Nishat Bagh in Kashmir that is arguably the most beautiful of all Mughal gardens (see p. 94). Its terraces, water channels and majestic rows of *chenar* (oriental plane) trees provide a grand hillslope vista that sweeps across Dal Lake.

After the death of her husband, defeated in successional struggles, Nur Jahan ended her years supervising construction of the Shahdara tomb-garden complex in Lahore for her husband, brother and herself, whose dimensions were decimally proportioned from the largest garden enclosure of 600 *gaz* (Mughal yards; approximately 490 metres) square to smaller gardens 300 *gaz* square with walks, rooms and water channels that were ten, five and one *gaz* wide respectively.[20]

Garden, City and Empire

Mughal garden history and heritage were established for posterity by a great period of construction during the second quarter of the seventeenth century. Shah Jahan lined the riverfront parapets of Agra and Lahore Forts with jewel-like garden courtyards overlooking the river channels below. Hunting palaces became architecturally refined, as did the famous gardens of Kashmir. Rather than survey the wide proliferation of these projects, it seems apt to focus on two of Shah Jahan's masterpieces.

The Taj Mahal tomb-garden continued the *chahar-bagh* model initiated by Humayun's Tomb, but it diverged from earlier tomb-gardens in several important ways. Its main garden space has a fourfold plan, as does the Taj Ganj village associated with it to the south and the Mahtab Bagh garden to the north. The tomb itself was sited on a high riverfront plinth. Scholars have debated whether this shift in tomb location from garden centre to riverfront had mainly symbolic[21] or visual and functional significance.[22] It now appears that the Mahtab Bagh pleasure garden across the river was part of the original composition that, along with the river's width, centred the tomb within a larger terraced landscape context, once again, "beneath which rivers flow" |7|.[23] Plantings at the Taj Mahal garden were steadily removed in the colonial and independence periods, though there is now greater recognition that historic gardens had more trees and less lawn.[24]

The city of Lahore witnessed construction of its own terraced Shalimar Garden, originally known as the Farah Bakhsh and Faiz Bakhsh gardens, fed by a canal diverted from the Ravi River to Lahore |6|11|. The family of Wazir Khan, who served as governors of the province, built gardens, mosques and *havelis*. Likewise, the Persian noble Ali Mardan Khan built a small canal and garden from a tributary of the Chenab River near Sohdra and was ultimately buried in a large tomb-garden in Lahore not far from that of Dai Anga, who was Shah Jahan's wet nurse. This proliferation of monumental tomb-gardens and forts during

|6| Preceding pages: Shalimar Garden in Lahore, Pakistan.
|7| The Taj Mahal from the Mahtab Bagh garden in Agra, India.

7

Shah Jahan's reign constitutes the main surviving buildings of the Mughal Empire.

The largest urban design project of all was the construction of Shahjahanabad as the new capital of Delhi in 1638–48. This new city was fed by a large canal drawn from the Yamuna River. Upon entering Delhi it branched into one channel that ran down the middle of an east-west boulevard known as Chandni Chowk, and a second channel that fed massive gardens to the north of that boulevard built to a large extent by women of the court. In addition to these expansive urban gardens, the citadel was graced by elegant garden courts and water channels that ran north-south, paralleling the River Yamuna below. As with other Mughal citadels, some of these courts were planted while others were paved with exquisitely carved white marble water channels and inlay stonework |8|9|. Wells and Persian wheels served private residential *haveli* gardens within the Walled City.[25]

At least several of Shah Jahan's children and nobles were passionate garden patrons. A water tank and tomb-pavilion built by Dara Shikoh near the beloved spiritual centre of Mian Mir in Lahore is one example. Princess Jahanara is credited with many gardens, from those of Shahjahanabad to the misnamed Zahra Bagh in Agra. As Ebba Koch has shown, Mumtaz Mahal (for whom the Taj Mahal was later constructed) built this garden and subsequently bequeathed it to her daughter Jahanara.[26] Aurangzeb's sons emulated Shah Jahan's Taj Mahal by building the Bibi-ka Maqbara tomb-garden in Aurangabad for their mother.[27]

8

Aurangzeb himself was buried in a small grave open to the sky in the corner of a Chishti *pir*'s shrine in Khuldabad, emulating his sister Jahanara at the shrine of Nizamuddin Auliya in Delhi.[28]

The Flowering of Late Mughal Gardens

Ordinarily this would be the end of the narrative as Mughal patronage turned in more conservative directions, the state apparatus became overextended, contracted and declined. But that would be a mistake. Grand tomb-gardens continued to be built by nobles such as the late Mughal vizier Safdarjung (1708–54) whose tomb-garden lies on axis with that of Humayun's Tomb, purportedly scavenging its marble from another nearby tomb.

The weakening central state created space for the flourishing of sub-imperial Mughal gardens in less conflict-ridden provinces. Late Mughal gardens were built in cities from Lucknow to Benares.[29] A late eighteenth-century map of Agra riverfront gardens shows hardly a single empty parcel along the Yamuna River.[30] The "twilight of the Mughals," a common phrase among colonial writers, was thus experienced at least in part in beautiful garden settings. Paintings from the reign of Muhammad Shah Rangila (r. 1719–48), for example, depict a colourful range of garden scenes in Delhi including some in the Red Fort. One garden painting shows a strong composition of trees, shrubs and flowerbeds while another presents a delicate tracery of ink and watercolour plantings loosely intermixed and layered upon one another. One painting of the Yamuna riverbank is a forest while another is an open field, another a luscious wetland, and yet another a park-like playground.

The Afterlife of Mughal Gardens

Mughal garden design per se ended with the empire in 1857. The end occurred very near where Mughal garden design began in India three centuries earlier, at Humayun's Tomb-Garden where

|8| Marble water channel in the Red Fort in Shahjahanabad, Delhi, paralleling the Yamuna River.

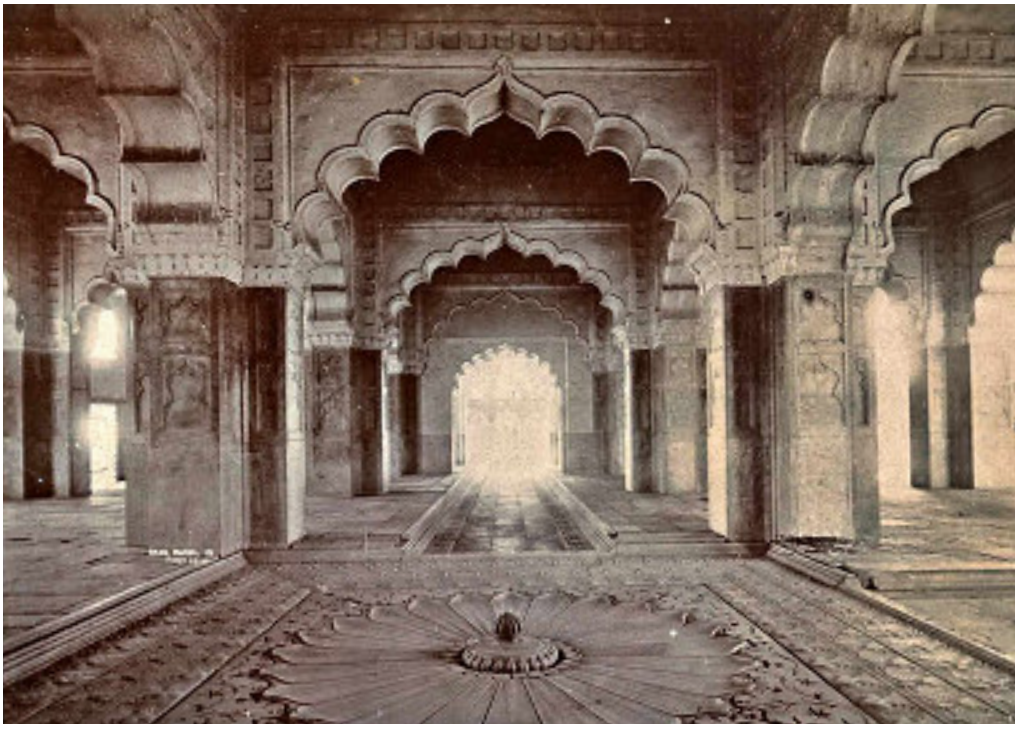
|9| Garden-like marble water pool in the Red Fort in Shahjahanabad, Delhi, India.

the defeated emperor, Bahadur Shah Zafar II, surrendered to William Hodson on 20 September 1857. It was a pitiful end to a declining trend and a horrific conflict. The afterlife of Humayun's Tomb-Garden has had many chapters, the most recent of which was celebrated in 2013 with the completion of its conservation by the Archaeological Survey of India (ASI) and the Aga Khan Trust for Culture (AKTC).[31]

This brief perspective on Mughal gardens shows that there is no simple beginning to the story. It reaches back into the Central Asian, Persian and Indic histories and the heritage of many peoples, places and times. Mughal garden research has helped stimulate studies of related garden cultures in nearby regions, for example the Sultanate, Rajput and Deccani gardens such as the Qutb Shahi tombs at Hyderabad |10|.[32] These regional histories have broadened our understanding of Central and South Asian garden cultures and raised new questions for research. Nor does there seem to be an end to the story, as designers build upon Mughal garden precedents, consciously and subconsciously, and as diverse societies anticipate the possibility of a paradise at the end of time if not in this world.

These cultural achievements, losses and hopes set within gardens invite deeper reflection on what is being conserved. What do historic gardens mean for contemporary cultures? The foundations for garden conservation in India and most regions of the world are tenuous. Many historical gardens have been abandoned or redeveloped. The afterlife of places like Anarkali's tomb-garden in Lahore, for example, included use as a house for a European mercenary, a Christian church and presently the Punjab provincial archives.[33] Sir John Marshall's otherwise impressive and influential *Conservation Manual* gave limited attention to gardens. The British conserved some Mughal gardens according to their own standards and purposes.[34] They emulated Mughal gardens in the so-called Viceroy's Garden at Rashtrapati Bhawan, as well as exotic garden design, and now community gardens, back in England.

It used to be thought that conservation was a field of applied history and technology. That view is changing. The Historic Cities Programme projects have broken new ground. They pose new questions and challenges for historians and for societies about what these historic gardens were like, how they were originally designed and experienced, what they have meant, and how their conservation demands new types of geographic enquiry and action to address pressing challenges today and for future generations.



9

Endnotes

1 See Ebba Koch, *Mughal Art and Imperial Ideology: Collected Essays*, Oxford University Press, Delhi, 2001; Laura E. Parodi, "The Posthumous Portrait of 'Hadrat Jannat Ashiyānī': Dynastic, Saintly, and Literary Imagery in the Tomb of Humayun", in *Islamic Art*, 6, 2009, pp. 129–158; and Sunil Sharma, *Amir Khusrau: The Poet of Sultans and Sufis*, Oneworld, Oxford, 2005.

2 See James L. Wescoat Jr, "Gardens, Pavilions, and Tents: The Arts of Shelter", in *Treasures of the Aga Khan Museum: Architecture in Islamic Arts*, AKTC, Geneva, 2011, pp. 235–246; and Id., "The Changing Cultural Space of Mughal Gardens", chapter in preparation for *Companion to Asian Art and Architecture*, Rebecca Brown and Deborah Hutton (eds.), Blackwell, 2011, pp. 201–230.

3 See James L. Wescoat Jr, "Gardens of Conquest and Transformation: Lessons from the Earliest Mughal Gardens in India", in *Landscape Journal*, 10, 2, 1991, pp. 105–114.

4 See Zahiruddin Muhammad Babur, *The Baburnama: Memoirs of Babur, Prince and Emperor*, Wheeler M. Thackston (trans.), Smithsonian Institution, Washington, 1996, pp. 36–37.

5 Ibid., p. 50.

6 Evoking this paradisiacal phrase in many suras of the Qur'an. See Wheeler M. Thackston (ed. and trans.), "Zafarnama", in *A Century of Princes: Sources on Timurid History and Art*, Aga Khan Program for Islamic Architecture, Cambridge, MA, 1989, p. 88; and James L. Wescoat Jr, "Beneath Which Rivers Flow: Water, Geographic Imagination, and Sustainable Landscape Design", in *Landscapes of Water: History, Innovation and Sustainable Design*, U. Fratino, A. Petrillo, A. Petruccioli and M. Stella (eds.), Uniongrafica Corcelli Editrice, Bari, 2002, vol. 1, pp. 13–34.

7 See Elizabeth B. Moynihan, "The Lotus Garden Palace of Zahir al-Din Muhammad Babur", in *Muqarnas*, 5, 1988, pp. 134–152.

8 See Babur, *The Baburnama* op. cit., p. 360.

9 See Ebba Koch, "The Mughal Waterfront Garden", in *Gardens in the Time of the Great Muslim Empires: Theory and Design*, Attilio Petruccioli (ed.), E. J. Brill, Leiden, 1997, pp. 140–160.

10 See Parodi, "The Posthumous Portrait of 'Hadrat Jannat Ashiyānī'" op. cit.; James L. Wescoat Jr, "Gardens of Invention and Exile: The Precarious Context of Mughal Garden Design During the Reign of Humayun (1530–1556)", in *Journal of Garden History*, 10, 1990, pp. 106–116; and Id., "Ritual Movement and Territoriality: A Study of Landscape Transformation During the Reign of Humayun", in *Environmental Design: Journal of the Islamic Environmental Design Research Centre*, 1993, pp. 56–63.

11 See Laura E. Parodi, "Humayun's Sojourn at the Safavid Court", in *Proceedings of the 5th Conference of the Societas Iranologica Europaea*, A. Panaino and R. Zipoli (eds.), vol. II, Mimesis, Milan, 2006, pp. 135–157.

12 See Lisa Golombek, "Timur's Gardens: The Feminine Perspective", in *The Mughal Garden*, M. Hussain, A. Rehman and J. Wescoat (eds.), Ferozsons Press, Lahore, 1996, pp. 29–36.

13 See Maria Eva Subtelny, "A Medieval Persian Agricultural Manual in Context: The Irshad al-Zira'a in Late Timurid and Early Safavid Khorasan", in *Studia Iranica*, 22, 1993, pp. 167–217; Id., "Mirak-i Sayyid Ghiyas and the Timurid Tradition of Landscape Architecture", in *Studia Iranica*, 24, 1995, pp. 19–60; and Id., "Agriculture and the Timurid *Chaharbagh*: The Evidence from a Medieval Persian Agricultural Manual", in Koch, *Gardens in the Time of the Great Muslim Empires* op. cit, pp. 110–128.

14 See James L. Wescoat Jr, "Gardens vs. Citadels: The Territorial Context of Early Mughal Gardens", in *Garden History: Issues, Approaches, Methods*, J. D. Hunt (ed.), Dumbarton Oaks, Washington, DC, 1992, pp. 331–358.

15 See Nadeem Rezavi, *Fathpur Sikri Rediscovered*, Oxford University Press, Oxford, 2012.

16 See James L. Wescoat Jr, "Mughal Gardens and Geographic Sciences, Then and Now", in Koch, *Gardens in the Time of the Great Muslim Empires* op cit., pp. 187–202.

17 See Ebba Koch, "'My Garden is Hindustan': The Mughal Padshah's Realization of a Political Metaphor", in *Middle East Garden Traditions: Unity and Diversity*, Michel Conan (ed.), Dumbarton Oaks, Washington, DC, 2007, pp. 159–175.

18 See Som Prakash Verma (ed.), *Flora and Fauna in Mughal Art*, Marg, Mumbai, 1999.

19 See Nuruddin Muhammad Jahangir, *The Jahangirnama: Memoirs of Jahangir, Emperor of India*, Wheeler M. Thackston (trans.), Smithsonian Institution, Washington, DC, 1999, p. 163.

20 See James L. Wescoat Jr, Michael Brand, and M. N. Mir, "The Shahdara Gardens of Lahore: Site Documentation and Spatial Analysis", in *Pakistan Archaeology*, 25, 1993, pp. 333–366.

21 See Wayne Begley, "The Garden of the Taj Mahal: A Case Study of Mughal Architectural Planning and Symbolism", in *Mughal Gardens: Sources, Representations, Places, Prospects*, James L. Wescoat Jr. and Joachim Wolschke-Bulmahn (eds.), Dumbarton Oaks, Washington, DC, 1996, pp. 213–232.

22 See Koch, "The Mughal Waterfront Garden" op. cit.

23 See Elizabeth B. Moynihan (ed.), *The Moonlight Garden: New Discoveries at the Taj Mahal*, Smithsonian Institution, Washington, DC, 2001, pp. 59–77; and James L. Wescoat Jr, "The Colors of Water: Hydrology and Human Experience at the Taj Mahal", in *New Geographies: Urbanisms of Color*, Gareth Doherty (ed.), Harvard Graduate School of Design, Cambridge, MA, 2011, pp. 174–183. The term 'landscape' is a modern heuristic for local historical-geographic complexes in Islamic cultures, see James L. Wescoat Jr, "Between Garden and Geography: Landscape as an Emergent Concept in the Wider Middle East", in *Contemporary Urban Landscapes of the Middle East*, Mohamad Gharipour (ed.), Routledge, London, forthcoming.

24 See Priyaleen Singh, "Changing Imagery of the Gardens of Taj Mahal", in *LA! Journal of Landscape Architecture* (India), 7, 1, 2009, pp. 30–35.

11

25 See Stephen P. Blake, "The Khanah Bagh in Mughal India: House Gardens in the Palaces and Mansions of the Great Men of Shahjahanabad", in Wescoat and Wolschke-Bulman (eds.), *Mughal Gardens: Sources, Representations, Places, Prospects* op cit., pp. 171–188; and James L. Wescoat Jr, "Conserving Urban Water Heritage in Multi-Centered Regions: An Historical-Geographic Approach to Early Modern Delhi", in *Change over Time*, 4, 2014, pp. 142–166.

26 See Ebba Koch, "The Zahara Bagh (Bagh-i Jahanara) at Agra", in *Environmental Design: Journal of the Islamic Environmental Design Research Centre*, 2, 1, 1986, pp. 30–37.

27 See Laura E. Parodi, "The Bibi-ka Maqbara in Aurangabad. A Landmark of Mughal Power in the Deccan?", in *East & West*, vol. 48, no. 3–4, 1998, pp. 349–383.

28 See Carl Ernst, *Eternal Garden: Mysticism, History and Politics at a South Asian Sufi Center*, SUNY Press, Albany, 1992.

29 See Klaus Roetzer and Deokar Khandu, "Mughal Gardens in Benaras and Its Neighbourhood in the Eighteenth and Nineteenth Centuries", in *Confluence of Cultures: French Contributions to Indo-Persian Studies*, F. N. Delvoye (ed.), Manohar, Delhi, 1994, pp. 131–169.

30 See Ebba Koch, *The Complete Taj Mahal: and the Riverfront Gardens of Agra*, Thames & Hudson, London, 2006.

31 See Aga Khan Trust for Culture, *Humayun's Tomb – Sunder Nursery – Hazrat Nizamuddin Basti*, Urban Renewal Initiative, AKTC, Delhi, 2013.

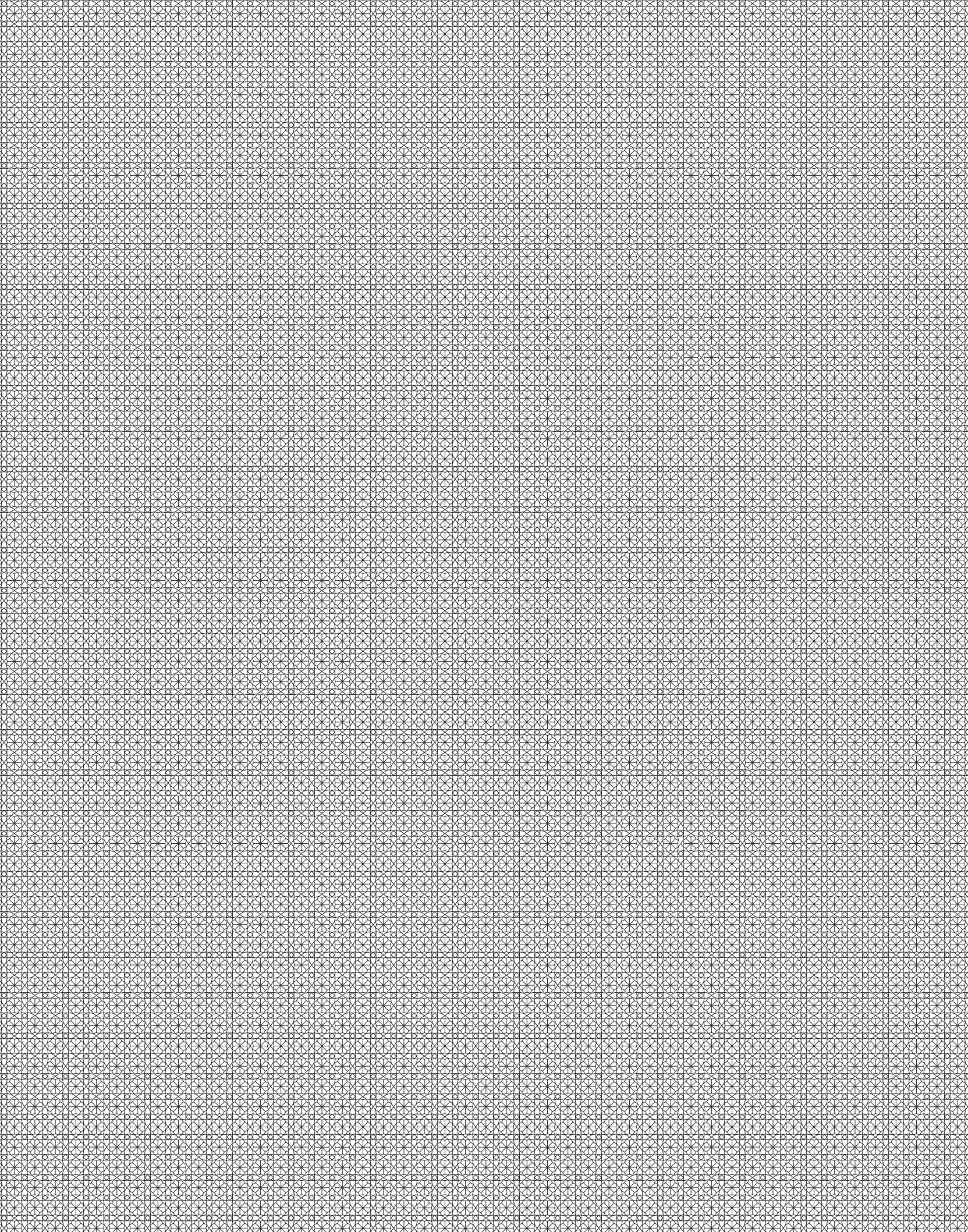
32 See Daud Ali and Emma Flatt (eds.), *Garden and Landscape Practices in Precolonial India: Histories from the Deccan*, Routledge, Delhi, 2011; and Debra Diamond, *Garden and Cosmos: The Royal Paintings of Jodhpur*. Smithsonian Institution, Washington, DC, 2008.

33 See John Dixon Hunt, *The Afterlife of Gardens*, University of Pennsylvania Press, Philadelphia, 2004.

34 See Jyoti Sharma, "The British Treatment of Historic Gardens in the Indian Subcontinent: The Transformation of Delhi's Nawab Safdarjung's Tomb Complex from a Funerary Garden into a Public Park", in *Garden History*, 35, 2, 2007, pp. 210–228.

| 10 | Preceding pages: the Qutb Shahi tomb complex, Hyderabad, India.

| 11 | Shalimar Garden, view from the central *takht* to the north gate, Lahore, Pakistan.



Part III

Traces of the Mughal World Today: Revalorized Heritage

Kabul

The Significance of Bagh-e Babur

Originally laid out without an enclosure wall with far reaching views across green fields and pastures, rapid urban growth and the construction of informal dwellings has resulted in the transformation of Babur's Garden into a green oasis in an otherwise overdeveloped landscape.

Ajmal Maiwandi

Bagh-e Babur and the Mughal Era

Rehabilitating the Garden of Babur and Its Surroundings in Kabul

In the foothills of the snow-peaked Hindu Kush mountains and the fertile alluvial plains of the Kabul River basin, Zahir-ud-Din Muhammad ("Defender of the Faith") commonly known by his nickname "Babur" (believed to be derived from *Babr* – Persian for "tiger") – a young Uzbek prince exiled from his native Fergana region in present-day Uzbekistan – laid the foundations of an empire that subsequently became known as the Mughal dynasty: one of the greatest dynasties in world history. From humble beginnings in the outpost city of Kabul, at its height the Mughal dynasty stretched from Balkh in northern Afghanistan to the Deccan in India, with its kings ruling over an estimated 150 million subjects for a period of more than three and a half centuries.

At the age of twelve, in 1495 Babur ascended to the throne of the small principality of Fergana. He was the scion of distinguished families, descended from Timur on his father's side and the Mongol emperor Ghengis Khan through his mother. Like his father, Babur set his sights on extending his rule over Timur's capital, Samarkand, which he managed to occupy briefly on three occasions. Having unsuccessfully attempted to conquer Samarkand and losing control of his native Fergana in the process, Babur travelled south though the Hindu Kush with a small entourage of followers and captured Kabul in 1504 at the age of twenty-one. Over subsequent years, Babur consolidated his rule in Kabul and attempted on several occasions to recapture Samarkand and Bukhara from their Uzbek occupiers. Failing this, in 1519 he turned his attention to India, eventually capturing Delhi in 1526.

2

3

|1| Built on a plinth along the main latitudinal axis of the site, the 19th-century Garden Pavilion is surrounded by deep shaded verandas affording views down the length of the Garden.

|2| The reconstruction of water channels and holding tanks along the central axis, a key aspect of the Mughal garden, was based on extensive archaeological and documentary evidence.

|3| A view of the Queen's Palace, a royal residence built in the late 19th century and reconstructed as part of the rehabilitation of Babur's Garden in order to serve public functions.

Preoccupied with extending and consolidating his rule over Kabul and areas to the south and east of the city and as his Timurid predecessors before him had done in Herat, Babur focused his energy on designing and landscaping gardens. While his Memoirs describe having created several such gardens in and around Kabul, possibly including a garden in Istalif to the north of the city and the Nimla Gardens to the east near Jalalabad, his prized garden and the one in which he chose to be interred upon death was the site now known as Bagh-e Babur (Babur's Garden). Considering that Babur spent more than ten years based in Kabul, it can reasonably be asserted that this garden and the site of his grave can lay claim to being one of the first, oldest and most significant Mughal gardens in the region.

The Legacy of Babur: History and the Environment

A detailed account of Babur's life and conquests is provided in his Memoirs, *The Baburnama*, which offer a unique insight into the ideas of the founder of a dynasty that was to dominate the politics and culture of the region for three and a half centuries. These Memoirs also reveal the extent to which the natural landscape was central to the life of Babur's court, much of whose business was conducted in gardens that he visited or established during his travels. The Timurid gardens that he mentions visiting in Samarkand and Herat clearly had a lasting impression on him, and probably influenced Babur's ideas about the sites that he identified soon after capturing Kabul. The garden now known as Bagh-e Babur was one such site, used by Babur to plan and launch military campaigns and celebrate victories, hold royal audiences, dispense punishments, read poetry and entertain.

Such was the significance of his favourite garden that Babur continued to issue instructions during his campaigns in India to ensure that it was properly maintained. For example, his directions regarding the upkeep of one garden were to:

"Plant beautiful trees, form regular orchards, and all around the orchards sow beautiful and sweet-smelling flowers and shrubs, according to some good plan."[1]

In India, Babur adapted his ideas to the unfamiliar geography and climate, while making best use of the limited sources of running water. The area along the banks of the Yamuna River in Agra, where a series of gardens was set out during Babur's reign, came to be known as "Kabul" by the local population.

Outline History of Bagh-e Babur and Its Transformation

It was back in Kabul, on a fold that had captivated him on the south-western slopes of the Kuh-e Sher Darwaza foothills, that Babur set out what might be the 'avenue' garden he describes in

4

5

The Baburnama. Situated above the fertile Chardeh plain, water was diverted to the site of the Garden through open-surface channels leading from the Logar River more than ten kilometres to the south-east. Running water had long been a central element in formal gardens in the region, due in part to religious and symbolic associations with paradise, which might also have influenced Babur's wish to be laid to rest on this site. The layout of the Garden included running water, flowers and fruit trees: most of the elements that came in time to be associated with later Mughal funerary gardens, such as those of Humayun, Akbar, Jahangir and Shah Jahan.

His body having been transported from Agra, where he died in 1530, to Kabul, Babur's remains were interred within a grave on an upper terrace of the Garden in around 1540. His successors came to pay their respects at this grave, with Babur's grandson Akbar visiting in 1581 and 1589, and his great-grandson Jahangir instructing during the course of a visit in 1607 that a platform, or *chabwtra*, be laid around the grave, an inscribed headstone be erected and that the Garden be enclosed by walls. Shah Jahan dedicated a marble mosque during a visit to the site in 1647, when he also gave instructions for the construction of a gateway at the base of the Garden, which later archeological evidence suggests was never built.

The site subsequently seems to have fallen into disrepair, as Kabul's political and economic importance in the region was inextricably linked to the rise and collapse of the Mughal dynasty. When Charles Masson visited the site in 1832, and prepared a drawing of Babur's Grave enclosure (see p. 143), he

|4| The reconstructed carved marble enclosure surrounding Babur's Grave can be seen through the arched opening of a second brick masonry wall built in the late 19th century in order to protect the site.

|5| Marble required for the reconstruction of Babur's Grave enclosure was sourced from India, where the marble used in the original enclosure had been quarried, and carved there before being transported to Kabul and reassembled by local craftsmen.

6

noted that the tombs had been left to decline and their stones had been taken and used in the enclosing walls.

Further damage was inflicted on the site during the severe earthquake that struck Kabul in 1842, when the perimeter walls reportedly collapsed. John Burke's photographs of the site in 1872 show fragments of various marble grave enclosures scattered over the terraces, with the marble mosque commissioned by Shah Jahan in a poor state of repair.

As part of a wider programme of investments in Kabul, Amir Abdur Rahman Khan (r. 1880–1901) rebuilt the perimeter walls of the Garden and constructed a number of buildings for his court within the site, thereby transforming an environment that had until then been defined largely by trees and water. The area around Babur's Grave platform was encompassed by a low, arcaded, masonry enclosure and the level of the adjacent terrace was raised. Archaeological excavations carried out during the course of the restoration revealed a system of water pipes supplying a series of fountains that were superimposed over original central water channels built during Babur's reign. Further transformations occurred in the 1930s, when Nadir Shah remodelled the 'central axis' of the Garden in a European style, with three fountains in stone pools. It was at this time that Babur's Garden was officially opened to the public, and a large swimming pool was constructed on the site of a graveyard north of the Shah Jahan Mosque.

Babur's Garden was much transformed and in a poor state of repair by the time that inter-factional fighting broke out in Kabul in 1992. The conflict quickly engulfed the area around the site, which lay at the front lines between factional fighters, who cut down trees to limit cover, stripped and set fire to buildings and

|6| Built by Amir Abdurrahman Khan at the end of the 19th century as a royal residence, this view shows the courtyard of the Queen's Palace, or *haremserai*, located in the upper terraces of the Garden directly opposite Babur's tomb.

|7| Located at the bottom of Babur's Garden, the Caravanserai building was reconstructed in 2005 using traditional materials and building techniques and houses a visitor centre, retail premises and the offices of the Babur Garden Trust, which manages and operates the site.

looted the water pumps. Most inhabitants of the neighbourhood around the Garden fled their homes. It was not until 1995 that mines and unexploded ordnance were cleared and water supplies to the area were restored, enabling some replanting to take place, under the auspices of UN-Habitat.

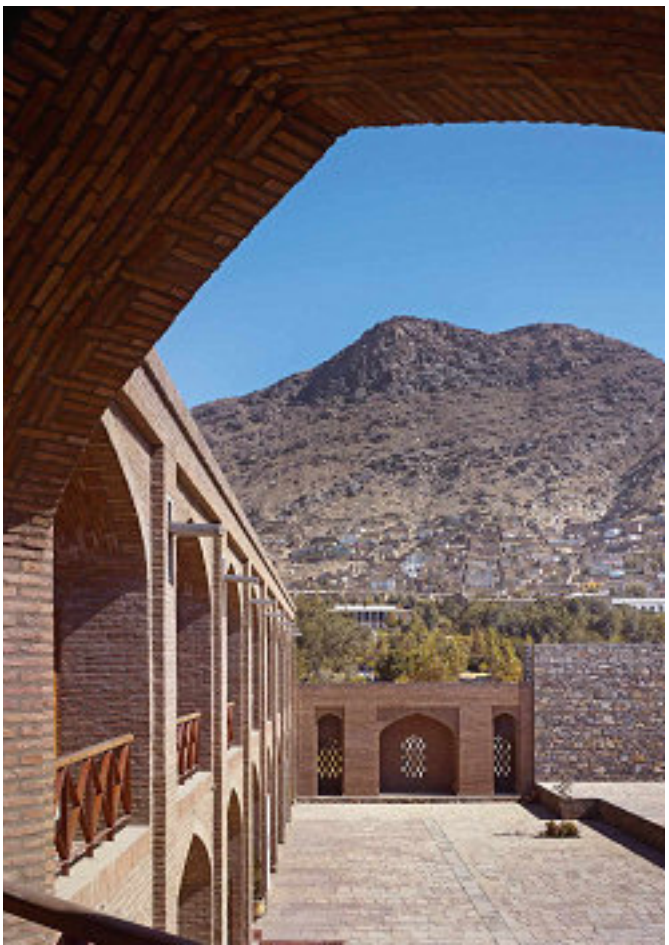
Selection Processes and Challenges

In March 2002, the Aga Khan Trust for Culture (AKTC) signed a 'Memorandum of Understanding' with the then Transitional Administration of Afghanistan for a comprehensive programme of rehabilitation of Bagh-e Babur. The decision to select Babur's Garden for rehabilitation was made on the basis of its importance as a public garden for the inhabitants of the city, together with the historic significance of the site as a key registered national monument and within the wider history of Afghanistan. The restoration project was funded and carried out through the Trust's Historic Cities Programme (HCP), with significant co-funding made available for work by the Federal Republic of Germany. The goal of the work was to restore the original character of the landscape and conserve key buildings, while ensuring that the Garden, which is the largest public open space in Kabul, continues to be a focus for recreation for the inhabitants of the city. Significantly, the Garden has remained fully open to the public throughout the course of the rehabilitation work. Additional small-scale co-funding from the United States and Save the Children was used following the completion of restoration works in 2008 for improvements to visitor services and facilities.

As front lines between warring factions in the 1990s, the key challenges for the restoration project became evident at the start of work. Extensive efforts were required to clear the site of war debris and to mobilize and train a competent team of local professionals. De-mining and the removal of unexploded ordnance continued throughout the course of rehabilitation works. In support of counterpart institutions, including Kabul Municipality and the Ministry of Information and Culture, a joint coordinating committee was established and tasked with facilitating rehabilitation works. Concerted efforts were made at the start of works to reinforce the skills of local architects, landscaping professionals and the craftsmen required to implement restoration activities, and this remained an important objective throughout the project.

Surrounded by 'informal' hillside residential quarters built on public land over the course of three decades of war, another key challenge for the restoration team was to mobilize the local community and ensure their active participation in and support for the rehabilitation works. Neglected historically by formal planning processes undertaken by Afghan institutions, which had resulted in the provision of better infrastructure and public services in other parts of the city, the inclusion of the area surrounding the Garden into wider planning and urban upgrading initiatives was a critical aspect of the restoration works.

7



Project Description

Babur's Garden comprises a walled area of eleven and a half hectares, within which the principal historic structures are Babur's Grave and other historic graves, a marble mosque dedicated in the seventeenth century by Shah Jahan, and a *haremserai*,

or Queen's Palace, and a small Pavilion that both date from the late nineteenth century. In parallel with clearance of rubble and waste from the site, the initial focus of the restoration works during 2002–03 was on architectural and topographic surveys of the landscape and of key buildings. Located at the base of the Kuh-e Sher Darwaza hills, there is a thirty-five-metre difference in height between the lower sections of the landscape and the upper areas of the site, divided into a 'stepped' terrace garden containing sixteen levels or terraces of various sizes, traversed by ramps and stairs. At its centre, extending from the lower entrance to the upper reaches of the site, the Garden is divided by a wide 'formal' avenue, known locally as the 'central axis'. This area is the organizational 'spine' of the site and contains the bulk of the archaeological remains of the Mughal garden, including water channels, tanks and chutes lined with marble. With the exception of the Queen's Palace and later 'modern' additions to the site, all other major historic constructions – including the reconstructed Caravanserai, the Pavilion, the Shah Jahan Mosque and Babur's Grave – are built along the central axis.

Project Results

Although it is not clear how Babur originally defined the extent of his Garden, the perimeter walls that now surround it follow the tradition of enclosure of formal Persian gardens. Jahangir's instruction in 1607 that walls be built around several gardens in Kabul included the construction of walls around Babur's Garden. The scale and alignment of these walls has doubtless changed, but surviving sections of *pakhsa* (compacted earth) walling were surveyed in 2002. With many sections found to be close to collapse, nearly 1.6 kilometres of walls (parts of which are nearly eight metres high and over two metres thick) were rebuilt or repaired by hand using traditional techniques and materials.

In order to understand the original nature of the landscape, six seasons of joint archaeological excavations were undertaken by the German Archaeological Institute and the Afghan Institute of Archaeology. Architectural elements, from gravestones to parapets and waterfalls, were found to have been altered and reused in a random manner throughout the Garden, suggesting a subsequent disregard for their decorative or symbolic value. The archaeological excavations found items such as coins, glass, pottery, bones and even the remains of a crab in one of the lower tanks, thus shedding light on how the Garden had been used down the ages.

Following archaeological excavations in Babur's Grave precinct, in 2004 a marble-lined water channel (visible in late nineteenth-century photographs) was excavated west of the Shah Jahan Mosque. Between this and the large octagonal tank excavated on the ninth terrace (now reconstructed) lay the ten-metre-square tank which is partly covered by the veranda of the Pavilion, and whose shape is marked in the stone paving.

The dismantling of three twentieth-century fountains enabled excavation to take place along the length of the central axis, where remains of eight rectangular tanks linked by channels, sections of terracotta pipe and stone retaining walls at the edges of terraces were found. In places, Mughal elements were found beneath more than 2.5 metres of soil deposits; they had been partly destroyed during the digging of a deep trench for pipes to supply the modern fountains. Fragments of three carved, marble, waterfall elements of matching dimensions, which had been reused as gravestones, were also discovered. Together, these finds enabled the team to reconstruct the central axis and its main water channel, allowing water to flow once more through the site, as it did in Babur's time. This has been achieved without significantly disturbing the surviving archaeological remains, which were protected and backfilled after thorough documentation.

In addition to the archaeological evidence, historic descriptions and images of the Garden were used to restore the character of the landscape that originally captivated Babur. The focus has been on the key elements in the original concept – planting, grading and the restoration of running water along the 'spine' of the Garden.

Underlying these works was the intention to provide visitors with an exciting visual experience of the Garden, as they progress up through the site. Having passed through the lower entrance on the bank of the Chardeh River and entered the

|8| Preceding pages: the upper terraces of Babur's Garden contains some of the most important historic structures remaining in Kabul, including Babur's Grave enclosure (centre), the mid-17th-century marble summer mosque built by Shah Jahan (left), and the 19th-century Garden Pavilion (far left).

9

courtyard of the new Caravanserai, the visitor glimpses the ascending Garden through an arched gate in the reconstructed stone wall of the Shah Jahan gateway. Passing through this gate, it is possible to perceive the full extent of the orchard terraces of the Garden, rising more than thirty-five metres up the hillside. On the outer edges of this lowest terrace, copses of walnuts and plane trees provide areas of deep shade, as shown in nineteenth-century prints of the site.

The visitor proceeds through the Garden by means of pathways and flights of stone stairs on either side of the central axis, along which water flows through a series of channels, waterfalls and pools. This central watercourse is flanked by an avenue of plane trees, as depicted in an early nineteenth-century watercolour painting of the area by James Atkinson (see p.149), directing views up the spine of the Garden towards the Pavilion and providing the deep shade that has long characterized this Garden.

Each terrace along the central axis forms in itself a small garden, planted with pomegranates, roses and flowering shrubs between areas of stone paving around a pool of water fed from the terrace above. From each level, there are views and access to the lateral orchard terraces, on which some several thousand fruit trees have been planted. Babur's Memoirs have provided an invaluable source of information about the trees that he planted in gardens in and around Kabul. Based on this description, areas closest to the central axis contain pomegranates, apricots, apples, cherries (the wild *alu balu* being Babur's particular favourite) and peaches, between which are small grassy meadows. Outside the longitudinal paths that run parallel to the

|9| Located on a terrace beneath Babur's Grave, visible on the right, the marble summer mosque built on the instructions of Shah Jahan was carefully restored during the course of rehabilitation works and the area surrounding the structure was repaved in white marble.

10

central axis, there is a denser planting of mulberry, apricot, fig and almond trees. At the outer edge of each terrace, copses of walnut trees have been planted along the perimeter walls, over which they will in time be visible from outside the Garden.

While the original watercourse along the 'central axis' would probably also have irrigated the orchard terraces through secondary channels, a separate system of underground pipes has now been installed to increase efficiency and reduce water loss by evaporation. Water is supplied through gravity-fed underground galvanized pipes from the upper reservoir, built by Nadir Shah, to small stone, holding tanks that regulate the flow into open-surface channels to the orchards.

At the source of the water channels along the 'central axis', a large octagonal tank (replicating the original that has been preserved underground) is flanked by four large plane trees between which is an area of stone paving. From this level, there are views down the central avenue and across the plain of western Kabul towards the Paghman Mountains, identical to those that Babur himself must have enjoyed. The modern swimming pool that had encroached upon the terrace north of the Pavilion was removed and a new swimming pool facility was built outside the garden enclosure, near the lower entrance from the city. The new swimming pool has been used, on average, by over 50,000 young Afghans during the spring and summer months in the years immediately following its construction.

On the level above the Pavilion, the marble-clad western wall of the Shah Jahan Mosque represents an important visual element, as do the rebuilt dry-stone retaining walls that run across

| 10 | Since the completion of rehabilitation works in 2008, Babur's Garden has become a sanctuary for more than three million visitors and the deeply shaded areas reserved for family picnics has become popular with women and children.

| 11 | Visitors to the Garden enter at the bottom of the site through the Caravanserai building before ascending the sixteen terraces through a network of paved paths and gentle slopes.

the width of this part of the Garden. Cypresses have been introduced to the north of the Mosque, while planes and indigenous roses have been replanted alongside the dry trunks of the massive plane trees that once provided shade at this level.

With the original level of Babur's Grave terrace restored, the platform is now approached by marble stairs leading up from a formal flower garden to the south, surrounded by a circle of *alu balu*, or wild cherry trees. Between the outer and inner grave enclosures, *arghawan* or Judas trees blossom once a year in spring, while plane trees have been planted around the outer enclosure and along the terrace above, where they provide shade near the grave of Ruqaiya Sultana Begum, against a backdrop of towering mud-plastered perimeter walls.

Conservation of Key Elements

Babur's Grave has seen significant transformations since his body was exhumed from Agra for reburial in Kabul, in accordance with his wishes. Apart from the carved headstone erected on the instructions of Jahangir in 1607, which contains an elaborate chronogram that confirms the date of Babur's death in AH 937 (AD 1530–31), few original elements of the grave seemed to have survived. The dedication on Babur's gravestone reads:

> There is no deity but God;
> Mohammad is the messenger of God.
> The king from whose brow shone the light of God,
> that was Zahir-ud-Din Babur, the king.
> Glorious, wealthy, lucky, just, equitable and pious,
> he had an army of divine grace and favour,
> of victory and conquest.
> He conquered the worldly realm and went brightly.
> For the conquest of the world of the spirits,
> quick as the light of an eye.
> When paradise became his abode,
> the gatekeeper of paradise asked for the date, I told him:
> 'Paradise forever is the place of Babur the king'.[2]

The intricately carved marble grave enclosure recorded in Masson's drawing (see p.143) had apparently collapsed by the time of Godfrey Vigne's account of a visit to the Garden, published in 1840, while Burke's photographs from the 1870s show fragments scattered over the grave terrace. Later transformations in the grave area included the erection in the last years of the nineteenth century of an arcaded outer enclosure – subsequently demolished – and the levelling of the southern end of the grave terrace in the 1930s, when the swimming pool was built. In the ensuing years, Babur's headstone had been enclosed in a concrete frame and the grave itself embellished with coloured marble and onyx and covered by a framed shelter.

Based on archaeological excavations and a review of earlier documentation, the work undertaken over the course of the project aimed to re-establish the original character of the grave area in a manner that conformed to international conservation practice. The level of the southern end of the terrace was lowered to restore the original elevation of the grave platform, around which the late nineteenth-century outer arcaded

11

masonry enclosure has been reconstructed, on foundations of a seventeen-metre-square stone platform revealed by archaeological excavations, which indicated that this had been built around and above older graves.

The thirty-one marble fragments found in the grave area yielded important evidence as to the style and workmanship of the original enclosure around Babur's Grave. While it has long been held that the enclosure dates from the time of Shah Jahan, the craftsmanship and motifs on the recently rediscovered fragments suggest that it might, in fact, date from soon after Babur's burial. Together with documentary material, the fragments have enabled the reconstruction of the enclosure, carved from Indian Makrana marble used in the original structure, which has been erected *in situ* on the original grave platform. Measuring some 4.5 metres square, the elevations of the reconstructed enclosure comprise a central arched opening on the southern elevation flanked by pairs of marble lattice or *jali* screens. Now replanted with *arghawan* or Judas trees, the area between the marble screen and the outer masonry enclosure provides a tranquil space in which visitors can pay their respects; and here, among others, the grave of Babur's son Hindal also survives.

Immediately west of Babur's Grave enclosure and visible from the site of his tomb, the white marble Mosque dedicated by Shah Jahan during his visit to Babur's Grave in 1647 is arguably the most important surviving Islamic monument in Kabul. The building retains a fine inlaid marble inscription above its main elevation reading:

> Only a mosque of this beauty, the temple of nobility, constructed for the prayer of saints and the epiphany of cherubs, was fit to stand in so venerable a sanctuary as this highway of archangels, this theatre of heaven, the light garden of the God-forgiven angel king who rests in the garden of heaven, Zahir-ud-Din Muhammad Babur the conqueror.
>
> By the order of one filled with gratitude and affection, and praise of the throne of God, Abdul Muzaffar Shihabuddin Din Muhammad, the victorious king Shah Jahan after the conquest of Balkh and Badakhshan and the flight of Nadir Muhammed Khan from Balkh to Sheberghan pursued by an army of warriors in a battle of victorious troops on the battlefield.
>
> And by the clemency of God, it fell to his indigent servant and the companions of this slave, who lives in awe of the munificence of God, that towards the end of the nineteenth year of his happy reign [had this mosque built] in two years, in the year one thousand and fifty-six *hijri* for a sum of forty thousand rupees.[3]

Historic photographs indicate that a number of other buildings were erected around the Shah Jahan Mosque during the reign of Amir Abdur Rahman Khan, when the structure was covered with a traditional earth roof, later replaced by a pitched roof of steel sheeting. At the same time, the original parapet of the Mosque was removed and marble finials added. By the time the Italian Archaeological Mission began conservation in 1964, it was deemed necessary to erect a structure of reinforced concrete and brick, over which the marble facing was reassembled. Subsequent lack of maintenance, together with direct war damage, resulted in corrosion of the reinforcement and leaching of salts from the concrete, affecting both the structural marble elements and facing.

Following a detailed survey, conservation of the Mosque was initiated in 2003 with the removal of the modern roofing and laying of traditional lime concrete, and replacement of cracked marble structural elements. Missing sections of the parapet were replaced with original marble elements rediscovered elsewhere in the Garden, and the external elevation of the *mihrab* wall was refaced, using some of the original marble pieces that had been laid as paving around the Mosque. Staining on the marble elevations was cleaned and graffiti removed, but surface damage sustained during the fighting in the 1990s has been left visible.

The Garden Pavilion, built at the turn of the century as a place for the royal family to entertain guests, partially covered a large square tank that is mentioned in accounts of Shah Jahan's visit in 1638, and which also appears in nineteenth-century

| 12 | In addition to preserving the formal character of the original Mughal garden at the centre of the site, as seen in the image on the left, other areas of the landscape were designed according to local gardening traditions, entailing densely planted vegetation and meandering pathways.

illustrations of the Garden. Remnants of brick masonry beside the Pavilion foundations suggest that a platform might have adjoined the tank. Used as a residence for an English physician to the court of Amir Abdur Rahman, the Pavilion had fallen into disrepair by the 1970s. It was looted and burned during the factional fighting in 1992, and initial repairs were begun in 2003 by UN-Habitat and the Afghan organization DHSA. The restoration of the Pavilion was completed by AKTC in 2005, and since then it has been used for a range of official functions and cultural events.

While Babur might have camped on platforms similar to that found beside the Pavilion, the *haremserai*, or Queen's Palace, seems to have been the first permanent residential structure in the Garden. Built in the 1890s by Amir Abdur Rahman Khan in a local style permeated by European influences, the complex provided secluded quarters for the royal family around a central courtyard open to the west, with sweeping views of the garden terraces below and across the western plains of Kabul to the Paghman Mountains. With the building occupying the south-east corner of the site, pedestrians and horse carriages entered across the upper terraces of the Garden. Historic photos show other buildings linking the Queen's Palace to the Mosque and an adjacent hammam, but these were demolished during the reign of Nadir Shah. Used as a residence for the German legation during World War I, the complex subsequently served as a school and a military store, before being looted and burned during fighting in 1992.

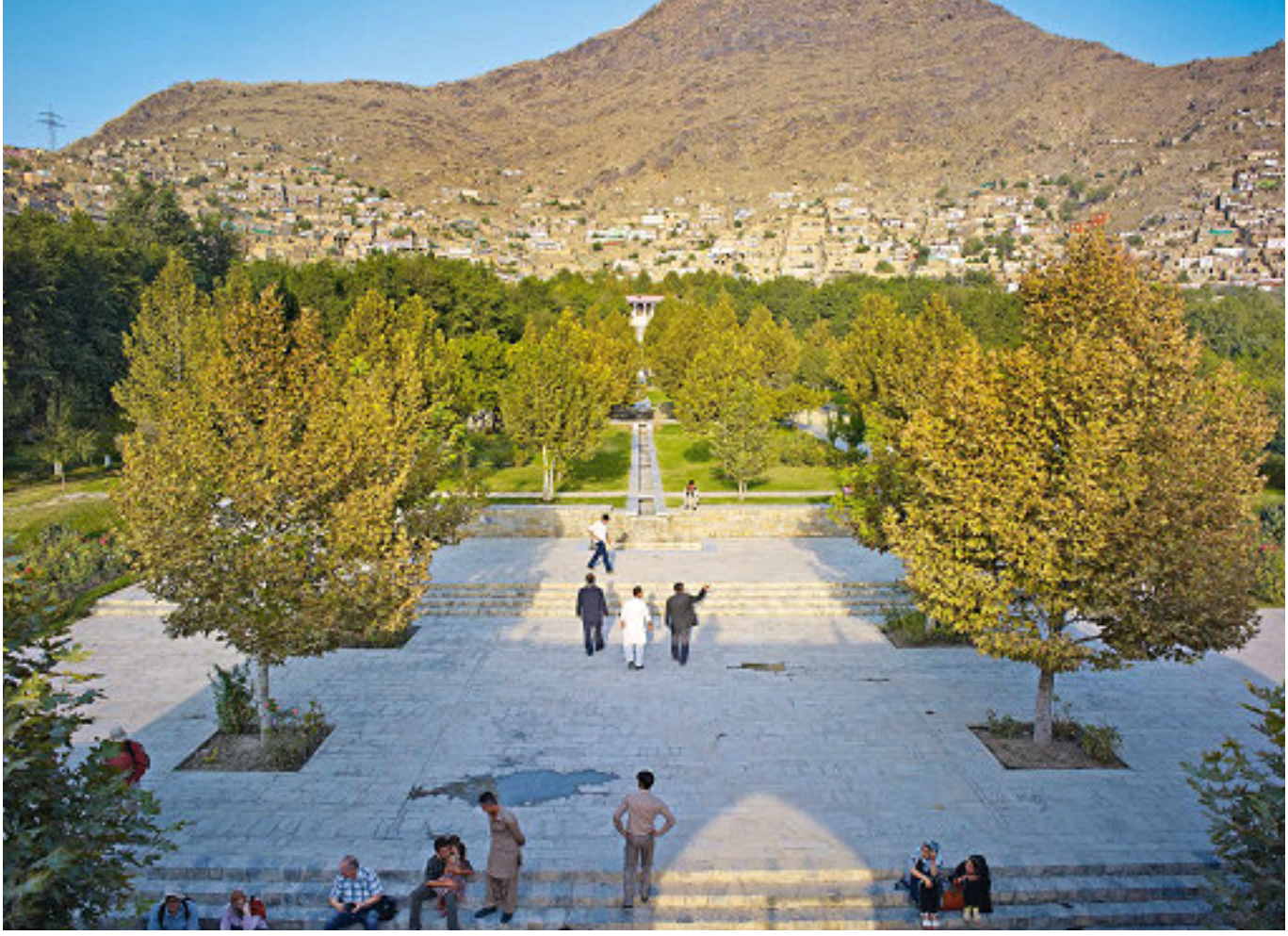
Following the clearing of unexploded ordnance and mines, the collapsed sections of the *haremserai* roof were removed and the entire complex surveyed. One space to have escaped destruction was a brick-domed hammam, whose decorated plaster was restored in 2004. Following consolidation of the ruined structure in 2005, work began on the preparation of designs for redevelopment, on the footprint of the original and with reference to historic photographs and surviving buildings of the same era. Reconstruction work began in early 2006. While respecting the architectural character of the original building, it has been possible to incorporate a range of alternative uses into the reconstructed complex and integrate new services and a range of materials. Moreover, this has provided an opportunity to develop the skills of a sizeable team of Afghan craftsmen in a range of techniques, including brick vaulting, joinery, decorative plasterwork, marble flooring and stone carving. Since its restoration, the Queen's Palace, with its large courtyard, has become the focus for public and cultural events in the Garden, generating substantial revenue towards the upkeep of the site. In 2013 alone, more than sixty-five cultural and social functions were held in the building.

Photographs of the Garden from around 1915 identify a double-storey Caravanserai structure built around a courtyard at the base of the Garden adjacent to the river. Although there was no trace of this structure above ground, excavations in 2003 revealed foundations of earlier structures and water channels. Traces of extensive stone footings, aligned with the central axis of the Garden, were subsequently discovered and seem to correspond to the gateway "adorned with gilded cupolas, befitting that place" that, according to the account in the *Padshahnama*, was commissioned by Shah Jahan.

The same passage of the *Padshahnama* refers to a building in which the destitute and poor should "eat their food in those cells sheltered from the hardships of snow and rain".[4] This was the inspiration for a new Caravanserai complex that houses the range of modern facilities required for contemporary visitors to Bagh-e Babur. Conveniently located at the bottom of the Garden, the Caravanserai building now serves as the main pedestrian entrance for visitors coming from the city side. Drawing on traditional built forms and brick-masonry techniques of the region, it houses an exhibition and information centre, offices, commercial outlets and public facilities.

Area Development Initiatives

In his Memoirs, Babur describes how he and his entourage would hunt in the forests that extended from below Kuh-e Sher Darwaza across to Paghman to the west. Early twentieth-century photographs of this plain show scattered clusters of traditional housing between market gardens, which were an important source of produce for the inhabitants of Kabul city which, until then, was largely confined within walled settlements further



13

north, along the banks of the Kabul River. The transformation of the environment below Bagh-e Babur began with the development in the 1920s of a new administrative centre in Darulaman to the south-west. In time, the fields between Darulaman and the centre of Kabul gave way to newly built suburbs replacing the traditional villages that had long dotted the plain.

Areas such as these grew significantly during the 1980s, as families fleeing war-affected villages settled in the relative security of Kabul, where they had a chance of finding employment. For those unable to afford homes in established settlements, the only alternative was to build shelter on the hillsides that separate the different sectors of Kabul. By the early 1990s, the steep, rocky slopes above Bagh-e Babur were densely settled with homes, the bulk of which were built using traditional techniques of stone masonry and mud bricks, with flat roofs. The lives of those living in these homes, however, were disrupted by inter-factional fighting in 1992, resulting in widespread displacement and destruction of property and infrastructure.

By 1994, families gradually began to return to the ruins of their homes, to clear mines and ordnance, and to embark on reconstruction. Within five years, not only had most of the original residents around Bagh-e Babur reoccupied their reconstructed homes, but settlement had resumed higher up the slopes, on illegally occupied government land, as demand for affordable housing in the city grew. Up to three quarters of the population of Kabul now lives outside the scope of the 1978 Master Plan, not eligible for official investments in infrastructure upgrading.

This is the context of an Area Development Project, initiated in early 2004, that aims to improve living conditions for the 10,000 or so people living in the immediate vicinity of Bagh-e Babur. Consultations were held with community representatives to identify priorities, on which basis investments have been made to improve storm-water drainage, water supplies and access. This has, over the past decade, been matched by widespread private investments in housing repairs and extensions, even by owners who have no legal title for the land on which they have built. The continuing construction of homes on perilously steep hillsides, however, has put additional pressure on the rudimentary infrastructure and increased risks to public health and the hazard of flash floods.

In parallel with the upgrading work, mapping and baseline surveys have been conducted in a wider area, extending over five *gozars* or sub-districts, currently inhabited by some 35,000 people. Although there are wide variations between the living conditions in the different *gozars*, these surveys reveal acute levels of overcrowding, with three quarters of families inhabiting

| 13 | Popular with local and international visitors alike, the Mughal "avenue" garden is defined by a formal network of terraces with water channels and tanks, planted with large plane trees, formal lawns and a variety of flowers and plants, and linked by paved pathways running the length of the Garden along a linear axis down the centre of the site.

15

only one or two rooms and having precarious livelihoods, with a quarter of able-bodied men relying on intermittent, casual labour. Access to basic services is limited, with nine out of ten families living on the plain reliant on unsafe water from shallow wells and with access only to rudimentary sanitation.

The data provided by the baseline surveys, together with the mapping of the physical environment, have been used in a series of participatory initiatives aimed at identifying and analysing key 'pressure points' in the area. Involving residents, community representatives and municipal staff, this process has led to the formulation of a series of 'Plans of Action', leading to the negotiation of an 'Area Development Plan'. An important aspect of this work has been to build the skills of key municipal staff at the district level, so that they might be in a better position to analyse the context and oversee current and future upgrading initiatives. It is envisaged that the 'Area Development Plan' might both leverage funding for upgrading on a larger scale and guide a broader process of physical, economic and social recovery in these *gozars*, while contributing to more effective urban governance.

Project Beneficiaries

The restoration of one of Afghanistan's most important historic sites and the largest public garden in Kabul has transformed the previously decaying and destroyed site into an authentic Mughal-era garden and a resource for the millions of inhabitants of the city. Following its conservation in 2008, Babur's Garden was added to the tentative list of UNESCO World Heritage sites.

| 14 | Preceding pages: all the flora cultivated in Babur's Garden were sourced locally, and planted in accordance with detailed information contained in Babur's Memoirs about the types and species of trees and flowers that he had planted in his gardens.

| 15 | The 11.5-hectare walled garden and historic buildings complex includes the Caravanserai and a public swimming pool on lower terraces (right), linked to facilities on the upper terraces that include the Queen's Palace, the Garden Pavilion, the Shah Jahan Mosque and Babur's Grave (left).

While ensuring that the historic landscape and buildings are safeguarded for future generations, the Bagh-e Babur rehabilitation programme has also fostered a better understanding of the needs of present inhabitants. Investments in conservation and rehabilitation continue to attract Afghan and international visitors to the Garden and have generated significant employment among the neighbouring communities, whose own investments in self-built housing have been enhanced by infrastructure upgrading. In adopting an inclusive approach towards both the conservation and planning work, efforts have been made to foster appropriate development in this highly sensitive environment. An important secondary objective of this work has been the provision of over 735,000 work days of employment for on average 350 skilled and unskilled labourers from the surrounding communities.

Many visitors to Bagh-e Babur remark that the site represents a symbol of cultural recovery in Afghanistan. The challenge continues to be that of finding a balance between the symbolic and the actual, to retain the unique character of the landscape and monuments while ensuring access to the public for recreation and education and contributing to the recovery of the wider area around the Garden.

Ensuring the Sustainability of Bagh-e Babur

Conceived as royal property, the fortunes of Bagh-e Babur until the mid twentieth century depended on investments made by Afghanistan's rulers. After the era of royal patronage, when the site became a public park, its gradual degradation bears out the challenge of meeting the costs of its upkeep from public funds.

Realizing that the management and operations of the restored Garden posed further challenges, a tripartite 'Memorandum of Understanding' was signed in 2008 between Kabul Municipality, the Ministry of Information and Culture and AKTC, which established the independent Bagh-e Babur Trust (BBT). Tasked with the overall responsibility of effectively managing and maintaining the site, the seventy-five full-time staff of the BBT have ensured that Bagh-e Babur remains accessible to the more than 3.1 million Afghan and international visitors since 2008 and that revenue collected through visits and the hire of facilities is reinvested towards the operation of the site – resulting in the financial self-sustainability of the operations since 2010. Revenue generated through these sources is crucial to the Garden's sustainability; the two-year period between 2008 and 2010, for instance, saw a forty-eight per cent increase in self-generated revenue for the Garden. Surplus of revenue coupled with additional investments by the US Embassy were used to upgrade visitor facilities and to make further investments towards the upkeep of the landscape and historic monuments. The establishment of the BBT and its successful management by an Afghan team with direct oversight by the Afghan authorities has provided an important precedent for the sustainable management and operations of historic sites across Afghanistan.

Ensuring that the historic landscape and buildings are safeguarded for future generations, the Bagh-e Babur rehabilitation programme has helped foster a better understanding of an integrated approach to cultural preservation and wider socio-economic regeneration.

Endnotes

1 Donald N. Wilber, *Persian Gardens & Garden Pavilions*, Tuttle, Rutland, 1962, p. 29.
2 L. Bogdanov, "The Tomb of the Emperor Babur near Kabul", in *Epigraphia Indo-Moslemica*, 1923/24, pp. 1–12.
3 Peter Levi, *The Light Garden of the Angel King: Travels in Afghanistan with Bruce Chatwin*, Pallas Athene, London, 1999.
4 Abdul Hamid Lahori, *Padshahnama*, Mawlawis Kabir Ai-Din Ahmad and Abd Al-Rahim (eds.), Asiatic Society of Bengal, Calcutta, 1868.

Reconstructing Babur’s Grave Enclosure

Babur’s Garden after restoration by the Aga Khan Trust for Culture, Kabul, Afghanistan.

Ratish Nanda

Background

Kabul, where Emperor Babur ruled for nineteen years, remained dear to him even after he established the Mughal dynasty in Hindustan. Babur was buried in Agra, but it was possibly his son, Humayun, who returned his body to Kabul while he was retreating from India after being defeated by Sher Shah Sur. He wanted to bury his father under "the open Kabul sky," in his favourite garden, as Babur had desired.

Bagh-e Babur was only one of several gardens created by Babur and his successors, especially his great-grandson Jahangir, in the Kabul region. Yet it is the only one that has survived, due to the significance attached to the Tomb and Garden of the founder of the Mughal dynasty. Akbar, Jahangir and Shah Jahan all made frequent visits and additions to the Garden. Jahangir added a platform to the south of the grave enclosure as well as a headstone, while Shah Jahan commissioned a mosque located west of the grave enclosure.

By the nineteenth century, with the end of the Mughal dynasty, the Garden had gone into decline, and for almost two centuries, with all traces of the marble grave enclosure having disappeared, scholars referred to the area as the "lost tomb of Mughal emperor Babur".

The only visual documentation of this period is an 1832 camera lucida image shot by the famed traveller Charles Masson. Mid nineteenth-century photographs, such as one by Burke taken in 1879, show only fragments of the marble grave enclosure scattered in the vicinity of Babur's Grave. For, as Masson had already noted: "...the tombs, for the truth must be told, are the objects of least attention in these degenerate days. No person superintends them and great liberty has been taken with the stones employed in the enclosing walls..."[1] Having collected over 80,000 objects for the British East India Company, it is

2

|1| Babur's Grave once again stands within a marble enclosure "under the open Kabul sky" as the emperor had desired.

|2| Original stone fragments of all the elements used in the marble enclosure were discovered during restoration work, including three from the arched gateways and one from the lattice screen.

3

100 m

quite possible that Masson also helped himself to some of the marble fragments, such as the lattice screens – as he notes that others had done.

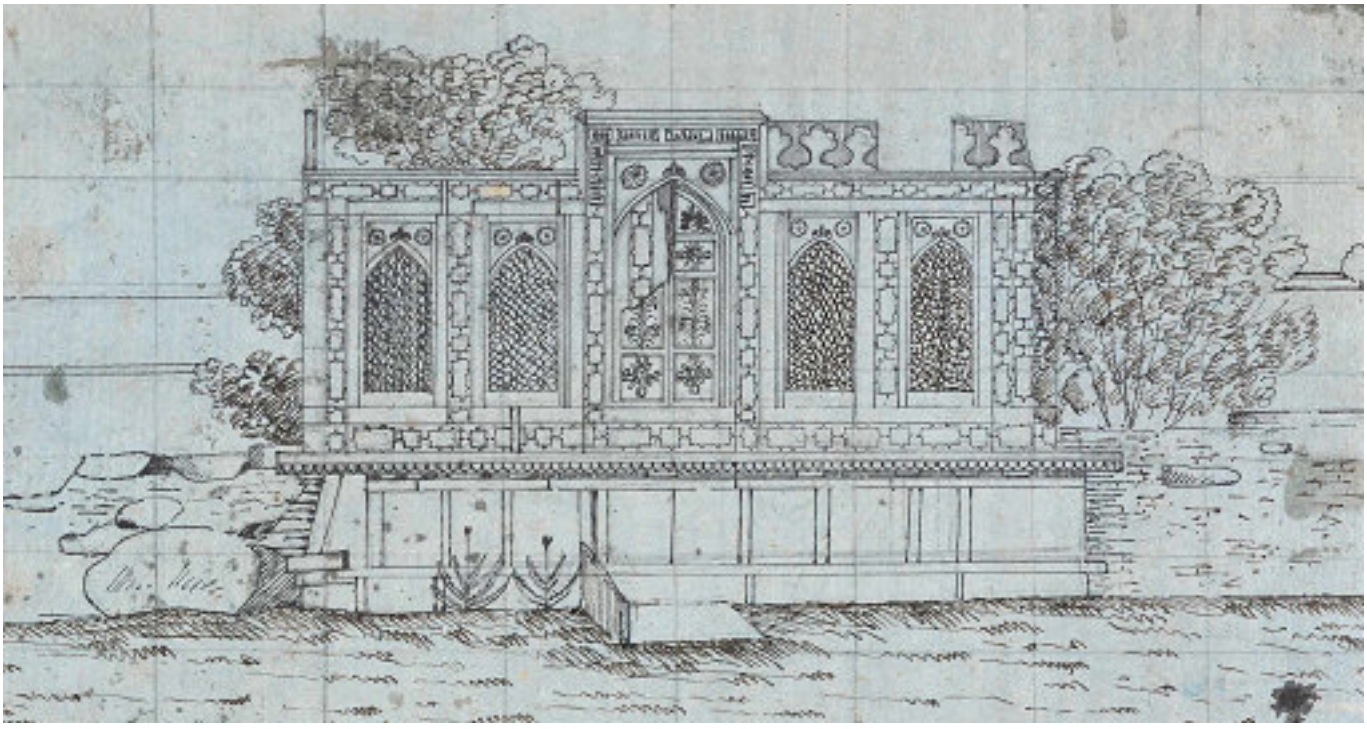
In the nineteenth and twentieth centuries, the Afghan royals made several additions and alterations to Bagh-e Babur, which eventually became a municipal park, open to the public. During this period several additions were made to the area of Babur's Grave and these ranged from a 17.6-square-metre nineteenth-century arcaded masonry enclosure, to a twentieth-century concrete pavilion with a pan-tiled roof above a concrete slab.

In 2002, when the Aga Khan Trust for Culture (AKTC) initiated the Bagh-e Babur restoration, the emperor's grave stood covered by this concrete pavilion, then in ruinous conditions and requiring dismantlement. The terrace on which the grave enclosure stood was levelled with earth from the adjacent swimming pool.

Following the study of archival material, including the original Masson camera lucida image, sourced from the British Library, three years of persistent surface archaeology in the Garden led to the discovery of twenty-four stone elements from the "lost tomb of Emperor Babur". These had been reused in paving for the Shah Jahan Mosque, in the foundations of a twentieth-century toilet built in the courtyard of the Queen's Palace, and embedded in retaining walls.

Fortunately, at least one portion of all the architectural elements used in the original grave enclosure was discovered: pieces from three entrance gateways; several parts of the *kangura* parapet; one piece of the moulding below the parapet; one segment of the elongated arches seen in the Masson image on either side of the entrance arch; several sections of the ornamental band with geometric patterns that framed the arches; and even a fragment of the lattice screen.

A study of the fragments revealed the accuracy of Masson's image as well as poor craftsmanship when compared with fragments from the grave enclosure of Ruqaiya Sultana Begum – commissioned by Emperor Shah Jahan. The poor craftsmanship



4

may have been the result of the limited time available to Humayun to allow his father a burial in keeping with his desires, as he fled to exile in Persia.

Conservation

With the discovery of the original camera lucida image, other archival material and twenty-four stone fragments from the original construction, the architectural details of the grave enclosure became clear to the AKTC project team. With the original Mughal designs now understood, and the realization that Babur's Grave enclosure was one of the most significant elements in the Garden, and possibly the reason for its survival over five centuries, the conservation effort aimed to restore the historic character of the grave precinct and dignity to the grave. It was agreed that the proposed reconstruction of the marble enclosure would capture the spirit of the original design without damaging what had survived below ground of the original and subsequent interventions.

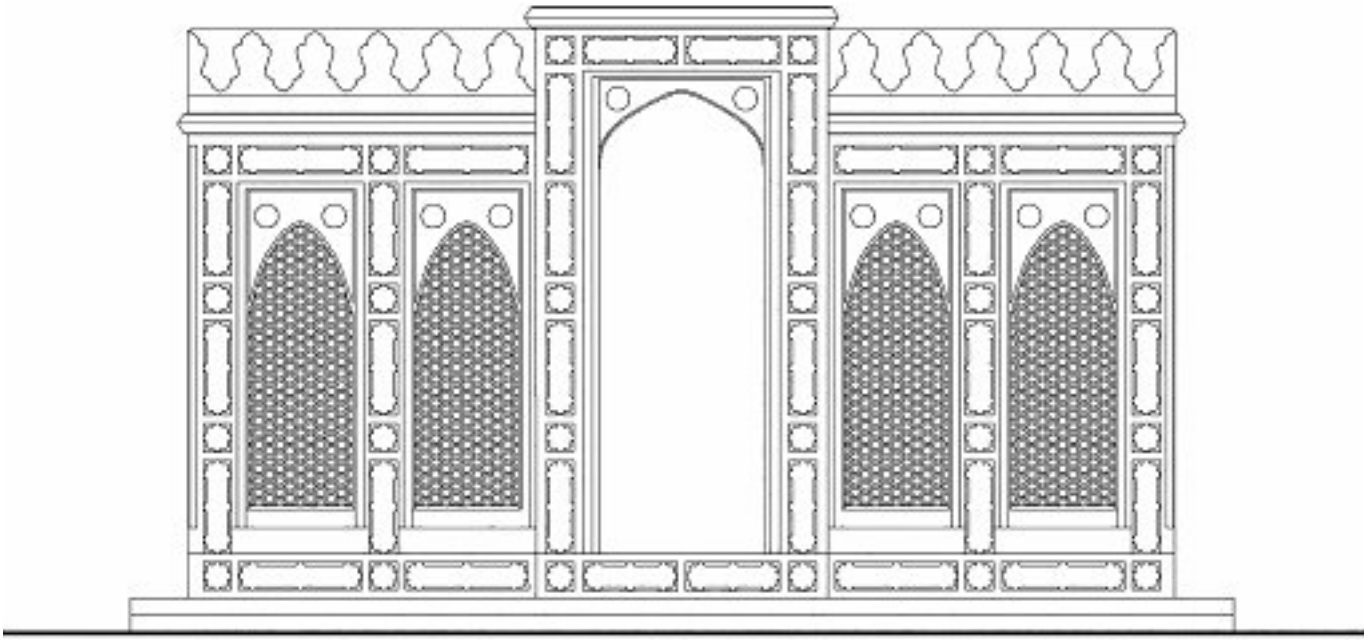
With the available evidence, the 1832 camera lucida image and the results of surface archaeology, a strong case could be made to reconstruct the marble enclosure. The reconstruction, based on scientific evidence, would also reveal the cultural significance of Bagh-e Babur as a whole, while restoring the relationship between the emperor's grave, sitting at the high end of the Garden, and the rest of the Garden and later buildings. In keeping with accepted international practice, the reconstruction is legible as 'new work' and clearly a major enhancement of the site. It was decided to display the twenty-four original stone elements, of great historical value, in the protected environment of the site museum.

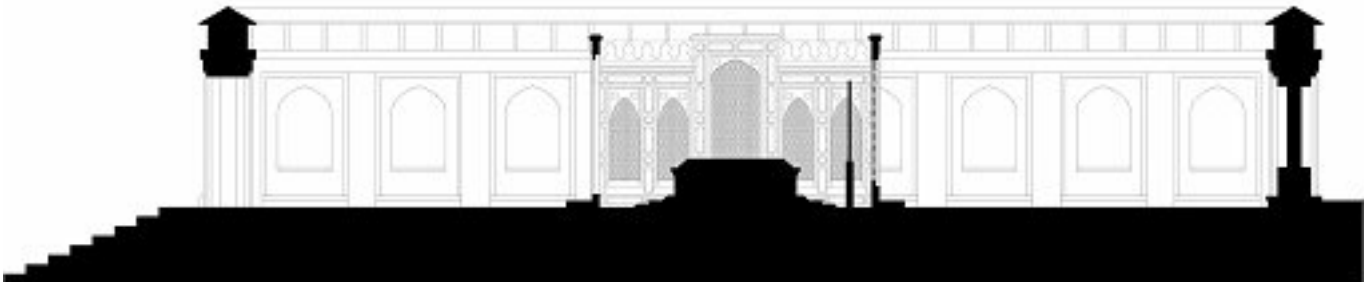
The reconstruction proposal was peer reviewed and Sir Bernard Fielden, Director Emeritus of ICCROM, commented: "...[AKTC] outlines a major conservation project with great clarity. I hope the execution goes well and you get the support of the local stakeholders".[2] Professor Michael Petzet, the President of ICOMOS, further commented: "Babur's grave was a problem which from my point of view was hardly solvable. Thus I am really happy that you succeed in offering a possible solution with the reconstruction of the marble enclosure based on [the image of] Charles Masson and the discovered stone fragments – a solution which corresponds to the original spirit of the place and also protects the sanctity of the historical burial place. Consequently I can only agree with Sir Bernard's enthusiastic remarks on your proposals for Babur's grave precinct."[3]

Following the peer review and approval of the Afghan government's Department of Archaeology, the reconstruction commenced with the acquisition of marble from Shah Jahan's favoured quarries of Makrana in Rajasthan, India. It was agreed that this twenty-first-century grave enclosure would be carved by master craftsmen using traditional tools, building skills and

|3| Bagh-e Babur lies nestled on a hilly outcrop. Access is from the riverside, with Babur's Grave located on the upper terraces.

|4| In 1832 British traveller Charles Masson took a camera lucida image of the marble enclosure. A comparison of this with the fragments discovered revealed it to be very accurate.





5

contemporary craft traditions, allowing the ornamental motifs to be of high quality.

Architectural models – typically used by Indian craftsmen for centuries – were provided, as were 1:1 scale drawings to allow the craftsmen to take measurements. Each element was carved separately in Delhi, after which Afghan and Indian craftsmen worked together to erect the enclosure. In addition to traditional stone joints, stainless-steel clamps were used to fix the stones to one another.

Together with the marble enclosure and its southern marble platform, the 17.6-square-metre arcaded masonry enclosure was also rebuilt on its original foundations, respecting later additions as well as providing a layer of protection to the comparatively delicate marble screen enclosure. The southern half of the terrace was also lowered to original levels, thus restoring the difference in grade of the immediate setting.

Babur's gravestone, seen in archival images to be a simple marble block but replaced in the twentieth century with an ornamental composition of a variety of marble tiles and oynx, was, however, left as found, in keeping with Professor Petzet's suggestion.

Similar documentation, archaeology and archival research were used as the basis for the reconstruction of Bagh-e Babur's 'central axis' on the Landscape Plan prepared by Mohammad Shaheer. The central axis had similarly been lost in twentieth-century alterations and further damaged during the prolonged war that Kabul has witnessed.

Babur, once again lies under the open Kabul sky, to which he returned only in death.

|5| The marble enclosure now stands within a reconstruction of the 19th-century arcaded masonry enclosure – built on its original foundations. It is accessed by steps from the terrace that has been lowered to its original levels.

|6| The marble enclosure reconstructed on the basis of archival and material evidence restores the dignity of Babur's Grave and respects the original intention of the Mughal builders for this most significant element in the Garden.

Endnotes

1 Charles Masson, *Narrative of Various Journeys in Balochistan, Afghanistan and the Punjab from 1826–39*, Bentley, London, 1842.
2 Sir Bernard Fielden, Director Emeritus, ICCROM, e-mail to the author, 7 September 2004.
3 Professor Michael Petzet, President of ICOMOS, e-mail to the author, 20 September 2004.

6

Restoring Babur’s Garden

Visitors stroll through Babur’s Garden, Kabul, Afghanistan.

Mohammad Shaheer

The Garden is situated on a hillside overlooking the Kabul River. It is completely enclosed by walls and occupies almost eleven and a half hectares of land, spread upwards over sixteen terraces. The difference in level between the lowermost part of the Garden and the uppermost terrace is approximately thirty-five metres. A large orchard with a central water channel runs down the middle, with each transition of the channel between terraces negotiated by a cascade and ponds.

Neglect and war over a period of decades resulted in extensive encroachment and destruction of the gardens. The terraces and slopes were substantially damaged, though still recognizable in profile, and the water systems and planting were virtually non-existent in any coherent form. Repair and restoration of the ground levels and grades was thus a priority, to be carried out before or in tandem with implementation of water and planting schemes.

The general policy for landscape restoration proposed:

— to follow in spirit the geometry of the Garden as it exists, intervening significantly only to restore the landscape where visible remnants or historical records of its former state were evident, as for example those found after archaeological investigations of the central axis. The major idea of the approach was to restore the shape of the terraces and slopes with sensitive grading and then implement large-scale planting with species appropriate to Mughal preferences as well as local tradition;
— in this way to create variations in planting format on a major portion of the terraces to bring the Garden back to the state of a flourishing orchard;
— to provide at the same time for use as a public garden by improving access to various areas and to restore the landscape of the central axis keeping this in mind;

2

|1| The 20th-century layout was sacrificed to restore the Mughal layout of the central axis, comprising retaining walls, marble-lined water channels and waterfalls at each terrace.

|2| In his early 19th-century watercolour, James Atkinson captured the character of the Garden's central axis marked by towering *Panja Chenar* (oriental plane) trees and flowing water.

— careful grading and the creation of interesting seating places with masses of a variety of fruit trees interspersed with clusters of much larger trees such as *chenar* and walnut.

Spaces

The existing land profile was used as a guide to determine the grade of the slope between each terrace level. The slopes were worked out to minimize shifting or excavation of earth and yet impart a degree of precision to the terrace arrangement.

Four broad types of activity were anticipated for the open spaces of the Garden:

1. First, the area around Babur's Tomb and Mosque and the zone of upper terraces above that would attract a limited number of visitors and could be considered a quiet contemplative area.
2. Second, the 'central axis' – the heart of the Garden – which would naturally become the main attraction with ponds and channels (as depicted in the nineteenth century). It would be a busy and intensely active landscape.
3. Flanking this on either side would be shaded spaces for picnicking and outdoor relaxation in the deep shade of the orchard plantings – a traditional form of recreation typical of the region and popular today as well. Orchards and large shade trees characterize pictorial records not only of Bagh-e Babur but also of other gardens of the period. The landscape in this third zone was designed to evoke these scenes.
4. The entrance areas of large public spaces are often special places of transition – from the outside to the inside – where people pause or wait, or congregate on ceremonial occasions. Two distinct entrance zones of this kind were designed: one for the public at the western end, from the riverside road, and the other for occasional ceremonial use, at the existing south-eastern point of entry.

Water

The central channel (now buried) may have been the main irrigation source for both sides of the Garden; it is difficult to tell because the present levels of the terraces in the northern half of the Garden do not encourage this hypothesis: they are higher than the level at which the channel is buried. However, the local ground slopes may have changed over the years.

While addressing the repair or restoration of water systems, conservation policies for historic gardens usually distinguish between water elements for visual effect and those needed for irrigation. Often it is not possible to restore the open irrigation channels to their rightful role and they are then recreated for appearance, with pumping systems to recycle the water; the irrigation needs of the garden being served more efficiently by a concealed network below ground.

At Bagh-e Babur archaeological excavations have established the original levels of the central water channel. Together with its pools and cascades, this channel was the Garden's main attraction. Over the years it has been significantly altered and its remnants are buried at various levels below the current land profile. In the early twentieth century an elaborate series of ornate European-style fountain pools was constructed over it, but these also were destroyed during the war.

Images, archival records and very detailed measurements of the archaeological remains of the central channel obtained from investigative excavations carried out during the project helped establish a substantively correct profile for the representation of its dimensions and character. The archaeological remains were kept protected and intact underneath.

Irrigation water is brought to each orchard area through a conventional underground piped system for efficiency and also to reduce loss by evaporation, which is inevitable with open channels. Most of the irrigation system is thus concealed, but certain specific lengths of open channels and basins have also been incorporated in the broad tradition of Mughal and Persian garden irrigation practice, together with well-defined circular depressions to hold the water at the bases of trees.

Planting

In keeping with the image agreed on by most scholars – that of lush foliage in organic abundance over flowing water channels and brimming pools – it was possible in Bagh-e Babur to undertake large-scale orchard-style planting, much as depicted

3

in miniature painting. This was viable here thanks to the circumstances of history and the inherent simplicity of the layout, an option not often feasible in other Mughal gardens because their usage, and hence spaces, is too strongly established in the mode of public gardens to accept major alteration.

On the subject of orchard planting in gardens, and since such examples are not well known, there is an interesting parallel between a minor, very late Mughal garden (at Pinjore, near Chandigarh, India) and Bagh-e Babur. It, too, is laid out in terraces on either side of a central axis with a water channel, cascades and ponds, the terraces being occupied today by dense mango and guava orchards.

The tree species suggested at Bagh-e Babur have been selected from those that are either native or naturalized in the Kabul region, or mentioned in the historical literature about Mughal gardens generally, and include some, especially *arghawan* or Judas trees, that are associated with Babur.

Large stately trees impart substance and structure to the Garden, recalling images where the spaces of a garden are seen against a background of *chenar* or other big trees; fruit trees in an orchard planting provide vegetal masses that complement the enclosed open spaces, adding colour through seasonal variation and blossom; smaller shrubs, the *arghawan* for instance, add variety and a change in scale.

Near the central axis, three zones of planting have been envisaged: the outermost, next to the boundary walls, consists of walnut and ash, large trees planted in clumps, not rows, to allow the walls to be seen. Next comes a dense orchard zone with larger fruit trees such as mulberry (Toot), fig and apricot; between this and the central area is the third zone of sparser orchard planting with gaps and spaces for picnics, with smaller fruit trees and *arghawan* shrubs. In contrast, the extensive open area of the central axis is marked on either side with specimens of *chenar* planted at appropriate intervals, with banks of spectacular Afghani roses on some terraces.

List of Plants

The trees proposed in the planting scheme for Bagh-e Babur were chosen from three sections:

1. Large trees for shade and foliage, including large fruit trees:
   chenar (*Platanus orientalis*)
   walnut (*Juglans*)
   ash (*Fraxinus*)
2. Medium to large fruit trees:
   mulberry (*Morus*)
   zard alu (*Prunus*)
3. Small to medium fruit trees:
   fig (*Ficus carica*)
   alu balu (*Prunus*)
   badam (*Amygdalus*)
   together with small trees and shrubs such as:
   arghawan (*Cercis siliquastrum*).

|3| The entrance plaza to the Garden from the riverside.

Delhi

The Area of Humayun's Tomb

Humayun's Tomb World Heritage Site comprises several 16th-century garden-tombs.

Ratish Nanda

Delhi has been in continuous existence for over a thousand years. At least ten capital cities were built here, all within a triangle formed by the River Yamuna on the east and the hilly outcrop of the Delhi ridge on the west and south.

In the early thirteenth century Ghiyasuddin Balban, prior to becoming sultan of the Slave dynasty or the Il Bari Turks, built a palace called Lal Mahal along the River Yamuna, and the area came to be known as Ghiyaspur. A few decades later Hazrat Nizamuddin Auliya, a revered Sufi saint, chose to meditate and live in close proximity to the palace. In 1325 he was buried nearby in the courtyard of a mosque built in his honour during the rule of the Khalji dynasty, and the area came to be known as Nizamuddin.

Two centuries later, in 1526, after winning his battle for control of Hindustan at Panipat, Emperor Babur recorded his entry to Delhi in his journal: "On Tuesday, I circumambulated Shaykh Nizam Awliya's tomb and camped beside the Jamuna directly opposite Delhi. That evening I toured the Delhi fortress..."[1] That Babur, the founder of the Mughal dynasty, would offer his reverence at the saint's grave on his entry to Delhi and prior to even visiting the fortress he had just conquered demonstrates the spiritual significance of the area to the Mughals.

As it is considered auspicious to be buried near a saint's grave, an abundance of tomb building occurred in the area beginning in the fourteenth century. Many of the most significant structures of the early Mughal reign were also built here, beginning with Emperor Humayun's capital city of Dinpanah – its citadel today known as the Old Fort.

Just south of the city of Dinpanah, along the banks of the River Yamuna – abutting Hazrat Nizamuddin's riverside *chillgah*, or meditation chamber, and on the Grand Trunk Road that linked Lahore to Calcutta – Emperor Akbar built the Tomb-Garden of his father Emperor Humayun in the mid 1560s. As Ebba Koch,

2

3

|1| The 14th-century Dargah of Hazrat Nizamuddin Auliya stands at the heart of the project area and led to a profusion of tomb building here over 700 years.

|2| Located along the Mughal-era Grand Trunk Road, the Sunder Nursery area is home to several structures from the Mughal period.

|3| An 1860s view from the roof of Humayun's Tomb looking towards Hazrat Nizamuddin Basti.

a noted historian of the Mughal Empire, writes: "With the first major building enterprise of Akbar's period, the tomb of his father [...] Mughal architecture came into its own. The tomb of Humayun is a synthesis of creatively developed Timurid ideas and local traditions, the whole breathing true Mughal splendour in its perfect planning. It is the first of the great dynastic mausoleums that were to become synonyms of Mughal architecture. Here for the first time the monumental scale is attained that was to be characteristic of imperial projects."[2]

In 1993 Humayun's Tomb complex was inscribed on the UNESCO World Heritage list. UNESCO documents state that the Tomb complex was "built on a monumental scale, with a grandeur of design and a garden setting with no mausoleum precedents in the Islamic world. [It] truly represents a Mughal innovation [...] Humayun's Garden-Tomb, and several contemporary sixteenth structures on the property, form a unique ensemble of Mughal-era garden-tombs."[3]

The urban renewal project led by the Aga Khan Trust for Culture (AKTC) focuses on an area that is home to structures built over a period of seven centuries, including the three centuries of Mughal rule. The project has aimed to undertake conservation works on all the monuments standing within the project area, using traditional materials, tools and building crafts. Conservation works were coupled with the landscaping of almost eighty-one hectares to restore the setting of the monuments and the buffer zone of the World Heritage Site, as well as to ensure long-term preservation.

The project has revived a craft-based approach to conservation. Stone-carvers, masons, glazed-tile makers, carpenters and plasterers have worked alongside multidisciplinary teams of conservation and landscape architects, civil and hydraulic engineers, archaeologists, architects, historians and designers to develop a model conservation process for the Indian context.

4

5

6

7

Establishing the Project

Background

When designating Humayun's Tomb as a World Heritage Site in 1993, ICOMOS experts were "critical of the poor state of the gardens around the tomb" and the Archaeological Survey of India (ASI) undertook to restore the gardens as a precursor to the UNESCO designation. The year 1997 marked fifty years of India's independence and on that occasion His Highness the Aga Khan, in response to a request from ASI, gifted the garden restoration of Humayun's Tomb to the nation. This was the first scientific garden restoration in India, as well as the first privately funded and implemented conservation effort at any of India's monuments of national significance.

The gardens within the 10.5-hectare walled enclosure of Humayun's Tomb were in a decrepit state and suffering from insensitive alterations and planting. The neglect of almost a century had disfigured the historic character of the site. The work on the garden thus aimed at restoring its original levels, planting flora appropriate to Mughal gardens and restoring flowing water within the garden. This effort required that 12,000 cubic metres of earth be manually lifted and removed to restore levels; three kilometres of sandstone were hand-chiselled to replace the missing or damaged sandstone edging of the water channels; over 3000 plants were added; the restoration of 22,500 square metres of pathways was carried out; and a major rainwater harvesting system was introduced, all part of the works carried out by AKTC. The garden restoration was completed in April 2003 and AKTC managed and maintained the restored gardens for an additional year.

Following the success and significant impact of the restoration of Humayun's Tomb-Garden, the then prime minister of India, Dr Manmohan Singh, requested a further partnership in the field of culture. In response to this request, and also in order to build on the success of the garden restoration and to demonstrate the potential of coupling conservation efforts with socio-economic development and environmental development initiatives, AKTC expressed a desire to return to the Humayun's

|4| Traditional stone craftsmen carry stone blocks required for conservation work.
|5| Restoring the central incised plaster medallion on the ceiling of Humayun's Tomb entrance chamber.
|6| Young people from the adjoining Hazrat Nizamuddin Basti were employed to make the ceramic tiles, thus reviving a craft tradition.
|7| Restoration of tile work on the canopies on the roof of Humayun's Tomb as per original patterns.

Tomb – Nizamuddin area to implement an Urban Renewal Initiative that would showcase Mughal heritage while improving the quality of life for local communities and significantly enhancing the visitor experience.

Partnerships

To fulfil the project objectives of heritage and environmental conservation and socio-economic development, a single 'Memorandum of Understanding' (MoU) was signed on 11 July 2007 with ASI (the government of India agency mandated for the preservation of national heritage); the Central Public Works Department (owners of the twenty-eight-hectare Sunder Nursery); as well as the Municipal Corporation of Delhi (responsible for primary health, primary education, sanitation, urban improvements and waste management).

Just as the garden restoration of Humayun's Tomb-Garden was the first such initiative, there was no precedent in India for a private agency undertaking an urban renewal project with diverse components. AKTC was responsible for coordination between government agencies. This has remained a significant challenge especially since follow-up MoUs have been signed with several other agencies, such as the Delhi Development Authority, Delhi Government's Department of Women and Child Development, the Public Works Department and the Department of Archaeology, among others.

The Nizamuddin Urban Renewal Initiative has included at least two hundred individual projects over the past seven years that include conservation works on almost fifty individual monuments and landscaping of over eighty-one hectares spread across the Humayun's Tomb complex, Sunder Nursery and the neighbourhood parks in Hazrat Nizamuddin Basti. A major community health programme coupled with pathological facilities for over 55,000 people has also been part of the initiative, as have education programmes ranging from primary education to adult education and vocational training, livelihood training, the construction of community toilets, reviving the cultural legacy of the area represented by seven centuries of musical traditions, and other intangible heritage efforts that include food, crafts and rituals.

Critical funding required for project activities has been received from a multitude of agencies, thus allowing expansion of the programme. Conservation works at Humayun's Tomb and Nila Gumbad have been co-funded by the Sir Dorabji Tata Trust and allied trusts. Isa Khan's garden-tomb and Bu Halima's garden-tomb have been conserved subsequent to grants from the World Monuments Fund. The US Ambassadors Fund for Cultural Preservation provided funds for the conservation of the sizeable Batashewala-Unknown tomb complex as well as for Sunderwala Burj: a tomb in the complex is known as the "Unknown tomb". The German Embassy supported the complicated conservation works undertaken on Chausath Khamba and the Arab ki Serai's northern gateway while the JM Kaplan Fund and Housing and Urban Development Corporation helped work on the Sunderwala Mahal. The Department of Archaeology of the Government of Delhi and the Delhi Development Authority have recently allotted funds for the conservation of Azimganj Serai and monuments in Hazrat Nizamuddin Basti respectively. With Interglobe Foundation pledging funding, conservation works are also to commence on the grand mausoleum of Abdul Rahim Khan-i-Khana, the famous poet and general in Emperor Akbar's army. Planning is now underway to build a modern site Interpretation Centre with funding from the Indian Ministry of Tourism.

8

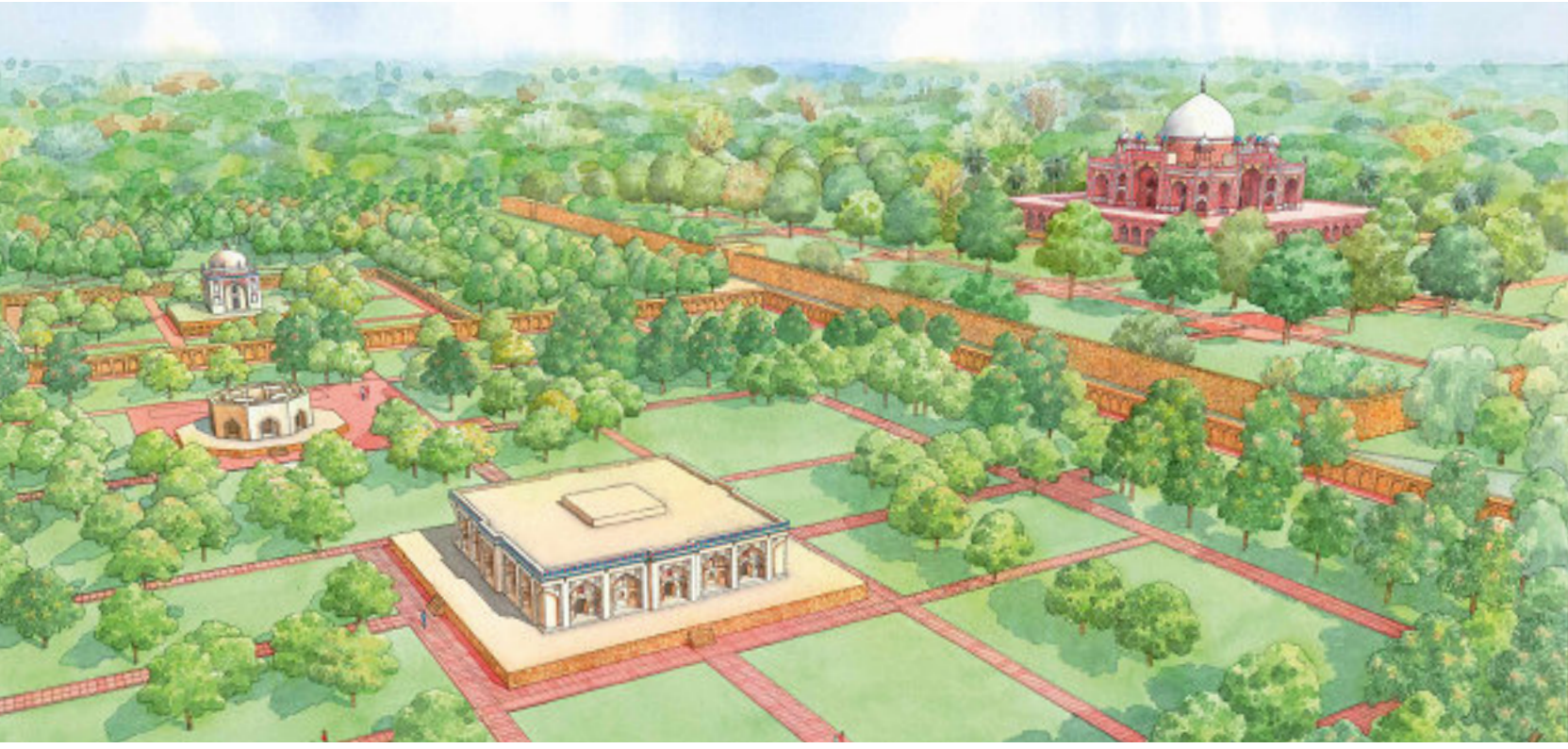
|8| The tomb of Abdul Rahim Khan-i-Khana built a few decades after Humayun's Tomb.

|9| The project site of Nizamuddin Urban Renewal Initiative, now designated a Heritage Zone in the Delhi Master Plan, covers an area of 121 hectares in the heart of New Delhi. The new Humayun's Tomb Site Museum is also located here.

9

1 Azimganj Serai
2 Sunder Nursery
3 Batashewala Complex
4 Humayun's Tomb Site Museum
5 Humayun's Tomb Complex
6 Hazrat Nizamuddin Basti
7 Abdul Rahim Khan-i-Khana's Tomb
8 Nila Gumbad

300 m



11

State of Conservation

Though designated a World Heritage Site, Emperor Humayun's Tomb and its attached structures were in a poor state of preservation with inappropriate past repairs that severely compromised the authenticity of material and design and accelerated the process of decay. Major works undertaken on several structures in the complex as recently as 2003–05 included laying cement layers on roofs and plinths and the profuse application of cement plaster on wall surfaces – often obliterating ornamental incised plasterwork. Since 2007 much effort has gone into undoing past repairs, using traditional materials and building craft techniques to restore architectural details formed by the Mughal builders, where these are known.

Despite the rapid and almost uncontrolled urban development that Delhi has witnessed over recent decades, the link between Humayun's Tomb and Humayun's Old Fort citadel had remained green – with Sunder Nursery and the National Zoological Park occupying a large part of this space. A threat to the integrity of the site came from a proposal of the Delhi government to build an extension of National Highway 24 through Sunder Nursery in order to connect central Delhi with eastern parts of the city. Not only would this have split the setting of the World Heritage Site and made future planned extensions impossible, but an expected 12,000 cars per hour would have been brought to the entrance of the Humayun's Tomb complex, making access for visitors unpleasant. A cross section of civil society groups, including environmentalists and resident welfare associations, led a campaign against the planned route that was eventually not permitted to be built by the Delhi Urban Art Commission.

The immediate setting of all major monuments within the project area had been disfigured. Bu Halima's garden-tomb enclosure was breached by a twentieth-century carriageway. Earth levels within Isa Khan's garden-tomb were over one metre higher than original levels. Sunderwala Burj stood within a traffic island; Sunderwala Mahal was hemmed in by temporary structures built for nursery operations; the Batashewala complex and the Unknown Mughal tomb lost much of their walled enclosures; and the Nila Gumbad was separated from Humayun's Tomb by a road and hemmed in by squatters.

Conservation works undertaken by AKTC have included restoration of the immediate landscape setting and enhancing the landscape of the wider setting. Lack of available archival material and historical research meant that the project required a significant research effort at institutions across the world to source archival photographs and records of works carried out during the British era. On-site investigations – archaeology,

| 10 | Preceding pages: conservation work being undertaken at Isa Khan's Tomb in Humayun's Tomb complex.

| 11 | Abutting Humayun's Tomb-Garden on the north stands the 6.8-hectare Batashewala complex comprising three 16th-century Mughal tomb-gardens.

| 12 | A 3D laser-scan image of Humayun's Tomb complex.

architectural documentation, a ground-penetrating radar survey and 3D high-definition surveys using laser scanning – were used in addition to archival research to fully understand the site prior to the formulation of the Conservation Plan.

Just as the state of conservation and the setting of the monuments had to be addressed, so, too, did the disconnection of the monuments with the residential communities of Hazrat Nizamuddin Basti, where, despite the presence of a dense ensemble of medieval monuments, the quality of life was poor. High malnutrition among children, poor health parameters especially for women, lack of basic in-home toilets, poor waste disposal, high levels of illiteracy and dropouts among school children, high unemployment with less than one per cent of women employed were some of the factors that had to be addressed as part of the urban renewal initiative.

A significant cultural revival programme led by youths from resident communities, who were first involved in a cultural mapping exercise, has led to resurgent pride in parts of the population. Each year, local youths have walked thousands of school students through the narrow lanes, bringing alive the built and intangible heritage, and in turn helping to bridge a communal divide. Local youths have also been at the centre of a craft revival and have been trained by craftsmen from Uzbekistan to make glazed tiles matching those of the Mughals.

Conserving Mughal Heritage

Following the thirteenth-century construction of Lal Mahal, the earliest structures in the greater Nizamuddin area were mainly built in what today constitutes the Basti – where the saint Hazrat Nizamuddin Auliya lived and was buried. The early fourteenth-century mosque and the step-well, or *baoli*, built here indicate the presence of a large congregation of followers of the saint.

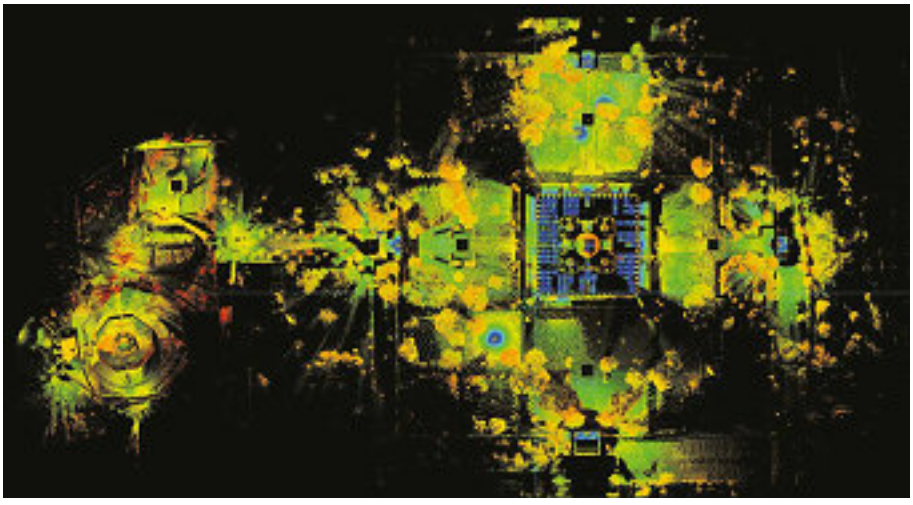
With the arrival of the Mughals, considerable building activity commenced here in the early sixteenth century and continued until the decline of the Mughals in the nineteenth century, making the Nizamuddin area easily the most significant building site of the early Mughal reign. Though over two dozen monumental structures stand within the project area, with the most prominent among these being the tomb of Emperor Humayun and the attached Nila Gumbad, the other Mughal structures can be classified in three distinct categories: the tombs of prominent nobles; garden-tombs adjoining Emperor Humayun's mausoleum; and finally the Mughal serais.

Humayun's Tomb

Historical background

It is striking that the Tomb-Garden of Emperor Humayun has no precedent in the Islamic world in terms of scale, design and use of material. At the time, it was easily the largest mausoleum to have been built – dwarfing the tombs built in Delhi during the preceding Sultanate era. The construction of the mausoleum was commenced a decade after Emperor Humayun's death and only once his son and successor Emperor Akbar had consolidated the throne. As such it was as much a political statement of the young Akbar, as it was a memorial to his father's memory.

The mausoleum sits in an enclosed garden, based on the Qur'anic description of Paradise and in keeping with the Mughal



12

Sultan Ghari
1231

Ghiyas-ud-din Tughlaq's Tomb
1325

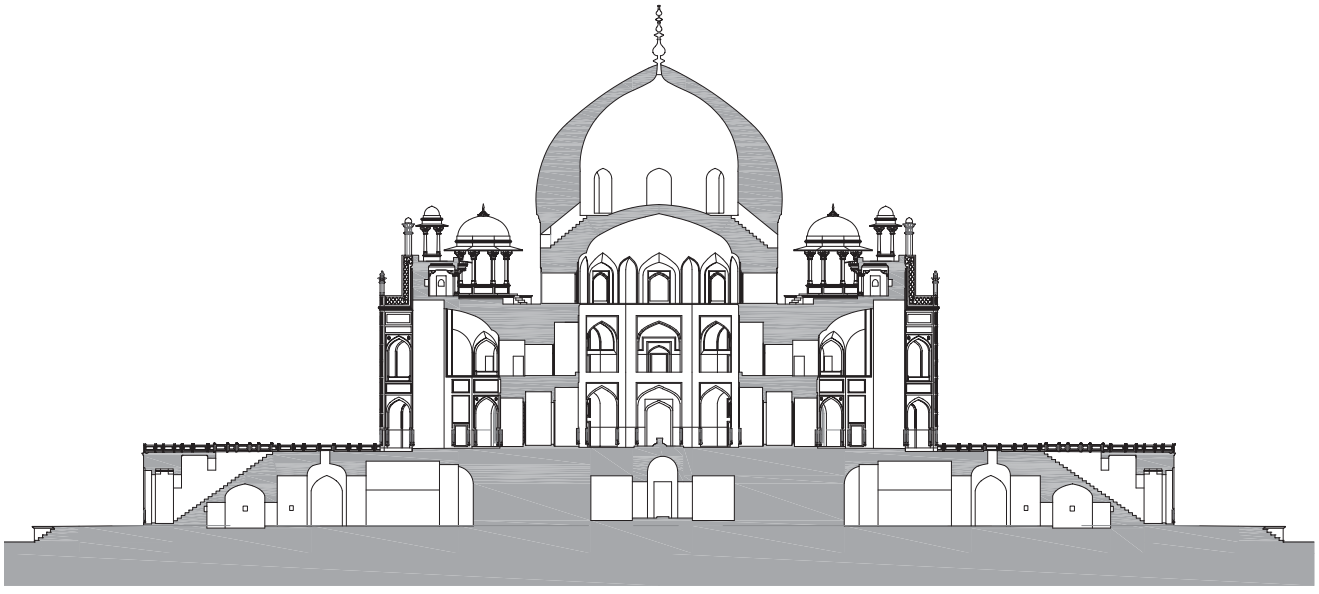
Muhammed Shah Saiyyad's Tomb
1443

Sikandar Lodi's Tomb
1518

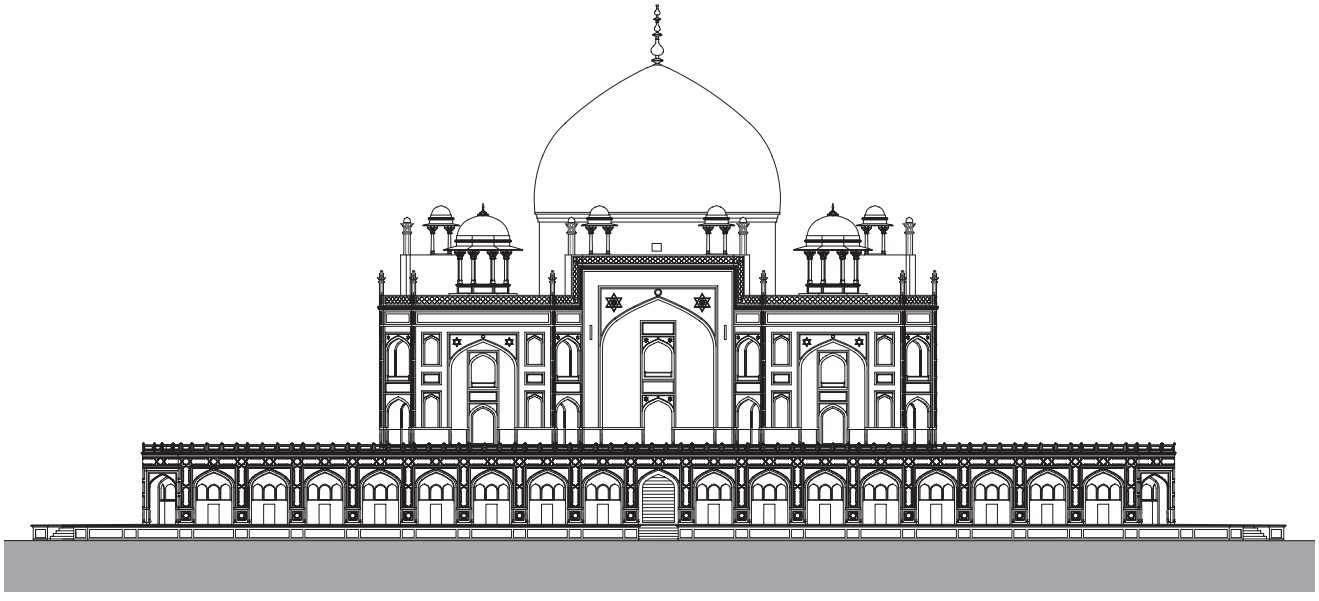
Isa Khan's Tomb
1547

Humayun's Tomb
1572

13



10 m

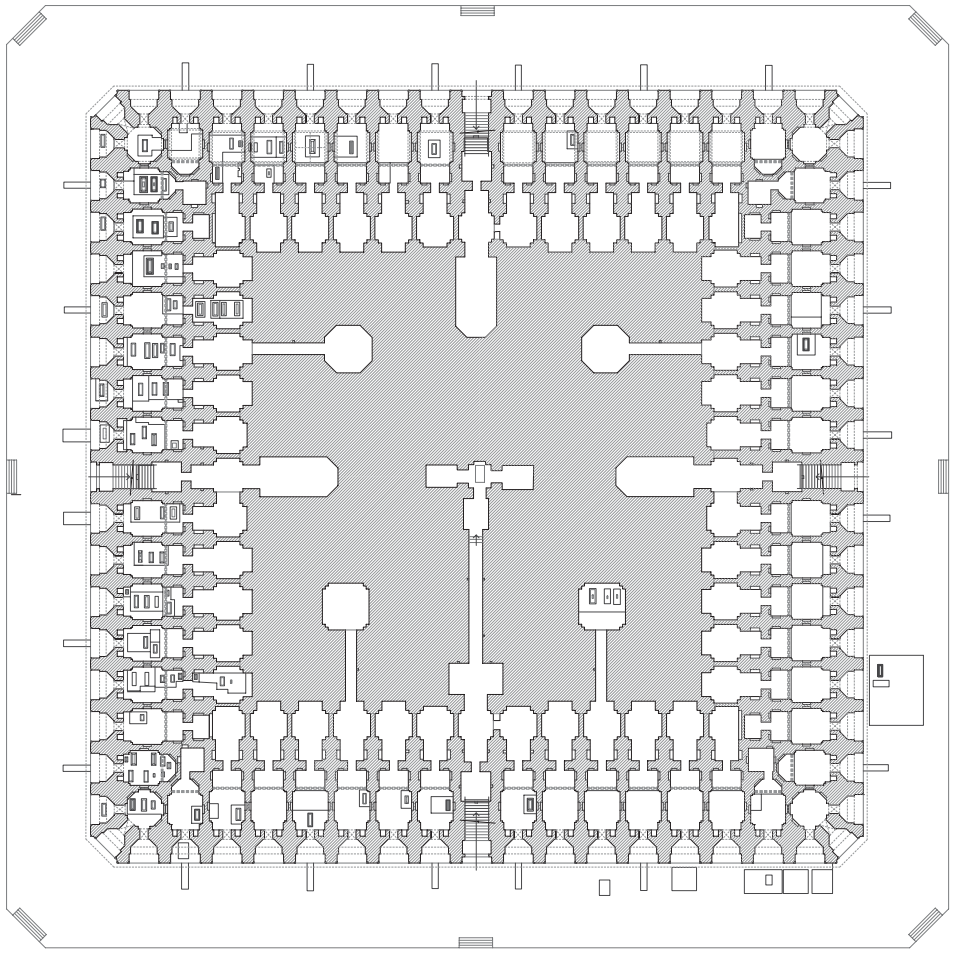


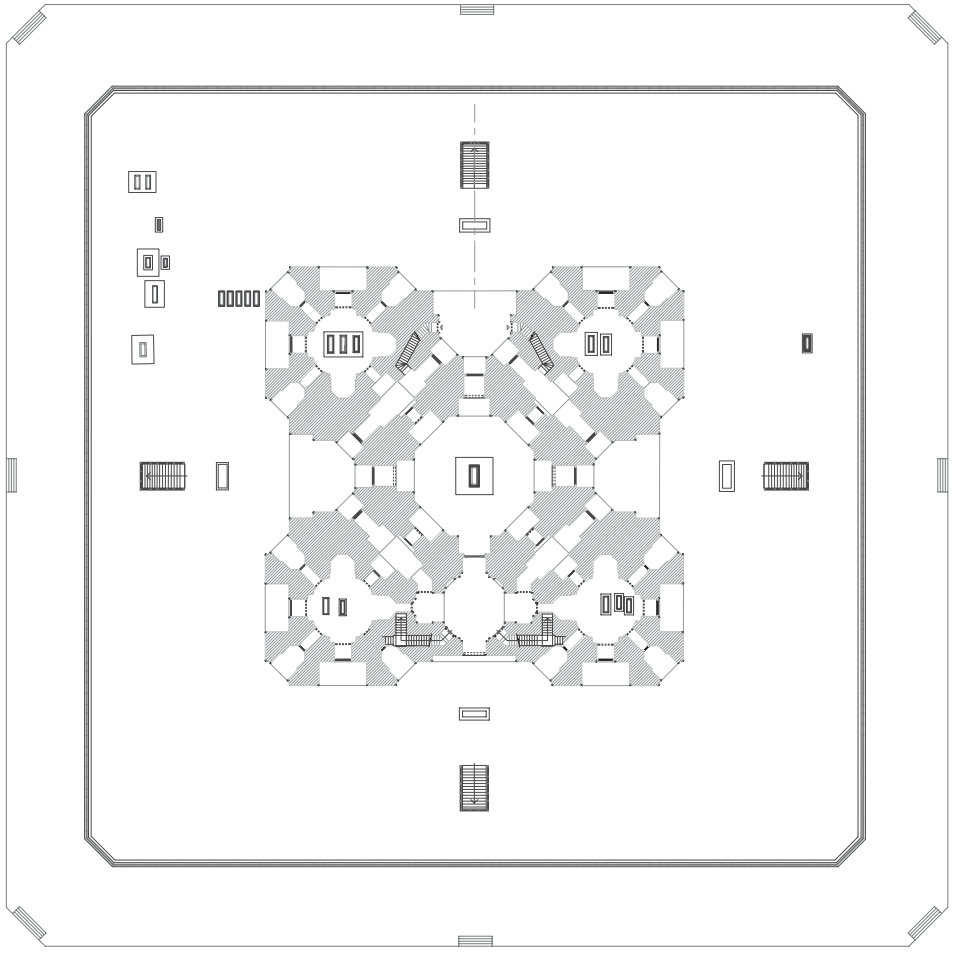
14

|13| The development of tombs – in typology, scale and geometry – in Delhi. Humayun's Tomb (far right) was built on a much larger scale than any of the tombs built in the city since the 12th century.

|14| Section and elevation of Humayun's Tomb. The central tomb chamber is over 24 metres in height.

|15| Ground- and first-floor level architectural plans of Humayun's Tomb.





50 m

16

ideal, inspired by Emperor Babur's love for enclosed gardens. Tall, arcaded, masonry walls define the northern, western and southern sides while the River Yamuna formed the eastern edge of the Tomb-Garden. The north-east corner of the Tomb-Garden enclosure is formed by the fourteenth-century *chillgah*, or meditation chamber, of the saint Hazrat Nizamuddin Auliya, defining the location of Humayun's mausoleum, set in a sacred landscape.

Other factors that seemed to have helped Emperor Akbar choose the site for the mausoleum were the proximity of the Dargah of Hazrat Nizamuddin Auliya as well as the site being on the River Yamuna and the sixteenth-century Grand Trunk Road. Both the river and the road would have served as transport arteries to bring the vast quantities of stone required for the building – quartzite from the Delhi region; red sandstone and white marble from three hundred kilometres away. The proximity of the Purana Qila – which would have served as the Delhi fortress during Akbar's frequent visits to the Dargah and in turn the construction site – would also have led to the site being favoured.

Geological investigations carried out during the garden restoration of Humayun's Tomb also reveal that the grand mausoleum stands on a rocky outcrop, providing a stable foundation in a seismic zone. This rocky outcrop also formed a river island on which stands the garden-tomb of Nila Gumbad – seemingly the earliest Mughal-era structure to have been built in Delhi. The western wall of its garden enclosure was later incorporated as part of the eastern enclosure of Humayun's Tomb, with a corner gateway giving access from one to the other.

The principal gateway to the Tomb-Garden stands in the centre of the southern enclosure wall while another monumental, if smaller, gateway is located on the western side, the latter today serving as the principal visitor access. The centres of the northern and eastern sides are marked by pavilions, built in masonry and finished with lime plaster, unlike the gateways that are finished with dressed stone.

With the principal gateways standing in the centre of the enclosure walls, which themselves are oriented in the cardinal directions, the mausoleum has north-south and east-west axes. However, with the corners of the tomb structure chamfered at the three main levels – the lower platform, the arcade and the principal upper structure – the Mughal builders also introduced a strong diagonal axis that extends to the garden with octagonal pools emphasizing the four corners. Domed roof canopies accentuate the diagonal axis, which today is partially disfigured by the inappropriate planting of palm trees, in 1916, on the corners.

| 16 | The imposing South Gate, which served as the Royal Entrance.

| 17 | Conservation works on the dome of Humayun's Tomb required careful removal of cement from the joints of the marble dome and then filling the joints with lime mortar.

The garden is divided into four equal quadrants with wide pathways – containing water channels – leading from the four cardinal directions towards the mausoleums, thus forming the first literal *chahar-bagh*, or fourfold garden. In the centre of each side are square tanks that contain fountains, originally fed by terracotta pipes bringing water from tanks or wells located outside the immediate garden enclosure. Each quadrant is further divided into eight square garden plots, with comparatively narrower pathways, also containing water channels. At the intersection of pathways are either additional smaller tanks, which also serve as silting chambers, or platforms that would have held the Mughal tents and on which trees such as tamarind were again inappropriately planted in 1916. Flowing water is the essence of the garden and some of the major platforms are surrounded by up to eight smaller tanks. The eastern stretch, located along the river, is sunken – possibly to allow for privacy when the royal tents were pitched here.

In the centre of the garden, Humayun's mausoleum stands on a low platform paved with large blocks of quartzite, local stone sourced from Delhi. Each of the arched recesses of the ground-level arcade lead to chambers, intended as mini mausoleums, where over 160 Mughal family members lie buried, which has led historians to name the tomb the "Dormitory of the Mughals". The actual grave of Emperor Humayun lies in a small three-metre-square room, and is in masonry covered with plain plaster, devoid of any ornamentation or inscriptions. Burial continued at Humayun's Tomb up until the nineteenth century and Shah Jahan's son, Dara Shikoh, as well as at least four of the later Mughal emperors lie buried here.

A red-white contrast fashioned by the clever use of sandstone-marble on the facade creates a striking composition. The white plaster on the lower arcade is meant to mimic marble but even here red polychromy is used to highlight the ornamental incised plasterwork. Furthermore, the red sandstone lattice screens over the doorways on the lower arcade have an 'inlay' of white lime plaster, taking the red-white contrast to minute architectural detailing.

Though the red sandstone and white marble, used in great quantities and imported from a great distance, have so far been considered only as cladding on the random rubble masonry walls built of quartzite, these stone blocks are fifteen to twenty centimetres thick and horizontal stone bands are embedded in the random rubble masonry up to fifty to sixty centimetres thick, thus suggesting that these are part of the structural system. The sandstone arches on the lower arcade, as well as the grand sandstone half-domed vaults on the northern, eastern and western facades, further underline the structural nature of what has, until the recent conservation effort, been considered to be cladding.

Planning for conservation

In 1997, with the intention of undertaking the garden restoration, AKTC commenced a major programme to source archival material related to Humayun's Tomb and its setting. The study of Mughal chronicles and research at the ASI archives in Delhi and Agra, the National Archives, the British Library, the Canadian Centre for Architecture, the Rampur Raza Library and the Victoria and Albert Museum, among other institutions, revealed significant information that has informed both the garden

17

restoration and the subsequent conservation of the mausoleum and attached structures. A continuous record of photographs now exists from 1849 onward and similarly all conservation efforts from 1860 onward are known, as are major earlier events at the mausoleum, since its building in the mid sixteenth century.

Often, archival research and building archaeology have helped define and justify removal of later alterations, such as the concreting over the stone blocks of the lower plinth and the installation of stone lattice screens of inferior quality blocking the access to the four corner chambers from the principal tomb chamber.

Archival research has been substantiated by exhaustive documentation and condition assessment, including structural assessment. A high-definition survey using 3D laser-scanning technology was used as the basis on which a stone by stone assessment of the entire facade was completed prior to commencing conservation works.

The scale of the conservation effort proposed at Humayun's Tomb World Heritage Site, never before attempted in India, coupled with the need to return to a craft-based approach to undo the inappropriate twentieth-century alterations and restore material authenticity, necessitated periodic reviews of ongoing and proposed works by independent experts. Since conservation works commenced here in 2008, many outside experts, independently engaged by the Sir Dorabji Tata Trust, have reviewed completed, ongoing and proposed works. A 'Core Committee' was also formed at ASI with the mandate to review ongoing and proposed works each month.

With the restoration of glazed tiles on the canopies becoming a major undertaking requiring the revival of craft techniques, an international two-day workshop was hosted on site by AKTC in collaboration with ASI and UNESCO. The documentation, analysis and proposals were shared with forty participants from ten tile-producing countries prior to finalizing the conservation approach for restoration of the glazed-tile work.

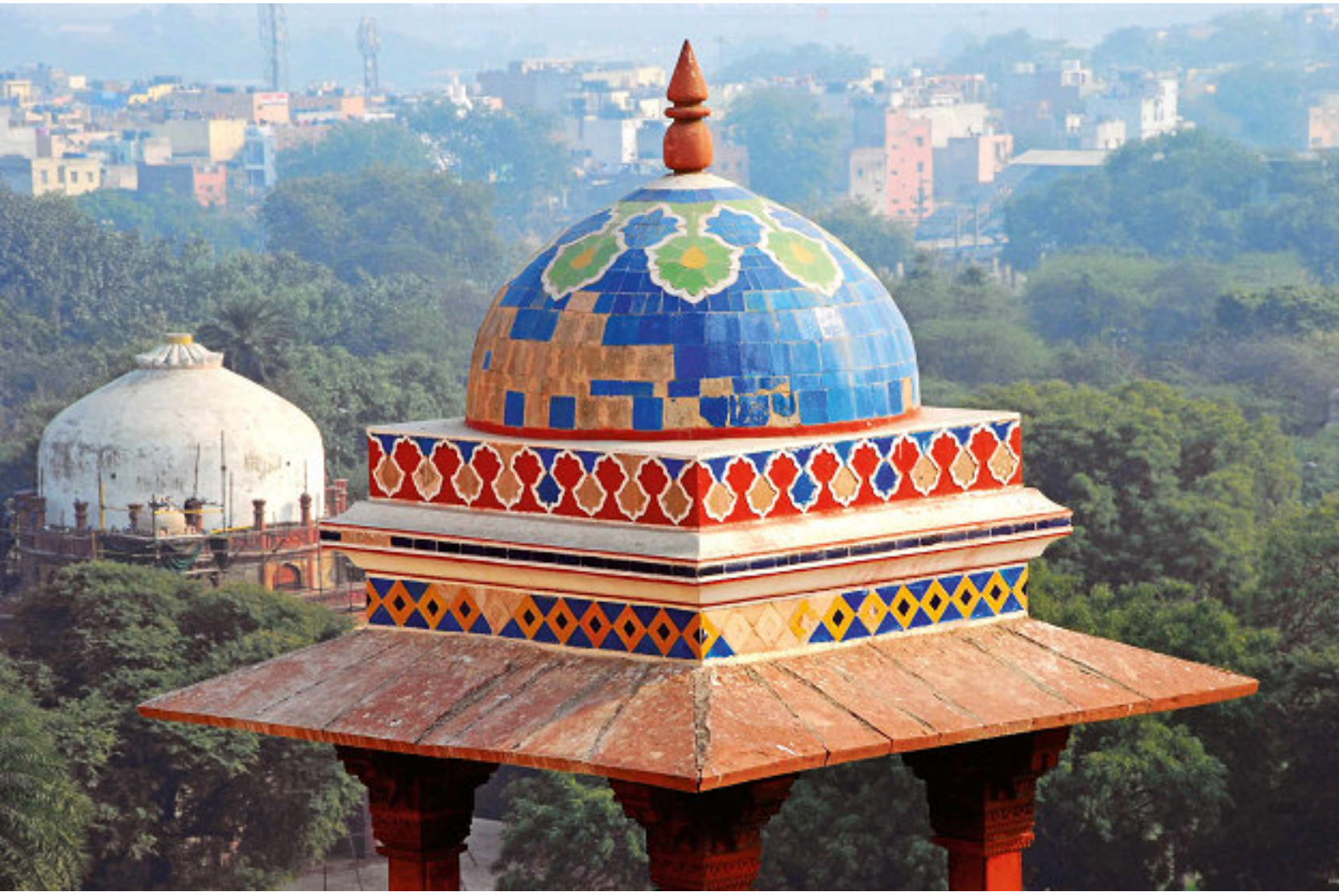
Conserving the World Heritage Site

Since 2008, conservation works on Humayun's Tomb have been based on available evidence and focused on restoring the architectural integrity of the mausoleum by using traditional materials, tools and building craft skills. The principal aim of the conservation effort has been to enhance the life of the structure as well as follow the original builders' design intention to ensure that integrity and authenticity of material is not compromised.

A major effort has been undertaken to remove or undo the inappropriate twentieth-century and early twenty-first-century interventions, many of which had altered the structure as well as encouraged an accelerated decaying process. The conservation effort required in excess of 200,000 man-days of work by master craftsmen – stone-carvers, masons, plasterers, tile makers, carpenters – and has now included works to be undertaken on all parts of the structure.

Humayun's Tomb boasts a grand double dome of a scale never before seen in India. The dome is surmounted by a six-metre-tall finial comprising copper vessels fixed on an octagonal wooden upright of twenty-centimetre diameter at the top of the dome. The outer dome was leaking and the plaster on

19



20

its inner surface had turned to dust piled over the lower dome. Conservation works thus commenced with the methodical removal of cement from the joints of the marble dome and careful pointing of the joints with lime mortar. The seasonal expansion and contraction of marble meant that the pointing had to be undertaken in winter, when the joints were at their widest. With the joints secure from rainwater penetration, the inner face was re-plastered with lime mortar.

Many sandstone blocks on the striking neck of the dome were found to be in a severely deteriorated condition, mostly owing to the cement pointing used in the stone joints in 1961–62. Several of the sandstone blocks – considered to have deteriorated beyond repair – were replaced, though alternate horizontal bands were found to be of a structural nature and embedded fifty centimetres or more within the masonry.

In the twentieth century, additional layers of concrete were laid on the roof and core samples taken at the onset of conservation works from the roof revealed over forty centimetres of excess concrete weighing in excess of one million kilograms that had to be removed from the roof to restore the original levels, expose buried architectural elements and in turn ensure effective water disposal.

Careful structural analysis preceded the commencement of the removal by first using a diamond-edged blade to make a thin twenty-centimetre-deep cut on a one-metre grid across the roof. Specially imported low vibration tools then widened the

|18| Preceding pages: Humayun's Garden-Tomb, built on a monumental scale, has no precedence in the Islamic world. This monumental scale and its garden setting reflecting Qur'anic ideals truly represent Mughal innovation.

|19| A roof canopy of Humayun's Tomb before the tile work was restored.

|20| The tile work on all eight canopies was restored using glazed tiles of five colours – cobalt blue, turquoise blue, green, white and yellow. All original tiles that had survived were maintained.

21

cut to a gap of up to ten centimetres. Following this preparatory work, stone-carvers were employed to remove the concrete using traditional hand tools. A layer of lime concrete matching the original in composition – of brick aggregate, sand, brick dust and traditional additives such as fruit pulp and molasses – was then laid over the roof to the original slope and levels that could be easily defined by a careful study of recovered architectural elements.

At the onset of conservation works, fragments of tiles were visible on the smaller roof canopies. An early nineteenth-century painting of the mausoleum in the collection of the Victoria and Albert Museum in London clearly depicts the prominent blue of the central canopies with the white marble dome in the background. A careful scientific study of the tile fragments that had survived on the domed canopies unexpectedly revealed original patterns of the tile work.

Similar tile work was also found to adorn many of the structures within Humayun's Tomb complex and the larger project area. Ceramic glazed tiles were used as inlay work, on the domes and canopies, in the parapet and moulding, in decorative medallions in the spandrels of the arches, and on projecting *jarokhas* or balconies to highlight the profile of the arches, among other elements. With the understanding that glazed tiles comprised a significant architectural element of the monuments

and probably served for the Mughal builders as a reminder of their Persian ancestry, AKTC commenced a three-year research programme, in 2009, to revive the lost craft skills and produce tiles exactly matching those of the Mughals. Over 20,000 samples were prepared in a process that commenced under the guidance of master craftsmen from Uzbekistan with youth from the adjoining Nizamuddin Basti now trained to produce these tiles, thus marking a revival of a Mughal craft.

Once tiles with matching chemical and physical properties could be prepared, exhaustive deliberations on the appropriate conservation philosophy led to the agreement that tiles that had lost their glaze would be retained on the canopies and only where cement plaster had been applied in lieu of tiles would new tiles be inserted. Tiles have now been restored to the canopies of Humayun's Tomb – serving their protective function as well as allowing visitors to understand the mausoleum as its builders intended it to be seen.

With conservation works complete on the roof, the attention of the craftsmen was turned to the principal structure of the mausoleum. The centre of each facade of this is taller and is defined by a 13.6-metre-tall arch, with the southern arch treated differently to serve as the entrance to the octagonal tomb chamber.

As William Finch, visiting here in the seventeenth century, described the tomb chamber: "... The sepulchre of Humayun is in a large room spread with rich carpets, the tomb itself covered with a rich *shamiyana* (canopy/tent) overhead, and in front certain books on small trestles, by which stand his sword, turban and shoes".[4] The carpets, the canopy over the cenotaph, or Emperor Humayun's belongings no longer exist. Nor does the gilding on the dome and glazed tiles on the walls, reducing the tomb chamber to a shadow of its former splendour.

The facade of this structure is also defined by the red-white contrast, with white marble borders inlaid in red sandstone. The sandstone blocks are laid to a strict pattern that could originally have been further emphasized by protruding lime mortar pointing, of which traces survive in portions of the facade protected from the elements.

Early twentieth-century texts describe the domed ceiling of the principal chamber covered with gilding. In 1914 it was written: "Traces can still be seen, in several places, of the original tile decoration, on the wall surfaces of the tomb chamber".[5] In the hope that fragments of tiles might have simply been covered with plaster, as was the case with the canopies, a careful manual scraping of paint and cement plaster was carried out, yet no tile fragments seemed to have survived the mid twentieth-century

22

23

|21| The red-white contrast of the facade is the predominant architectural feature of the mausoleum, as seen here on the lower arcade.

|22|23| Removal of cement from the lower arcade revealed the historic star pattern, which was restored in incised plasterwork.

26

27

|24|25| The restored tomb chamber, which was covered in layers of cement plaster, was carefully re-plastered with a final 1-mm coat of lime and marble dust to restore its original appearance. No traces of the original tile work were found on the walls.

|26| Recovery and restoration of the stone paving on the lower plinth using traditional tools and craft techniques.

|27| Quartzite stone blocks, all weighing over 1000 kilos, were lifted manually and reset in the plinth with a lime concrete base.

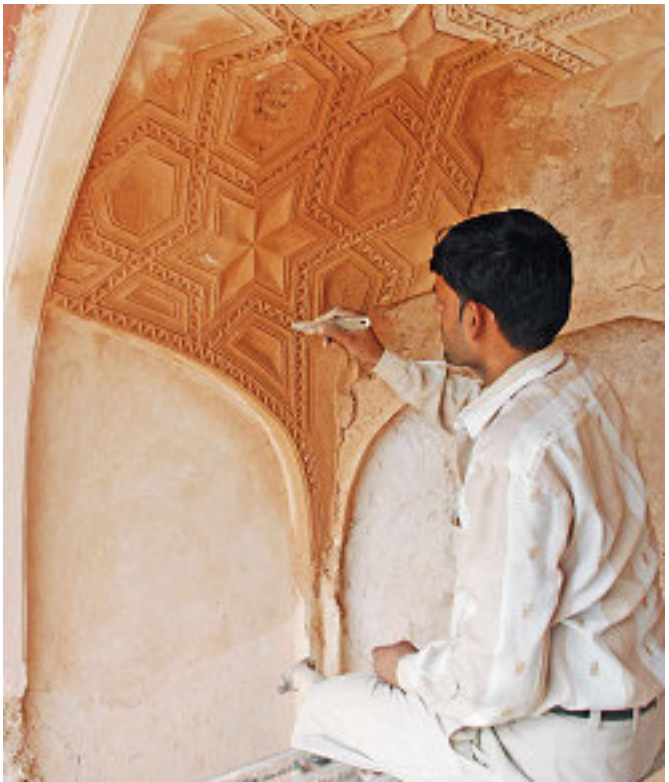
|28| Removal of 20th-century cement layers from the lower arcade revealed star-shaped patterns in incised plasterwork. These were painstakingly restored by trained craftsmen.

repair. Ornamental plaster patterns were, however, revealed, with incised plasterwork in a netting pattern with red polychromy defining the edging of the archways both in the central chamber and the corner chambers. This decor was carefully restored. Cement plaster, as well as decayed loose lime plaster, was removed from all wall surfaces and replaced with a traditional lime mortar mix.

The facade of the principal tomb chamber includes white marble inlay in the predominantly red sandstone wall surfaces. In most descriptions of the Tomb by scholars, the sandstone is considered a 'veneer'. However, with almost all stones being fifteen to twenty centimetres thick, and the thin horizontal bands embedded deep in the masonry, it can now be affirmed that the sandstone was fixed together with the masonry of the five-metre-thick walls.

Overlooking the *chahar-bagh*, a twenty-one-metre-deep sandstone terrace surrounds the main tomb structure. This sandstone platform serves as the roof of the vaulted chambers below and is not simply 'paving' at ground level, as it had been treated by past repairs, of which those carried out in 2004 were the most intrusive and least documented. The discovery of a plan of the sandstone paving patterns, prepared in the 1880s and thus prior to twentieth-century work, revealed that the paving pattern was linked to the projections of the tomb chamber and was thus as precise as the stone patterns on the facade.

28



Conservation works were based on the revelation that except for portions on the eastern and western sides almost all the paving had been altered in past repairs and it also became evident that stones with mason marks had been 'shifted' during earlier repairs. To prevent further water ingress to the vaulted chambers below and thus ensure long-term structural stability of the mausoleum, almost seventy per cent of the sandstone plinth had to be lifted and reset. In order to ensure that visitor movement continued uninterrupted, these works were carried out section by section in 2011–12. Since then, a continuous programme has inserted lime grout into the masonry below from stone joints in the paving.

Below the expansive terrace of red sandstone are the mini mausoleums – two bay, deep-vaulted cells – where 160 members of the Mughal family lie buried. Though the facing of this spectacular arcade is clad in sandstone with marble inlay, the 'half-domed' wall surfaces are plastered with ornamental star-shaped patterns. A doorway with a sandstone door frame allows access to the vaulted chambers beyond. Over each doorway is a sandstone lattice screen of a unique design that emphasizes the red-white contrast of the Tomb by filling in grooves in the thickness of the stone with white lime punning.

With water rapidly percolating from the terrace above, this level of the mausoleum required significant conservation work to be undertaken once the sandstone plinth above had been treated. Stains indicating water ingress were visible across the facade of the arcade and almost all the original lime mortar had disintegrated.

The arcaded facade required significant stone replacement, of the sandstone cladding as well as several of the corner pilasters. Much of the marble inlay that dated from the twentieth century, when small pieces were used, was replaced with longer sections of suitable stone. All stone works were carried out with traditional hand tools, to encourage craftsmanship as well as to match the finish and work of the sixteenth-century builders.

Cement plaster had been profusely used on the external and internal wall surfaces since the 1990s, even obliterating original

plasterwork where traces of this had remained. During 2002–04, as with several Delhi monuments protected by ASI, a pinkish plaster prepared with an unusual high proportion of brick dust with lime and cement was applied to the arcade. This not only disfigured the historic appearance and compromised material authenticity but also, due to its hardness, accelerated decay of the original lime mortar and sandstone elements. A first step towards conservation of the ground-level vaults was thus the careful removal of all cement plaster, both from the facade as well as from the interior wall surfaces. On several cells traces of the ornamental star-shaped plasterwork were found.

The inner vaults required over 18,000 square metres of lime mortar plaster and even the floor of the vaults had mostly disintegrated requiring a new lime-concrete flooring to be laid in all cells. Again, for most of the sixty-eight cells, the sandstone door frames were either missing or broken. With the wooden doors to these cells used for firewood by refugees accommodated in the Tomb-Garden in 1947, clearly the door frames were no longer considered necessary. Conservation works carried out since 2009 have restored sandstone door frames as well as wooden doors to all cells.

The principal conservation challenge, however, was to restore the ornamental plasterwork of the 'half-domed' surface which comprises less than one per cent of the facade yet is a prominent architectural feature. Once the pattern was carefully discerned by studying available evidence, several months of experimentation and training for craftsmen followed, prior to commencing restoration of the ornamental patterns in lime mortar. Lime plaster, applied in layers, then incised to bring out the desired patterns, transformed the character of the mausoleum, from ruin to splendour. The final layer of lime-marble dust mortar served as a protective layer for the underlying plaster; it was used by the Mughals to mimic the white marble of the facade of these mini mausoleums. The ornamental patterns in incised plasterwork were once again emphasized with red lime plaster obtained by adding *geru* powder, as had been the case in the principal tomb chamber.

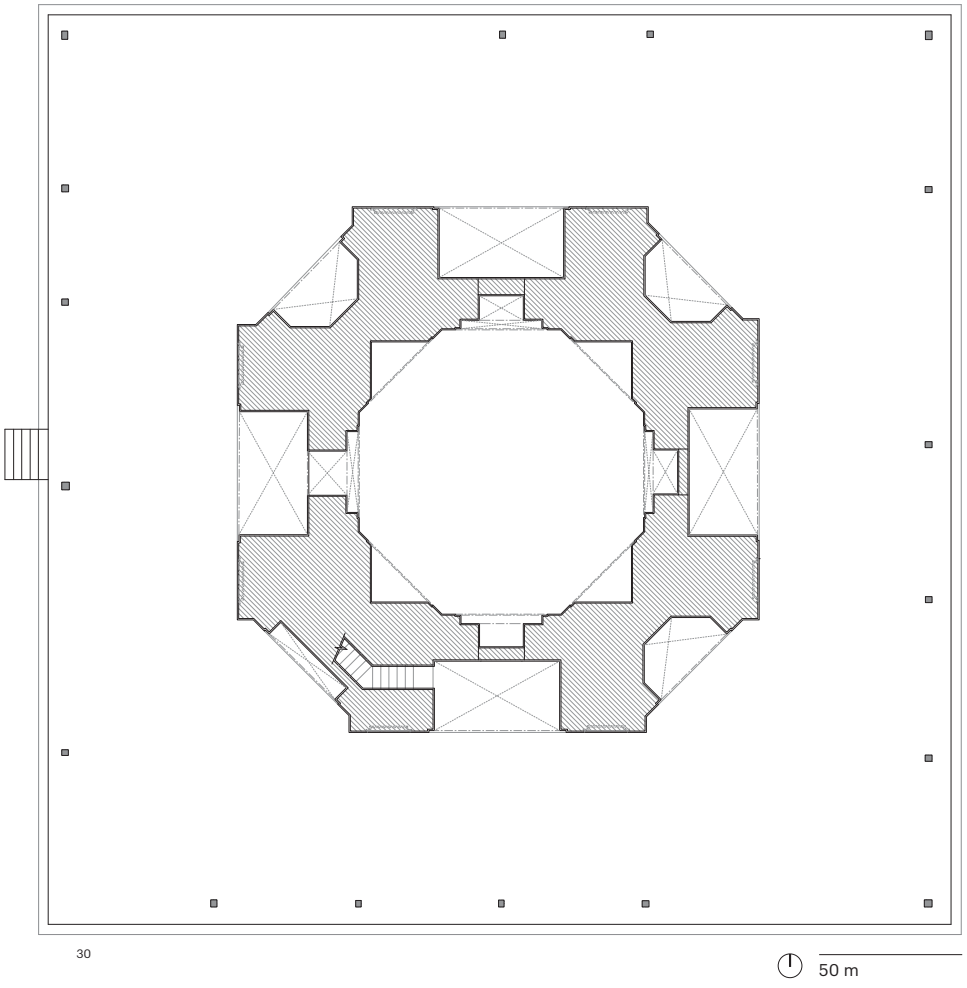
The ground-floor arcade stands on a platform, rising 1.2 metres above the garden. In order to restore the architectural integrity and authenticity of material and form, as well as the historic character, a major campaign to remove the concrete and restore the stone paving of this platform was carried out. Hundreds of stone craftsmen worked tirelessly for over a year to lift the stone paving, bay after bay, followed by providing a lime-concrete base, to ensure that settlement does not reoccur easily, prior to refixing the stone blocks to the original locations and with an adequate slope. It was revealed that the Mughal builders must have commenced laying this paving from the southern entrance and moved in a clockwise direction, as the quality of the stone reduces considerably on the northern and eastern sides.

Nila Gumbad

The earliest Mughal-era structure in Delhi was built on a river island and its western wall later formed the eastern edge of Humayun's Tomb-Garden. In the mid nineteenth century, the eastern half of the Nila Gumbad garden was taken over to lay railway lines, thankfully sparing this striking monument. In the 1970s the city's principal sewerage lines were laid between Humayun's Tomb and Nila Gumbad, requiring the arcaded northern retaining wall to be partially demolished. Following this intervention, the levelled ground began to be used as a road – through the protected area of the monuments.

The separation from Humayun's Tomb led to poor control of the area, and soon over two hundred squatter families were residing within the Nila Gumbad enclosure. AKTC efforts, since 1999, have been to restore the linkage, especially since Nila Gumbad stands within the World Heritage Site boundaries. ASI relocated the resident families in 2003 and since 2007 discussions with the Railways have led to a 'Memorandum of

29



30

50 m

|29| The restoration of Nila Gumbad, which abuts Humayun's Tomb, required an extensive process of land acquisition to ensure that linkages with Humayun's Tomb for visitor access were restored.

|30| Elevation and plan of Nila Gumbad, Delhi's earliest Mughal structure.

31

Understanding' (MoU), in 2010, to relocate the road to the eastern side of Nila Gumbad thus ensuring visitor access to Nila Gumbad. Following this agreement, a major conservation programme commenced at Nila Gumbad with the support of the Sir Dorabji Tata Trust.

Conservation efforts commenced with restoration of the tiles of the dome, where over 15,000 tiles were missing. When attempts to get this large quantity of trapezoidal tiles made in Uzbekistan and Iran failed, the capacity at Humayun's Tomb was significantly enhanced. It was observed that in past repairs tile fragments had been laid in plaster and there had been an attempt to keep the 'blue' by adding rubber sheets of colour matching the tiles. Cavities, up to a metre deep created by parakeets for nesting, were filled and the dome secured.

As with Humayun's Tomb, the lime-wash layers and cement plasters, as well as the pinkish plaster of 2002–04, were carefully removed and replaced with traditional lime mortar. On the frames of the alternate arches in the neck of the dome, as well as on the wall surfaces of the half-domed corner niches, incised plaster with brick patterns was found, again a reminder for the early Mughals of the brick masonry of their homeland. This plasterwork is being restored.

A garden will be laid out on the lands secured around the structure, for which the northern and western arcades are presently being conserved. Vestiges found to the north of the arcade could represent a ramp built to receive stone brought by river for the building of Humayun's Tomb.

Project Impact

Conservation challenges on structures undertaken for conservation by AKTC range from ensuring preservation to undertaking reconstruction of demolished or collapsed building elements. Most structures had undergone past repairs using inappropriate modern materials that had led to accelerated deterioration or at least disfiguration of their historical architectural character.

Return to a craft-based approach used in India for over a millennium was considered essential to restore the design intention of the Mughal builders and the grandeur of the monuments to the extent of evidence available. India is fortunate that traditional building craft skills, though rapidly disappearing,

|31| The ornamental ceiling of Nila Gumbad required careful cleaning to expose the striking patterns.

|32| The restoration of the finial meant replacing missing tiles on the dome as well as carefully pointing it to ensure that no further tile loss occurs.

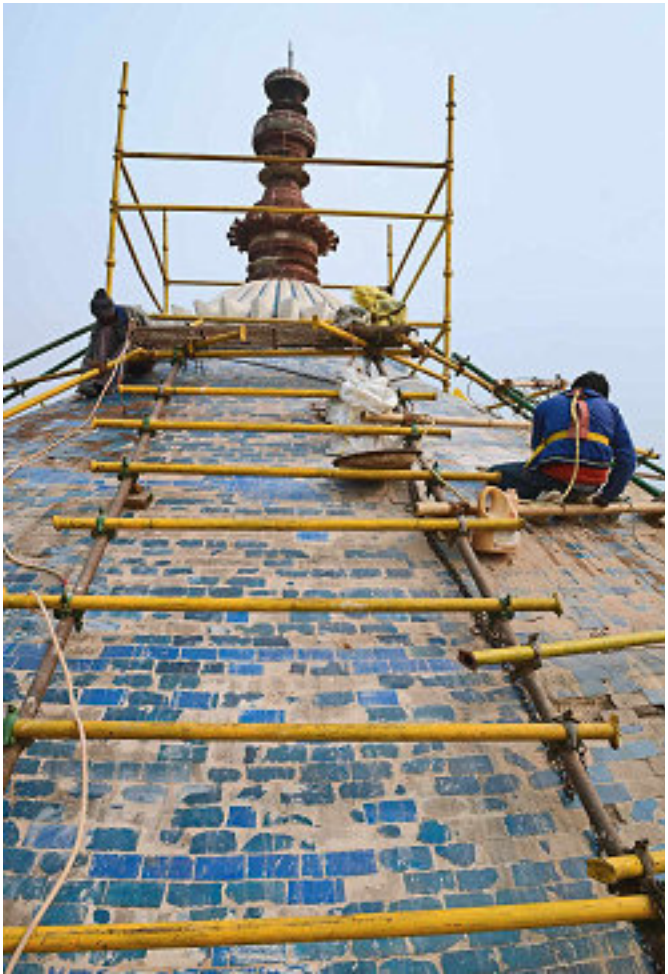
are still alive and the conservation work undertaken since 2007 has created at least 500,000 man-days of direct and indirect employment for craftsmen: stone-carvers, masons, plasterers, tile makers, metal smiths and carpenters, among others. During this period ASI has revised the national conservation policy to emphasize the importance of building craft skills in the conservation of India's built heritage.

Craftsmen have worked alongside a multidisciplinary team comprising engineers (civil, structural, hydrological, electrical), architects (landscape, conservation), designers, urban planners, urban designers, heritage management experts, art and architectural historians, archaeologists, social scientists and experts in finance, among others. Intense supervision of ongoing works, coupled with guidance to craftsmen to match the work of their forefathers, has ensured quality and created a model for policy makers for implementation elsewhere.

With an adequate understanding of the site acquired over a decade of involvement, AKTC will now embark on preparing a management plan for the site. This is aimed not only at a scientific management process being put in place but will also eventually seek extension of the World Heritage Site boundaries to include the twenty-eight-hectare Sunder Nursery in the north and Abdul Rahim Khan-i-Khana's garden-tomb to the south.

With the proposed building of a modern Interpretation Centre at the entrance zone of the Humayun's Tomb – Sunder Nursery complex, visitors to the site will come away with an improved understanding of the Mughal dynasty – its pluralistic traditions and social context, especially during Emperor Akbar's reign – and the development of the Nizamuddin area over seven centuries – with an emphasis on Mughal art and architecture and the poetic/Sufi traditions that flowered here through the ages, making Nizamuddin the cradle of Hindustani culture.

32



Endnotes

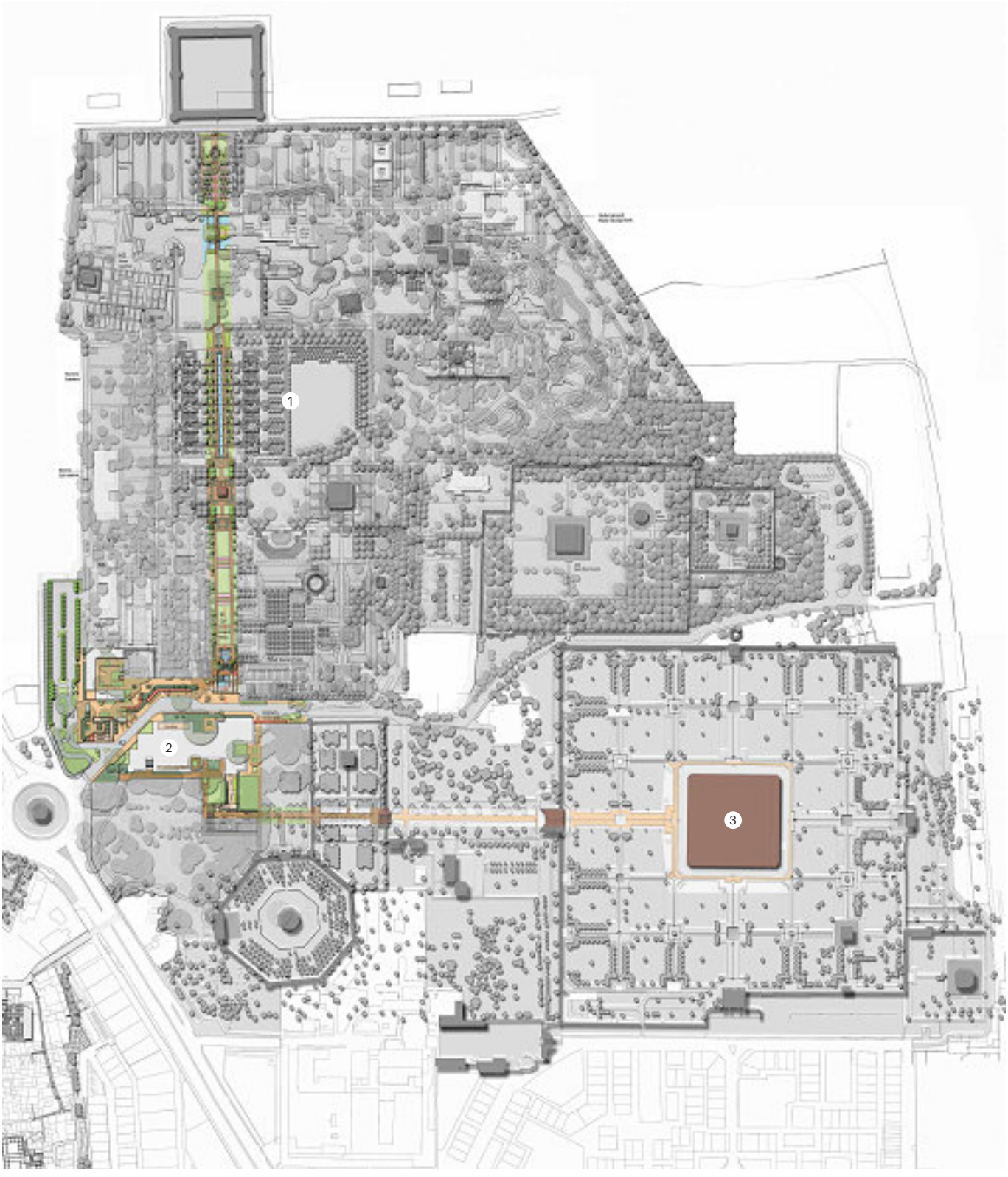
1 Wheeler M. Thackston (ed. and trans), *The Baburnama: Memoirs of Babur, Prince and Emperor*, The Modern Library, New York, 2002.
2 Ebba Koch, *Mughal Architecture*, Prestel, Munich, 1991, p. 43.
3 RSOUV (Retrospective Statement of Outstanding Unversal Value) submitted by the Archaeological Survey of India to the UNESCO World Heritage Centre in 2013. Not yet ratified and as such not published.
4 William Finch, quoted in Bill Aitken, *Speaking Stones: World Cultural Heritage Sites in India*, Eicher Goodearth Ltd., Delhi, 2001.
5 Zafar Hasan, *List of Hindu and Mohammedan Buildings of Delhi*, Vol. 2, Archaeological Survey of India, 1919.

Humayun's Tomb Site Museum

Subsequent to the decade-long efforts undertaken by the Aga Khan Trust for Culture (AKTC), the revitalized Humayun's Tomb complex and its environment now receive almost two million visitors each year. A state-of-the-art Museum is to be built at the entrance to this World Heritage Site and Sunder Nursery with the goal of explaining Mughal heritage and the development of the Nizamuddin area over a millennium, as well as illustrating the pluralist Sufi cultural traditions that defined Hindustani culture for at least five centuries. This is the first of the Site Museums planned for the twenty-five *Ardash* or 'model' monuments recently designated by the Indian Ministry of Culture.

The conceptual design presented in 2011–12 envisioned a sunken building inspired by the traditional *baolis* or step-wells of northern India. AKTC commissioned a heritage impact assessment study for the design prior to seeking planning approvals. The Ministry of Tourism has generously provided a grant for the construction of this Museum.[1] In keeping with its conservation role for the larger site, AKTC has commissioned the architectural and landscape design and will undertake, in coordination with the local authorities, the museographical exhibition design for this first Site Museum. A foundation laying ceremony was celebrated on 7 April 2015.

Central *iwan* (entry portal) to Humayun's Tomb, Delhi, India; the restored original of the finial topping the dome can be seen in the new Site Museum.



1

1 Sunder Nursery
2 Site Museum
3 Humayun's Tomb

100 m

Christine Mueller and Pankaj Vir Gupta,
Mohammad Shaheer

The Architecture of Humayun's Tomb Site Museum

Christine Mueller and Pankaj Vir Gupta

The Site Museum for Humayun's Tomb has been envisioned as the spatial link between the significant and distinct historical sites of the Nizamuddin Basti, Sunder Nursery and the tomb of the second Mughal emperor, Humayun |1|. To establish a spatial threshold – important in terms of emphasizing a sense of place for this ensemble of Mughal-era landscape and architecture – the Archaeological Survey of India (ASI), supported by the Aga Khan Trust for Culture (AKTC), proposes to build a Site Museum as a vital public amenity, facilitating the visitor's experience of Humayun's Tomb and adjacent sites.

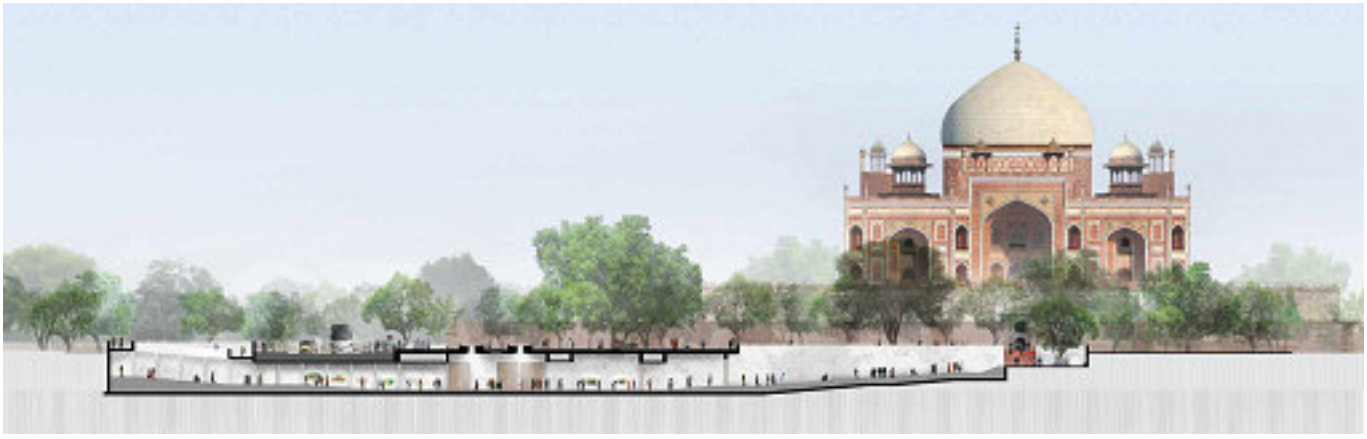
The architectural concept for the new Site Museum draws from the tradition of subterranean *baolis* – medieval step-wells that served as reservoirs for fresh water, and provided a cool, sky-lit refuge for travellers. The architecture of the Museum is also conceptually grounded in the Mughal commitment to aesthetic practice – illustrated through the relationship between architecture and nature. Gaston Bachelard – in his text *The Right To Dream* – describes this as an "immense charity towards the beautiful". He describes how, at dusk, gardeners might place lamps and a mirror before each lotus stem on the cusp of bloom so that the flower might blossom at dawn with greater confidence and delight in its own beauty. It is the splendour of this original imagination that enables us to perceive the clarity of this Mughal architecture over five centuries after its initial conception – positing beauty as integral to the act of building.

The Humayun's Tomb Site Museum has been organized in two distinct and interlinked zones: a primary Entrance Plaza situated adjacent to Sunder Nursery, and a subterranean Museum complex near the entrance gate to Humayun's Tomb.

2

3

|1| Plan showing the carefully designed spatial links between the new Site Museum, Sunder Nursery and Humayun's Tomb.
|2| Entrance Plaza.
|3| Entrance ramp into the Museum.



4

As in the tomb of Emperor Humayun, the sequence of arrival and procession through the Entrance Plaza and Museum building assumes a sense of order in the formal arrival court. The Entrance Plaza |2| is comprised of multiple ticket counters, public amenities and a cafe, as well as access to a souvenir shop, an auditorium, library, crafts gallery and seminar rooms.

The Entrance Plaza functions as a threshold from which visitors may orient themselves, organizing their itinerary within the many architectural features of the area. A two-storey structure – shaded under the foliage of large trees – defines the northern end of the Plaza. It is built in conformity with the footprint and volume of the existing structure on this site and clad with red sandstone. The quality of stone craftsmanship remains a defining feature of Mughal architecture in India. In keeping with this tradition, the surface of the red sandstone has been carved, amplifying the play of light and shadow on the richly textured, natural stone. To demarcate the procession of visitors from the Entrance Plaza into the Cafe Court, the red sandstone facade transforms into a delicately carved, white marble screen, signalling the entry.

The tradition of geometric forms within Mughal architecture has influenced the design of the Site Museum. For the Mughals, geometry manifested a cosmic order. The arrangement of carefully proportioned spaces imposed a discipline for inhabitation. However, this fidelity to geometry also facilitated a heightened human awareness of the powerful union between illumination and volume. Thus Mughal architecture imbued space with a sense of the terrestrial frame of this world, while also evoking an awareness of a greater cosmic order. The spatial evolution of geometry into powerful forms was not enough to satisfy the Mughals; the great refinement of this aesthetic practice emerged as each surface was adorned with detail, texture and colour – revealing architecture as a kinetic spectacle.

To enter the museum galleries, visitors descend from the Entrance Plaza along a wide ramp |3|, and walk through an Entry Gallery |5|– beneath the access road above – arriving into the Vestibule Gallery at a depth of six metres below the Plaza. The interplay between natural light and space begins at this point of descent. The threshold into the Entry Gallery is illuminated by diffused light from a large skylight above. The Vestibule Gallery introduces visitors to the Model Gallery – showcasing a virtual display of the entire site as it existed during the Mughal era. From the Vestibule Gallery, visitors may visit the museum exhibits in the Permanent Gallery, or ascend the steps and proceed directly to the Humayun's Tomb complex.

The gallery spaces for the Humayun's Tomb Site Museum are arranged in a sequence of intersecting squares, with wide column spans of eight metres to enable curatorial flexibility for exhibit design |7|. Given the increased traffic of visitors expected at the site, the public circulation sequence has been organized along a primary axis, spanning the entire length of the Museum. Natural light, filtered through skylights and open courtyards, illuminates the galleries. These open courtyards are critical aspects of the galleries, enabling curated displays of Mughal architectural artefacts, including facade treatments, landscape elements and ornamental traditions. The engineering systems required for a modern museum are woven around each gallery through specific service corridors, thus facilitating curatorial and museum management protocols.

Mughal emperors and their architects accorded great worth to the relationship between form, space and material. Their mastery lay in achieving a delicate balance between boldly proportioned exterior mass and lyrical sculpting of interior volumes. In their use of stone masonry to sculpt the forms of their mausoleums, the Mughals conveyed an impression of permanence that characterizes their architecture. The Site Museum aspires for a similar sensibility in the visitor experience.

The high-ceilinged Permanent Gallery, with an indoor area of over 1000 square metres, is the largest gallery space in the entire Museum. A wide courtyard flanks the north wall of this gallery, allowing light to wash across the floors and walls |6|. The floor surface of this courtyard is patterned with glazed, coloured tiles, evoking the floral motifs that adorned Mughal-era monuments. The stone-lined alcoves in this courtyard will

|4| Circulation sequence linking Sunder Nursery and Humayun's Tomb.
|5| View of the Entry Gallery.
|6| The Permanent Gallery and courtyard.
|7| Gallery level plan.

display reconstructions of prominent architectural elements of monuments and landscapes from the greater Nizamuddin area. The south wall of the Permanent Gallery features four, sky-lit niches – each four metres wide and six metres tall. These niches enable curators to display large objects with natural overhead light while protecting them from the outdoor environment. Given the large floor area, overhead skylights diffuse filtered light onto the polished marble floor. This subtle play of light and shadow illuminates the space and reflects on the plaster of the pleated ceiling above, creating an additional geometric imprint.

Adjacent to the Permanent Gallery, the Finial Gallery will house the restored copper finial of Humayun's Tomb, as well as other original architectural elements recovered during the conservation effort undertaken at the Humayun's Tomb complex since 1997.

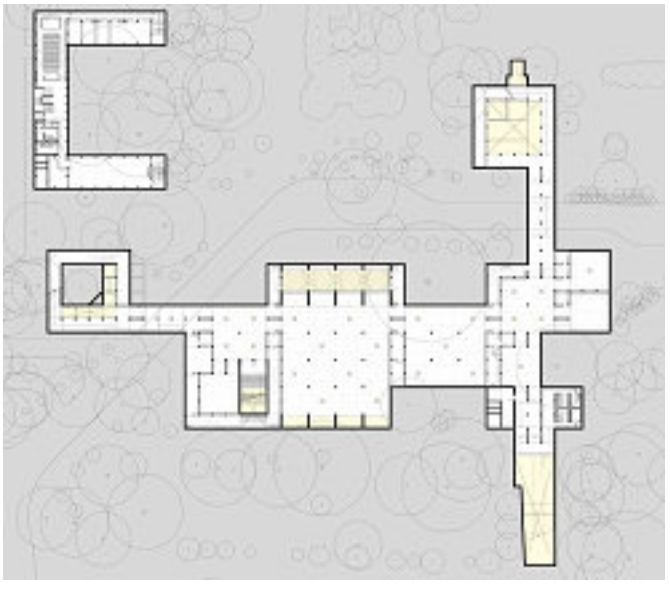
The Finial Gallery leads into the second Vestibule Gallery, situated along the axis of the Sunder Nursery promenade above. This space – marked by a single column at its centre – offers the choice of ascent to Humayun's Tomb |4|, or to Sunder Nursery. In each case, the re-emergence of the visitor from the subterranean to the terrestrial plane is spatially distinct. The gallery and ramp leading to Sunder Nursery evoke a cherished Mughal motif – the architecture of water. The scent and sound of water are palpable as visitors emerge from this Vestibule Gallery. As they ascend into the arbour of Sunder Nursery, a scalloped fountain – the *chinikhana* – offers a cool and welcome threshold for entry into the garden realm. For visitors proceeding to Humayun's Tomb, the ramped garden of the Long Court |9|, sculpted under the canopy of large trees, offers a release into the walled compound of the Tomb enclosure.

The architecture of the Humayun's Tomb Site Museum is perhaps best expressed in the Garden Plaza terrace |8|10|11| – its facade to the sky. Sheltered beneath the canopy of the mature trees on the site, this stone plaza reveals only a modest hint of the Museum below – soft light emitted at dusk through the marble screened skylights.

For visitors to experience the craft traditions that were introduced to India during the Mughal period and which continue to flourish in many ways, the contemporary architecture of the Site Museum aspires to 'inhabit' the spatial past. In evoking the tactile material culture of the Mughals, it engenders an awareness of the lineage of craftsmanship that has endured across five centuries. The builders of Humayun's Tomb created an absolute and enduring edifice that transcended the vicissitudes of their era. The Site Museum prepares present-day visitors to behold this remarkable achievement.

5

6



7

The Landscaping of Humayun's Tomb Site Museum

Mohammad Shaheer

The proposed landscape around the new Museum is designed to function as a series of generously proportioned walkways, gardens and plazas offering a pleasant experience to the large numbers of people that will walk through them, and to provide well-defined sitting places where families, small groups and school parties can conveniently gather or rest. Each space is planned to benefit from the shade, shelter and visual interest offered by the many fine mature trees found on the site.

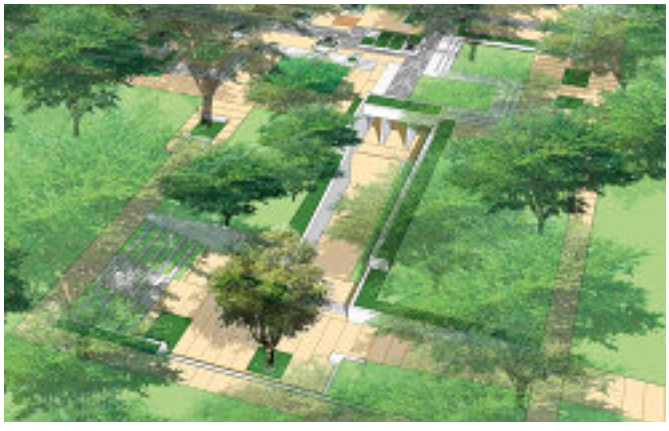
The main landscape spaces are the Entrance Plaza, the Museum Court, the Access Courts, the *Jamun* Tree Court, the Cascade Court, the Long Court and the Garden Plaza.

Visitors enter the Entrance Plaza |2| under the foliage of existing *Neem* (*Azadirachta indica*) and *Peepal* (*Ficus religiosa*) trees, part of an extended grove around which the above-ground facilities of the Museum have been aligned. The Plaza is accessible from east and west: the eastern entry enables visitors arriving by private bus – tourists and schoolchildren for example – to alight or board directly from either side of the road that presently runs between the two parts of the site. On the western side, a separate alighting point for those arriving by private car or taxi is planned adjacent to the Nursery's boundary, along with parking space for 200 cars.

The Entrance Plaza extends into the Museum Court, an expansive space virtually roofed over by the soaring canopies of several existing *Neem* and other trees of the *Ficus* species. This court then stretches into the main landscape of Sunder Nursery by way of a large space provisionally identified as the Crafts Court – an outdoor place for craftsmen to demonstrate and exhibit stone and other crafts under the shade of an existing cluster of *Siris* (*Albizzia*) and *Neem* trees.

For visitors arriving by public bus, the entrance area of the proposed new complex is already quite well connected by footpaths and an underpass across Mathura Road to the Nizamuddin

8



9

10

11

Basti. As part of a larger plan, parking for sixty tourist buses has been proposed at the eastern edge of the site, not far from the main entrance court of the Site Museum.

Strong connections – physical and conceptual – are established with the new landscape that is taking shape in Sunder Nursery and in the vicinity of Humayun's Tomb as part of the Nizamuddin Urban Renewal Initiative. A major exit from the Site Museum terminates the southern extent of the Sunder Nursery central axis. Further south on this axis the design of the main exit and its associated spaces is accurately coordinated with the central approach to Humayun's Tomb so that existing visual alignments are not compromised |1|11|.

Conceptually the intent of the landscape design is to illustrate and interpret the rich traditions of design and planting associated with gardens of the Mughal period, and also with their Persian precedents. Each of the three access courts leading to the lower level of the Site Museum is intended to highlight an individually distinct landscape feature.

At the main entrance for visitors for instance, an existing *Jamun* tree is taken as the central element around which the sloping walkway descends gently to the level below, and thus gives its name to the *Jamun* Tree Court. The design of another entrance/exit proposes a traditional water-cascade as its dominant feature, making a symbolic connection with the central axis of Sunder Nursery; hence its name, the Cascade Court. The third court, where visitors exit from the Museum and join the main approach to Humayun's Tomb, is designated the Long Court |9|, appropriate to its shape: a broad pathway about five metres in width inclining gently beside a grassy slope along the length of a very large linear enclosed space, shaded by groups of existing trees at its edges.

The extensive roof of the Museum, just a few steps above the surrounding park, is called the Garden Plaza |8|10|, set among existing trees. Its design is a variation on the garden carpet motif, an idea previously explored in the gardens along the central axis of Sunder Nursery. The flat plane of the roof suggests a carpet in the shade of trees. Its landscape is imagined as the contemporary interpretation of a garden carpet design, mostly in sandstone. The conventional features of such a carpet, as indeed also of a garden in the Persian style – a central water channel, planting beds, and narrow runnels for irrigation – are represented respectively as very simple patterns in the paving, and as thin shallow channels incised into the surface and suitably sloped to allow for surface run-off from this large paved area.

Endnote

1 The Ministry of Tourism has pledged INR 49 crores (approximately USD 8 million) towards the Museum's construction.

|8| The Garden Plaza.

|9| The Long Court: the proposed exit from the Site Museum onto the main approach to Humayun's Tomb.

|10| The central channel of the Garden Plaza.

|11| A view of Humayun's Tomb from the west, with the proposed roof garden of the Site Museum in the foreground.

Hazrat Nizamuddin Basti

Humayun's Tomb, women taking part in a *sanji* (paper cutting) workshop, part of the Hazrat Nizamuddin Basti social development programme, Delhi, India.

Ratish Nanda

The Nizamuddin area is today recognized as one of the densest ensemble's of medieval Islamic buildings anywhere in India. Almost every dynasty to have ruled Delhi has built here; the Il Bari Turks (also known as the Slave dynasty), the Khaljis, the Tughlaqs, the Lodis, the Surs and, of course, the Mughals built some of the finest buildings of their reigns in this small geographical area that stood along the River Yamuna, until the river receded eastwards in the nineteenth century.

Ghiyas ud din Balban built his palace here in the mid thirteenth century, before he ascended the throne in 1265, giving the area the name of Ghiyaspur. Lal Mahal, as his palace came to be known, was a fine building with a central dome and is today the earliest surviving Islamic palace building in India. At Lal Mahal the first recorded use in the country of the dome and true arch was employed. The famed traveller Ibn Batutta stayed at Lal Mahal for a part of his stay in Delhi. Today Lal Mahal serves as a residence, with portions of the building demolished in 2008–09 to make way for a new mosque.

The significance of the area today derives from Hazrat Nizamuddin Auliya, the revered fourteenth-century Sufi saint who chose to establish his *khanqah* in Ghiyaspur. The grand Jamaat Khana mosque built here during Alauddin Khalji's reign (1295–1315), to royal scale, remains, to date, one of the grandest structures in the complex. The construction of the mosque and that of the Baoli in 1320 would signify the presence of a significant population in Ghiyaspur or even a large volume of pilgrims visiting here to seek the blessings of Hazrat Nizamuddin Auliya. The Baoli would have served not only the drinking water needs of the local community and pilgrims but would also have been used for *wuzu* or ablutions prior to prayers at the mosque.

On his death, the saint was buried in the courtyard of the Jamaat Khana mosque, and the Ghiyaspur area began to be

2

|1| The revered Sufi saint, Hazrat Nizamuddin Auliya, with his favoured disciple, Amir Khusrau, whose influence on Hindustani culture – a fine synthesis of Hindu and Muslim elements into a synergetic whole – is dominant even today.

|2| The Jamat Khana mosque within the Dargah enclosure is now undergoing conservation work by AKTC on the request of the traditional keepers of the shrine.

باہر جانے کا راستہ
बाहर जाने का रास्ता
WAY TO OUTSIDE

4

known after him as "Nizamuddin". For almost seven hundred years, pilgrims have been visiting the shrine of the saint and since it is considered auspicious to be buried near a saint's grave seven centuries of tomb building can now be seen here. Within six months of the death of the saint, his favourite disciple, the great poet Amir Khusrau, also died, unable to bear the grief of the loss of his spiritual master. Hazrat Amir Khusrau (1253–1325) has, till today, maintained his position as a revered figure in the Indo-Persian cultural landscape of the South Asian subcontinent for over seven hundred years. In keeping with Sufi pluralistic traditions, he was, without doubt, the most popular proponent of what has come to be called Hindustani culture, a fine synthesis of Hindu and Muslim elements into a synergetic whole. He was a devout follower of the Chishti order while being associated with the courts of at least seven kings of Delhi, straddling the spiritual and materialistic worlds with ease and spreading the Sufi message of pluralism.

Structures were built surrounding the Baoli of Hazrat Nizamuddin Auliya up till late Mughal times with the southern arcade dating from 1379–80. Following partial collapse of the Baoli in 2008, a major conservation initiative is now underway, where eighteen families living on the top of the southern arcade have been provided alternate housing by the Aga Khan Trust for Culture (AKTC).

The spate of tomb building in the area continued through the Lodi period and, even though some of the significant royal tombs of the Lodi dynasty were built almost a mile east of the Dargah of Hazrat Nizmamuddin Auliya, structures such as the

|3| The entrance to the Dargah of Hazrat Nizamuddin Auliya.

|4| Barah Khambha, a 16th-century tomb and its park setting, is presently being restored in partnership with the Delhi Development Authority.

tomb known as Barahkhambha, Gol Gumbad and Do Sirihya Gumbad were built within Hazrat Nizamuddin Basti.

It was with the coming of the Mughals that the Nizamuddin area was dotted with garden-tombs; in fact, the earliest buildings of the Mughal dynasty were built here. The blue-domed Nila Gumbad is, without doubt, the earliest building of the Mughal era to have been built in Delhi. Located a few yards south of Hazrat Nizamuddin's *chillgah*, on a river island, the dome, tile work and plasterwork are all reminiscent of Persian influence. Though it seems later burial in Nila Gumbad continued, and as such created confusion about the date of the structure, it is the Nizamuddin area that defined pre-Shahjahanabad Mughal Delhi. Sabz Burj, literally 'green dome', now standing in a traffic island on Mathura Road, is possibly contemporary to Nila Gumbad, pre-dating Humayun's Tomb.

The Nizamuddin Basti is densely populated and though boasting of seven centuries of living culture and built heritage the quality of life of residents has been poor with high malnutrition rates among children, lack of health, education and sanitation infrastructure, low employment rates with under one per cent of women employed and limited access to urban services and access to parks.

AKTC's effort here has thus followed an urban landscape approach pioneered by AKTC in similar initiatives in Cairo, Kabul and Zanzibar, among other cities, and the focus on the context of built heritage has meant that the preservation of living culture represented by music, food, rituals and craft has been coupled with the conservation of the built heritage.

With thousands inhabiting the densely populated Hazrat Nizamuddin Basti, major efforts to improve the quality of life of inhabitants has led to a socio-economic programme that today directly benefits seventy per cent of residents and several thousand pilgrims from across India and other parts of the world. The project has demonstrated that conservation and development

6

8

7

9

10

initiatives can and should be part of a single process. Major improvements in health, education, water and sanitation infrastructure have been undertaken. Urban improvements have also included repaving streets, landscaping neighbourhood parks, housing improvement, rubbish collection and management and, more recently, developing byelaws for the heritage zone.

Community involvement in the conservation effort, through training of tour guides, vocational training and the creation of women's craft production groups, has also instilled a sense of pride in the community.

Art and culture festivals and heritage walks have, since 2009, attracted thousands of first-time visitors, especially school groups, from across Delhi to the Basti, helping those concerned to better understand the pluralistic nature of the Islam preached and practiced here since the fourteenth century.

Conservation works in the Basti have to date focused on the fourteenth-century Baoli and the Mughal-era mausoleum known as Chausath Khamba. Works are planned for other Mughal-era structures, such as Atgah Khan's Tomb and Barahkhambha.

|5| Preceding pages: Qawwali performance at the Dargah of Hazrat Nizamuddin Auliya.

|6| Community health workers visit door-to-door to ensure health-seeking behaviour among women improves.

|7| With under 1% of women employed, the project has emphasized vocational training for economic opportunities, such as embroidery.

|8| One of the neighbourhood parks has been designed for the exclusive use of the women who live in one of Delhi's most densely populated neighbourhoods.

|9| Musical traditions, such as Qawwali, were fostered and developed here at Hazrat Nizamuddin's Dargah. AKTC has created performance spaces as well as worked with musicians to document, disseminate and train.

|10| Young people of the Hazrat Nizamuddin Basti have carried out a cultural mapping of the area and been trained as guides. They provide educational tours to over 5000 school children annually.

Baoli

At the Nizamuddin Baoli, following the collapse of one of the walls, major conservation works have been carried out since 2009. The Baoli was hemmed in with modern construction, which led to its partial collapse in July 2008. A major conservation programme was undertaken involving the repair and consolidation of the monument coupled with cleaning the well of seven hundred years of accumulated deposits requiring 8000 man-days of work. This was followed with a series of consultations with local community representatives and families residing over the structure. Nineteen families have been provided alternate homes and support in ensuring health care, education opportunities for children and vocational training for employment to these families. The works at the Baoli aimed not only at restoring the architectural character of the monument but also at enhancing the setting of the fourteenth-century step-well and so four monuments standing on its edge have been conserved, including two in private ownership.

Chausath Khamba

The tomb of Mirza Aziz Kokaltash, the son of Atgah Khan, stands on a high plinth within an enclosure with a forecourt and is entered through an impressive gateway, mostly stripped of its stone cladding. It is known as Chausath Khamba, on account of its sixty-four pillars supporting the twenty-five domed bays.

Today hemmed in within Hazrat Nizamuddin Basti, the tomb is a 'pillared/arcaded hall' built entirely of marble and thus could have served as an inspiration to Emperor Shah Jahan for his pillared halls of audience comprising foliated arches and for his favoured use of marble.

Each of the marble blocks used in the domes is unique, with blocks varying from one another on account of horizontal and vertical curvature, and the length and thickness of the stone. Furthermore each ring is of varying width. The Mughal builders used iron clamps to fix the marble blocks with adjoining stones. Over the centuries, water ingress, noticed at the onset of the project, from each dome, led these clamps to corrode and expand, thus causing severe damage and bursting of the marble blocks. Until as recently as 2004, repairs to the burst marble blocks comprised infill with white cement mortar that matched the colour when applied but neither retarded the deterioration process nor ensured structural stability.

With co-funding from the German Embassy, a complex conservation programme commenced in 2010. Following exhaustive documentation of each of the domes and the condition assessment of each individual stone, the conservation process

11

12

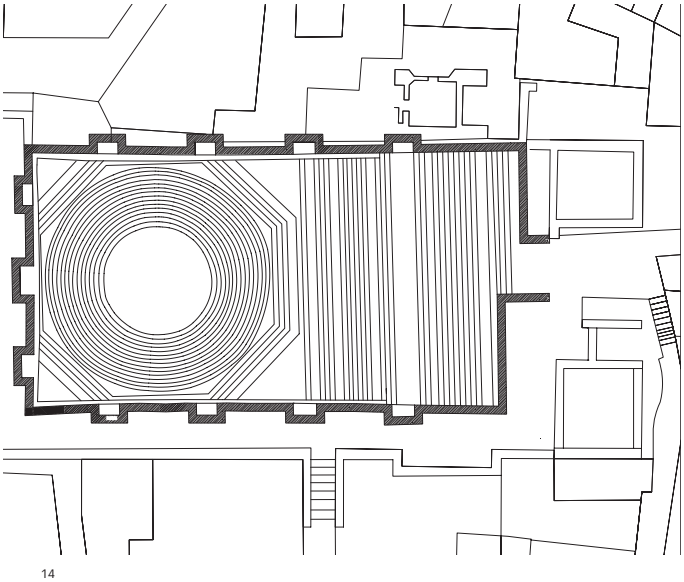
| 11 | Atgah Khan's Tomb has unique inlay work that will require careful restoration by master craftsmen.

| 12 | The Hazrat Nizamuddin Baoli partially collapsed in 2008 requiring AKTC to undertake urgent conservation work that also meant providing alternate dwelling units for 18 displaced families.

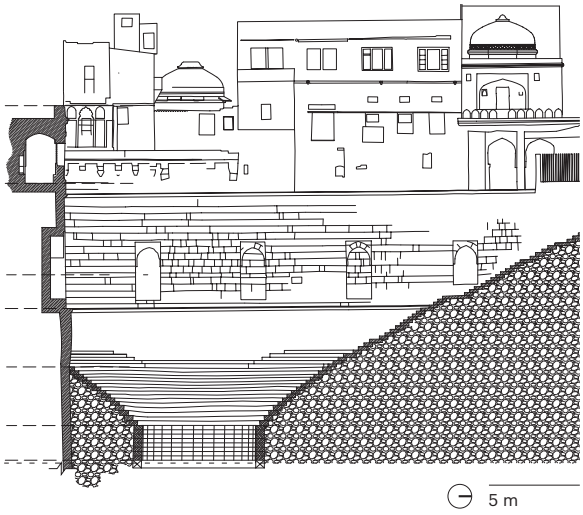
| 13 | The community requested that prior to restoring collapsed portions of the 14th-century Baoli, or stepwell, it be emptied of 700 years of accumulated deposit that had reached a depth of more than 10 metres. This had to be manually removed, requiring 8000 man-days of work.

| 14 | The plan and section of the Baoli, today hemmed in by modern constructions.

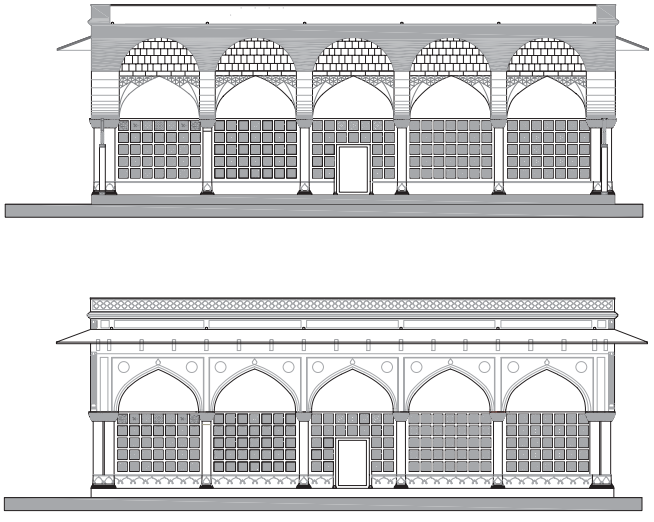
13



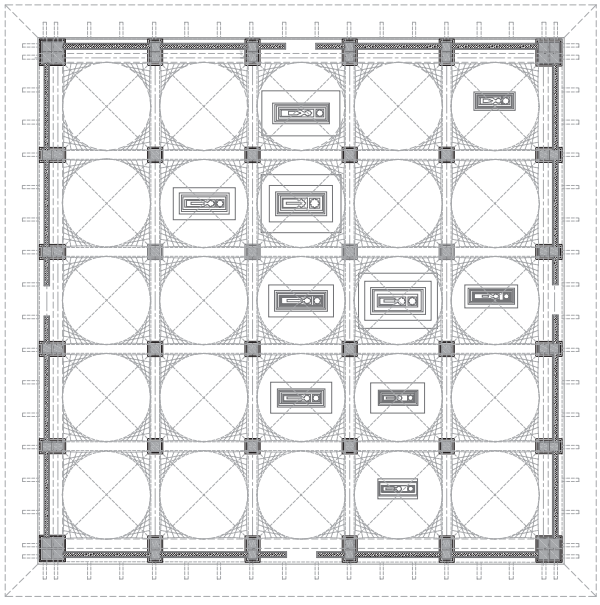
14



15



16



3 m

|15| Craftsmen using traditional tools and building techniques repaired the marble blocks of the Chausath Khamba over a four-year period.

|16| The section, elevation and ground plan of the Chausath Khamba, built entirely of marble.

|17| At the Chausath Khamba, each one of the 25 domes had to be stripped of its marble cladding in order to repair cracks and to replace iron dowels with non-corrosive stainless-steel dowels.

required dismantling each of the twenty-five marble domes. This allowed deep and profuse cracking in the brick masonry to be addressed and repaired, as well as the damaged marble blocks to be carefully renovated. Marble repairs mostly required that broken edges, damaged by corroding iron clamps, be restored by indenting matching marble of the required shape, thickness and profile.

In carrying out these repairs, it was essential to ensure that the keystone remained in place with support from a specially fabricated framework. The repaired stone blocks were restored to their precise original location and fixed with non-corroding stainless-steel clamps. No similar conservation effort requiring such large-scale dismantling for repair and relying solely on traditional building craft techniques has been recorded elsewhere. Once the repair methodology was finalized and renovation on the first dome completed over an eight-month period, the roof was made watertight by removing cement and laying a traditional lime-concrete layer to adequate slope.

Coupled with the conservation works, the forecourt was sensitively landscaped to serve as an open-air amphitheatre, and three international music festivals have now been organized to celebrate seven centuries of the Qawwali music traditions created here in Nizamuddin by the saint's favoured disciple, the fourteenth-century poet-courtier Amir Khusrau, in praise of the saint.

17

Atgah Khan's Tomb

The mausoleum of Atgah Khan, Emperor Akbar's minister, is a jewel-like structure that today stands dwarfed by modern buildings at the edge of the Dargah complex. Though small in scale, the tomb is one of the most significant Mughal-era structures in the Nizamuddin area and begins to employ the red sandstone-white marble contrast used to such great effect on Humayun's mausoleum. Here, however, the profuse ornamentation is unique in Delhi, with glazed ceramic tiles being used as inlay in marble panels, a gesture that is rare, even in Persia. The external walls up to the dado level are comprised of sandstone blocks with exquisite marble inlay. Both sandstone and marble panels have ornamental carvings of geometric motifs.

The interior surfaces of the tomb chamber have been stripped of sandstone and marble panels that could have been similarly ornamental. These appear to have been removed for the antiques market – as has been the case of decorative stone elements from several other monuments in the project area. The domed ceiling would have been striking, with coloured incised plasterwork, of which only a few small patches remain.

The crypt of the tomb is today occupied and lived in by several families, who have chipped away at the thick masonry walls to increase living space – in turn causing severe structural risk to the monument and endangering their own lives.

Conservation works can possibly commence here only once the families have been provided alternate accommodation. The dado-level sandstone panels on the facade would require replacement as past conservation works have obliterated original details and defaced the panels, which will need to be removed to a secure museum space. Restoration of the incised plasterwork of the ceiling is dependent on studies to reveal the original patterns.

Sunder Nursery: Conservation and Landscape

Restoring the historic lime plaster in the tomb of Mirza Muzaffar Hussain, Batashewala complex, Delhi, India.

Ratish Nanda and Mohammad Shaheer

Sunder Nursery Conservation

Ratish Nanda

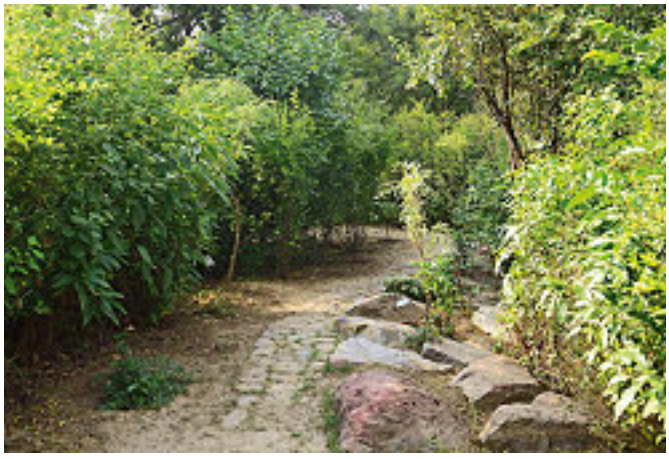
Sunder Nursery, earlier known as Azim Bagh or the "great garden", was established in the twentieth century to experiment and propagate plants for New Delhi during British colonial times. Within Sunder Nursery and its adjoining Batashewala complex stand seven Mughal-era garden-tombs.

The Landscape Master Plan now being implemented at Sunder Nursery aims to link the conservation effort on the standing monuments to create a major landscape space of truly urban scale, deriving inspiration from the traditional Indian concept of congruency between nature, garden and utility, coupled with environmental conservation. In addition to the formal landscape in the setting of the Mughal-era monuments, a biodiversity park is being created for flora that occupies Delhi's ridge, river edge, plains and other specialized zones such as desert and marshy areas.

Sunderwala Burj and Sunderwala Mahal

Two early Mughal-era tombs stand north of Isa Khan's tomb in the adjoining Sunder Nursery. Archival records reveal that these were, until the early twentieth century, grouped within a single enclosure entered through a lofty gateway on the south. A century later, no evidence of the enclosure walls nor of the gateway have survived.

The larger tomb, known as Sunderwala Mahal, has a central chamber enclosed with eight rooms forming a circumambulatory passage. The structure had largely collapsed and the western facade was reconstructed in 2002–04, but to inappropriate design, with arches built instead of half-domed chambers. In 2008–09, the collapsed portions were reconstructed as per



2

3

|1| Sunderwala Burj in Sunder Nursery, Delhi, India.

|2| Micro-habitat zones at Sunder Nursery showcasing Delhi's diverse ecology for educational and recreational purposes.

|3| An 1860s view from the roof of Humayun's Tomb looking towards Sunder Nursery and the Purana Qila.

the original design, matching the northern facade that had remained intact. In 2013 the inappropriately reconstructed western facade was dismantled and rebuilt to its original profile, and conservation works aimed at ensuring long-term preservation through the use of traditional materials continue.

The significance of the adjacent Sunderwala Burj lies in its ornamental ceiling with incised plaster patterns, much of which was intact but subject to deterioration due to water ingress from the roof. The star-pattern ceiling is reminiscent of decorative wood ceilings seen from Iran to Kashmir. The pattern is also a development of the designs seen on the lower arcade at Emperor Humayun's mausoleum.

Cracks in the dome and roof were repaired prior to careful removal of lime-wash layers from the decorative ceiling and restoration of the minor portions of missing incised plaster. Sandstone lattice screens were restored to the arched openings above the doorways and lime plaster to the wall surfaces. The red-white contrast was achieved here by the Mughal builders through the use of polychromy over the lime plaster.

The immediate setting of both Sunderwala Mahal and Sunderwala Burj have been treated as formal gardens – replacing the tarmacked road network that had reduced these monuments to traffic roundabouts. North of the Sunderwala Burj, the newly created gardens are inspired by the traditional Persian carpet layout.

Lakkarwala Burj

To the north-west of Sunderwala Burj stands a contemporary yet much larger mausoleum. It is not known who it was built for and, as with many of the tombs – Nila Gumbad, Sabz Burj and Sunderwala Burj, among others – it is simply known by a local name, Lakkarwala Burj. Strangely, Lakkarwala Burj does not follow the north-south alignment of all the other tombs and is on a slight diagonal, which in view of several earlier structures present in the area is difficult to understand.

Conservation works here were very similar to those undertaken at Sunderwala Burj: removal of inappropriate past layers and replacement with traditional materials prepared by master craftsmen, and sensitive landscaping of the immediate setting. The incised plasterwork in geometric and floral motifs has been restored where this has been lost, thus reviving some of the structure's original grandeur.

Batashewala Complex

To the immediate east of the Sunderwala tombs stands another garden-tomb enclosure in which the principal tomb is that of

4

5

|4| Sunderwala Mahal, a 16th-century tomb structure, required partial reconstruction as portions had collapsed in the late 20th century.

|5| The ornamental incised plaster ceiling of Sunderwala Burj is unique among Delhi monuments and required careful conservation and protection.

6

7

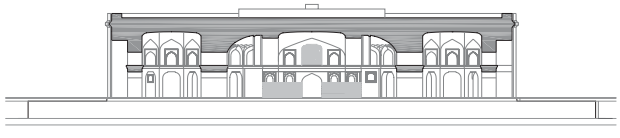
8

|6| The central axis of Sunder Nursery, inspired by Persian garden design, will serve as the heart of the new garden.

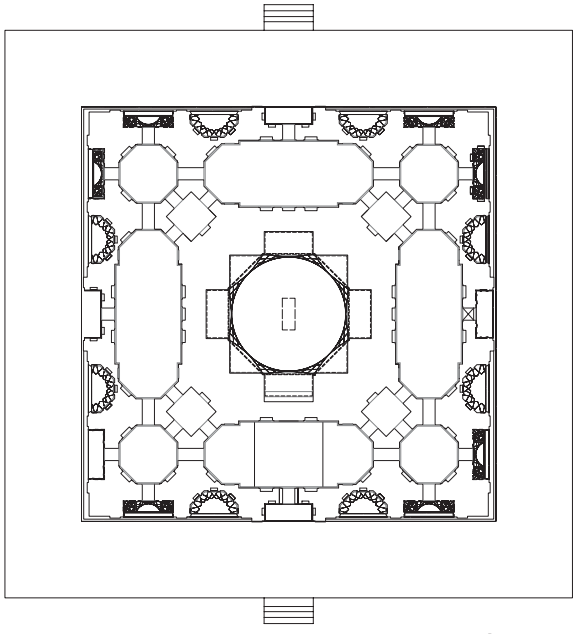
|7| The 16th-century Sunderwala Burj is one of several Mughal-era structures standing within Sunder Nursery.

|8| As with other monuments, the conservation of Lakkarwala Burj was also coupled with the landscaping of its immediate setting.

9



10



|9| The restored interiors of Mirza Muzaffar Hussain's Tomb, which were found covered in soot, algae and lime wash, thereby disfiguring the historic appearance and accelerating the decay process.

|10| Architectural documentation of Mirza Muzaffar Hussain's Tomb.

|11| The architectural integrity of Mirza Muzaffar Hussain's Tomb restored to the original builder's intentions.

Mirza Muzaffar Hussain, who traced his descent from both his father's and his mother's side to Timur and was married to Emperor Akbar's eldest daughter. The tomb is elevated and its interiors profusely ornamented with incised plasterwork as well as the red-white contrast in polychromy.

Only a few metres east and within the walled enclosure stands another tomb structure. Known as Chotta Batashewala, this tomb is an unequal octagon standing on a high plinth. The arcaded enclosure wall of the Batashewala complex tomb had mostly been lost, with large sections demolished in 1989 when temporary geodesic dome structures were built to house groups camping here, destroying the historic landscape of the enclosure as well.

A few metres further east from Chotta Batashewala is another Mughal-era tomb structure, within its own garden enclosure, pre-dating the Batashewala complex and almost in alignment with the northern pavilion of the Humayun's Tomb enclosure. Following the Lodi-era typology of a square domed tomb, this early Mughal structure contains a striking ornamental ceiling and decorative incised plasterwork on its southern facade. The ornamentation on the parapet is similar to Lakkarwala Burj.

Since 1999 the Aga Khan Trust for Culture (AKTC) has made efforts, through regular discussions with government authorities, to restore land to the ownership of the Archaeological Survey of India (ASI) in order to undertake major conservation works on monuments of national importance as well as the sensitive landscaping of the immediate setting of the monuments. These efforts bore fruit when the complex was 'sealed' on orders of the Supreme Court of India for illegal use by the Bharat Scouts and Guides and subsequent to this, in 2009, the land reverted to ASI. Shortly thereafter, funding support from the US Ambassadors Fund for Cultural Preservation was received and a four-year conservation initiative has thus far been undertaken.

Works commenced with demolition of over a hundred 'temporary' structures that were intended to stand for a six-month period but had remained there for twenty years, during which the metal framework of the geodesic domes had been replaced with reinforced concrete. Clearance of earth revealed the foundations of missing portions of both the walled enclosures, which were then reconstructed as standing portions and over their original foundations, thus restoring the significant garden enclosures. Efforts continue to request ASI to expand protection to the entire enclosed gardens rather than only the monument structures.

All three monuments in this setting required significant conservation, including reconstruction of collapsed portions of the "Batashewala" monuments. As with Sunderwala Mahal, the southern facade of Mirza Hussain's tomb had also been reconstructed to an inappropriate profile in 2003–04, with arches built in lieu of collapsed half-domes. This recent reconstruction was demolished to restore the original profile.

The geometric and floral patterns of the incised plasterwork on the interior surface and the *kangura* patterns on the parapet, including the glazed tiles, were restored where missing.

On the completion of conservation works and the landscape restoration, access will be established from Sunder Nursery, thus integrating six Mughal garden-tombs, all dating from the sixteenth and seventeenth centuries.

Azimganj Serai

The sixteenth-century Grand Trunk Road passed through the Nizamuddin area. Rest houses or serais for pilgrims, travellers

11

12

and traders were built at regular intervals on this medieval road. Here vaulted chambers, surrounding a central open court, provided shelter and spaces to store goods. The large court would often contain a mosque for worshippers as well as a well to provide drinking water. Many serais had attached enclosures where the animals were housed.

To the north of Sunder Nursery stands the now ruined Azimganj Serai. It is possibly on account of the latter that the Sunder Nursery area was formerly known as Azim Bagh or the "great garden".

The Azimganj Serai encloses a 100-metre-square court with two bay, deep-vaulted passages on all four sides. Built on an elevated platform, the Serai has a fort-like appearance. Recently being protected and acquired by the Delhi Government's Department of Archaeology, the Serai was neglected for over a century and is today in a state of ruin. Conservation works by AKTC have now commenced with the primary purpose of halting further deterioration. The courtyard of the Serai as well as some of the rooms could provide a unique setting in Delhi for reuse.

Landscaping the Setting

Mohammad Shaheer

The Landscape Master Plan for Sunder Nursery includes planning and design proposals related to:

— nursery and productive use;
— heritage and cultural activity;
— botanical and ecological experiences and exhibits;
— recreational use;
— services and amenities.

Sensitive site planning and landscape design have been implemented to create spatial identities that overlap and intersect, with the distinctive identity of each component, far from being compromised, contributing vigorously to the whole. Significant Mughal-era monuments stand at the geographical centre of the site; their position suggests the development of a core landscape of which they are the anchors or reference points – a kind of centrepiece from which other landscape experiences emanate.

| 12 | The 16th-century Azimganj Serai, abutting Sunder Nursery, is presently undergoing major conservation and landscape work.

The idea of a central heritage zone has emerged from the alignment of the existing gate with the centre line of Sunderwala Burj, and the extension of the same line to the significantly large enclosure of the Mughal-era Azimganj Serai just beyond the northern boundary.

The central axis extending from the main entrance to Sunderwala Tomb and further northwards in the direction of Azimganj Serai is an important and extensive formal landscape element of the proposed Sunder Nursery Plan.

The path network is designed as an interpretative representation for developing spatial and movement links connecting the Mughal monuments. The strong visual presence of the protected monuments suggests the delineation of a core zone or heritage axis represented by the central axis. A notional arc of movement falls into place as a secondary route connecting the other archaeological sites.

This 'central axis', inspired by Mughal landscape style, is conceived in three parts as a progression of formally arranged gardens around the heritage structures, and merging at its end with the naturalistic informality of the proposed Forest Arboretum and Water Gardens.

In the first part, stretching from the shared entrance with Humayun's Tomb to the Sunderwala Burj, the existing road has been replaced with a central grass sward, punctuated with small seating and garden areas, anchored to the Tomb itself at its northern end.

Movement takes place along paths on either side of this central garden space, so that, as you enter, the eye catches the axiality of the composition, but, as one moves, one looks past the monument, awareness being diverted to features beyond, and on either side. On the left, in contrast, is the deep and inviting shade of dense trees, and on the right, filtered views to Sunderwala Mahal and the raised landform of the Tree Garden, increasing the likelihood of the visitor's conscious or subliminal engagement with other aspects of this entrance landscape.

The second part of the axis draws the visitor further into the complex, introducing a glimpse of the proposed lake beyond, and the scattered monuments in the arboretum area to the east. The latter are proposed to be approached by means of a path sweeping in a gentle curve into the forest. This is the 'arc of discovery'. It is a means of expressing in an interesting way how the experience of encountering the group of scattered monuments – discovering them inside a forest – is quite different in comparison to how the other three tombs are seen, visible from quite a distance as prominent objects on a flat landscape, framed rather than surrounded by trees.

The Carpet Garden

The space just north of Sunderwala Tomb is designed as an elaborate garden, contemporary in layout but evocative of Mughal geometry, scale and irrigation practices. It is centred on a long water feature slightly elevated from the surroundings, from which on either side flow very narrow water channels, each culminating in a pool at a lower elevation. These pools, which are in the form of Mughal *jalis*, are the central feature of a miniature orchard. Viewed from the higher plinth of the Sunderwala Burj, with the sun behind the visitor, the garden would appear to be spread like a carpet, a fascinating foreground to the massed vegetation behind.

Though gardens in the Persian and Mughal tradition are characterized by spatial arrangements based on the four-square plan generated by the intersection of two axes perpendicular to each other, there is usually a strong directionality to one of these. The dominant axis stretches from the garden entrance to the central tomb, and from there to the prospect beyond, be it to the river as in Humayun's Tomb or the Taj, or right across Dal Lake to the distant mountains as in the Mughal pleasure gardens in the valley of Kashmir.

Attempting a contemporary expression of the traditional Mughal garden aesthetic, this simple arrangement of a linear water body flanked by areas of planting is adopted as the main motif for organizing the garden spaces of this part of the central axis.

The stylization of garden spaces and garden elements as two-dimensional patterns in the long-established design of garden carpets can serve as the approximation of a template in seeking an appropriate contemporary format to express the essential spirit of the Mughal garden:

13

For refuge and renewal
a magic space for concourse, music and rejoicing
for contemplation's lonely spell
conversation grave or a lover's shy disclosure...[1]

The idea of the garden carpet, with its accurate but graphically stylized depiction of the familiar *chahar-bagh*, establishes an interesting connection between the essentially outdoor practice of horticulture and the craft of indoor furnishing, a relationship which is probably unique among the major gardening traditions of the world. Poetry about both gardens and carpets speaks of them in the same idiom, imagining the carpet as a garden and vice versa; it suggests a conceptual interweaving of interior and exterior. This is quite different from, and goes beyond the usual interactions between indoor space and outdoor landscape which are confined to literal considerations of physical and visual proximity.

"Like a babbling brook / we dance from one paradise to the next..."[2] Early irrigation practices feature prominently in many Persian and Mughal miniatures of garden scenes: small ponds in

| 13 | The Landscape Master Plan of Sunder Nursery and the Batashewala complex integrates ecological, heritage and nursery functions in a harmonious manner.

| 14 | Carpet, *c.* 1800. Islamic, made in north-western Iran or Kurdistan. Cotton (warp and weft), wool (pile); symmetrically knotted pile. Length 566.4 cm; width 242.6 cm. The Metropolitan Museum of Art, New York, gift of William R. Pickering, 1967 (67.156).

each garden and water flowing in narrow open runnels from one garden to another.

In the proposed design for the carpet garden of the central axis, the idea of irrigation is suggested by the overflow of water from the long central water element into narrow channels, thence to be conveyed over small changes of level to a grove – a symbolic orchard garden perhaps – at the centre of which is water. Not a pool as one might expect, but a water feature inspired by the intricate geometry of Mughal *jalis* – a little water-parterre, if you will – through which the water runs, then overflows and is recirculated.

Each little garden – there are ten of them – is planted with a variety of citrus and is meant to be symbolic of the orchard planting in Mughal gardens. It has a water-parterre or, more correctly, what may be called a 'water *jali*' unique to itself. There are, therefore, ten such different patterns, carved in marble, through which the water trickles. This diversity of patterns echoes appropriately the way *jalis* are found in historical examples – in great variety, with many different patterns in the same panel.

Incorporating these features in contemporary design presents an excellent opportunity to exhibit and promote traditions of craftsmanship that have existed on the subcontinent through millenia.

The Water Gardens

The third part of the central axis depends far less on rectilinear alignments; it is dominated by an extensive body of water weaving between existing trees, its shape determined by the need to retain these fine specimens, and guided by the profile of the land. The presence of shady trees at its immediate edge provides the advantage of reducing evaporation losses, and also generating a greater variety of microclimatic conditions for propagation of water-associated plant material. The lake offers opportunities for the design of a water-side promenade along its northern side, and for locating architecturally experimental nursery structures and a cafeteria at its edge.

Post-Project Sustainability

Since 2009 AKTC has been engaged in discussions with the Central Public Works Department, who are responsible for the care and maintenance of Sunder Nursery, to put in place a post-project management system that would utilize funds generated from facilities created by the project to pay for an effective management of the complex as well as infrastructure created in the wider project area, including the proposed Interpretation Centre.

When created, the proposed Trust would be responsible for a calendar of cultural events, site management (including security and horticulture operations), ecological awareness programmes (including nature walks, marketing and coordinating with various government agencies to ensure appropriate transport linkages), licensing and urban planning controls, among others. Market surveys commissioned by AKTC serve as a guide to ensure financial sustainability of the created infrastructure within a ten-year period, during which time AKTC would underwrite shortfall in revenue.

Endnotes

1 From "Ode to a Garden Carpet" attributed to an unknown Sufi poet (*c.* 1500). The complete poem is quoted in the notes to chapter 2 ("The Concept of Traditional Forms") in Nader Ardalan and Laleh Bakhtiar, *The Sense of Unity: The Sufi Tradition in Persian Architecture*, University of Chicago Press, Chicago, 1979.

2 Jalaluddin Rumi. The quotation is from the poem "The Birds of Paradise", in the collection in Jonathan Star, *Rumi: In the Arms of the Beloved*, Tarcher/Penguin, 2007.

14

Hyderabad

Qutb Shahi Heritage Park

Close-up view of the conservation work on the dome of Mohammad Quli Qutb Shah's Tomb in the Qutb Shahi Heritage Park, Hyderabad, India.

1

Landscape in close vicinity of Tombs

1 Proposed garden around Tombs.

2 Garden space enclosed by heritage buildings to be improved, through restriction of steps and appropriate adjustment of levels.

3 Proposed orchard groves of small fruit trees.

General landscape

A Entrance square.

B Major new path as the main entry to the complex.

C Proposed location of Interpretation Centre and Visitor amenities.

C1 Proposed Open Air Theatre and space for functions with Tomb of Begum Hayat Baksh.

D Existing water body to be modified with a floating garden proposed as an interlude on the main path.

E Proposed landscape link across site.

E1 Existing earth form re-graded to allow direct connection and access to the earliest group of Tombs in the south west part of the complex.

E2 Proposed garden to negotiate the change in alignment of major path.

P Parking for buses and cars.

2

Ratish Nanda

Conserving a Sixteenth-Century Necropolis

In the sixteenth century, while the Mughals were building grand fortifications, mausoleums and mosques in north India, the Qutb Shahi dynasty also built majestic structures in their capital, the present-day Hyderabad. Builders and patrons of learning, the Qutb Shahi dynasty strengthened Golconda, one of India's most formidable citadels. The funerary architecture of the Qutb Shahi tomb complex evolved through their rule with most of the mausoleums built by the rulers and their family during their own lifetimes. Similarly, they encouraged the development of Indo-Persian and Indo-Islamic literature and culture in their kingdom.

Unlike the early Mughals, whose majestic tombs are spread across Kabul, Delhi, Agra, Lahore and Aurangabad, the Qutb Shahis lie buried in grand mausoleums at the foot of Golconda Fort. At the Qutb Shahi Heritage Park, conservation and landscape restoration is being implemented by the Aga Khan Trust for Culture (AKTC) in partnership with the Department of Archaeology and Museums of the Government of Telangana and the Quli Qutb Shah Urban Development Authority of the Greater Hyderabad Municipal Corporation. As with Humayun's Tomb conservation, the Sir Dorabji Tata Trust is providing valuable funding to conserve ten of the principal monuments.

This necropolis of the Qutb Shahi dynasty, which ruled the region for 169 years in the sixteenth and seventeenth centuries, includes forty mausoleums, twenty-three mosques, five *baolis* (step-wells), a hammam (mortuary bath), pavilions and garden structures set within a significant heritage zone. No other ensemble of structures in the adjoining Deccani kingdoms of Ahmednagar, Berar, Bidar, Bijapur or Gulbarga includes as many monuments of striking grandeur and complexity, reflecting a unique synthesis of architectural styles.

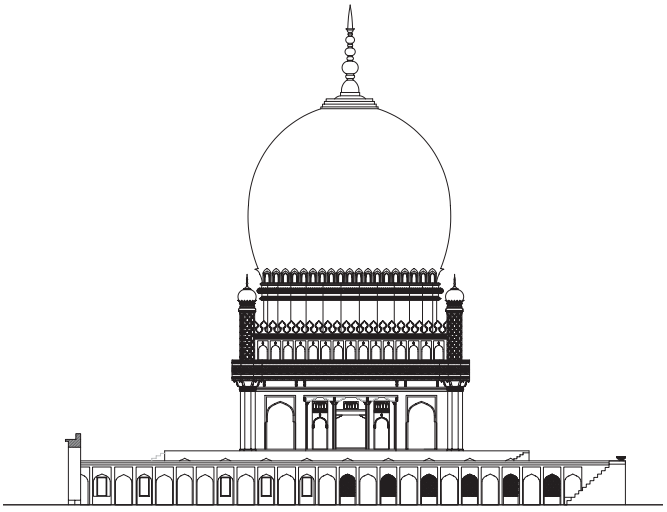
These monuments blend Persian, Pathan and Hindu architectural styles and are built with local granite. Surfaces of the

3

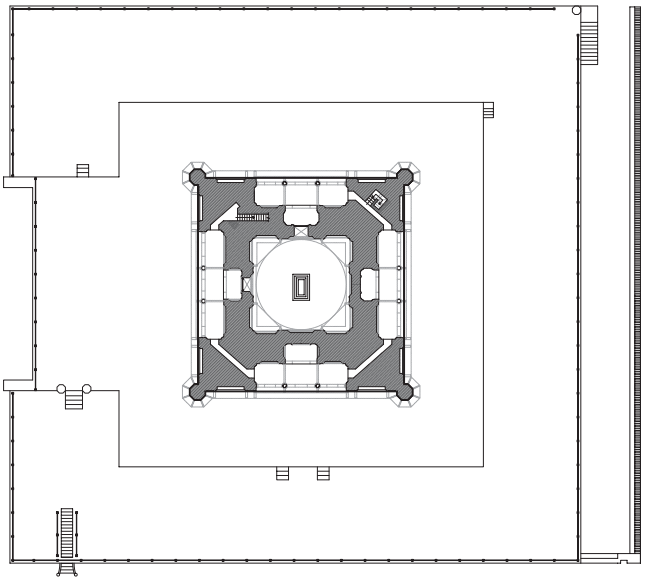
|1| Proposed Landscape Master Plan for Qutb Shahi Heritage Park in Hyderabad, India.

|2| View of the Qutb Shahi tombs from Golconda Fort in 1902–03.

|3| Nestled at the foot of the majestic Golconda Fort, the Qutb Shahi Heritage Park is spread over almost 53 hectares and is the necropolis of the Qutb Shahi dynasty, which ruled the region for 169 years in the 16th and 17th centuries.



4



historic buildings are ornamented with intricate stucco plasterwork and recent interventions have revealed that many of the monuments were also profusely ornamented with glazed-tile work. The Qutb Shahi tomb structures are derivations of the geometrical designs of the earlier Bahmani tombs of Bidar, though the stucco ornamentation employed here is significantly more intricate and on a far greater scale. During the Qutb Shahi period, these tombs were held in great veneration.

The 'Memorandum of Understanding' (MoU) signed to commence the project on 9 January 2013 was preceded by two years of documentation, condition assessment, topographical surveys and other landscape studies by the AKTC team. The Conservation Plan prepared on the basis of these studies included over two thousand architectural drawings, as well as the Landscape Master Plan prepared by Mohammad Shaheer (Shaheer Associates) on the basis of studies of vegetation, natural drainage, visitor circulation and view corridors, all forming part of the MoU. However, litigation by vested interests against public partners meant that conservation works could commence only in November 2013, subsequent to the sudden partial collapse of four structures in heavy storms.

Exhaustive archival research has now accumulated over five hundred photographs from the nineteenth century onwards. Archaeological excavations are being carried out with the support of the US Ambassadors Fund for Cultural Preservation to enhance the understanding of the site and to guide the landscape restoration. The conservation works will be preceded by further documentation, including state-of-the-art technology such as high-definition surveys using 3D laser-scanning technology.

As with the Humayun's Tomb project, conservation works will be rooted in the Indian context, where building craft traditions have been passed from father to son for centuries. The project will also be respectful of established international norms with an emphasis on retaining original material and material authenticity, and will be based on evidence, archival or *in situ*. Above all, conservation works will be implemented by master craftsmen using traditional tools, building materials and craft skills. The project is expected to require at least 300,000 man-days of direct employment over a ten-year period.

The mausoleums with bulbous domes are the principal attraction at the site, but the scale of the tombs varies enormously: from structures under four metres in height and twenty square metres in plan to others forty metres in height and almost 2000 square metres in plan. Similarly, there are several minor mosques and at least two very large ones.

|4| The elevation and ground plan of Mohammad Quli Qutb Shah's Tomb.

|5| Opposite page: the Landscape Master Plan developed from a close appraisal of the existing situation, including site slopes and levels, vegetation, access, existing monuments, and their visual setting and relationship to the landscape.

Contours, Elevations

The Qutb Shahi Heritage Park slopes in a diagonal direction from north-west to south-east.

Slope analysis

Slopes vary from 1 in 2 (dark brown) to 1 in 100 (light beige). An analysis of these slopes reveals that a considerable portion of the site has only a gentle slope.

Existing vegetation

Existing vegetation consists of native forest-type vegetation, scattered groups, individual trees among monuments and dense ornamental planting in Deccan Park. Each tree is presently being documented.

Existing drainage

The natural flow of rainwater runoff follows the slope from north-west to south-east. Landscape works will include earth grading to ensure that rainwater is collected in the step wells.

Access and movement

A path system based on the history of the place would play a vital role in enhancing and enriching the visitors' experience of this large, deep and complex historical site.

Landscape concept

The Landscape Master Plan envisages ecological zones on the north and south of the core monument area and a zone for facilities and parking along the periphery.

6

Variations in scale apart, it was determined that all the tomb and mosque structures, as well as all the step-wells, were in a poor state of preservation and the step-wells mostly in ruinous decay. The monuments suffer from similar patterns of material decay, as well as structural defects caused by dampness and water seepage, neglect and nineteenth/twentieth-century repairs using inappropriate modern materials such as cement. Often these repairs did not respect the original builders' design intention and thus altered the architectural character of the structures. Much of the plasterwork on the wall and dome surfaces has deteriorated, with all the structures covered with an inappropriate application of modern finish, disfiguring the historic character of these monuments.

Conservation works needing to be carried out on structures located within the Qutb Shahi Heritage Park range from preservation of original material fabric to reconstruction of collapsed building portions, such as the step-wells. The intention of the conservation works is to ensure that the significance of the site is preserved and that the architectural integrity is maintained. On occasion, this will require the removal of modern materials inserted into the built fabric and the restoration of elements such as stone edging on plinths, seen in archival images but removed at some time in the twentieth century.

The proposed Landscape Master Plan, based on site surveys and available archival material, is aimed at an enhanced setting for the monuments and improved internal visitor circulation. On the northern and southern edges of the site, significant areas will be dedicated to ecological zones for local flora coupled with the revival of water structures, leading to a significantly improved environment within a densely populated city. Ecological trails will allow visiting school children to have an improved understanding of heritage and ecology issues. Together with archaeological investigations, a detailed vegetation survey is now being undertaken, to record species, height, spread, girth and condition of each tree in order to inform the Landscape Plan.

The proposed Landscape Plan would appropriately utilize the space of the presently segregated "Deccan Park" as a generously proportioned entrance zone, hence establishing an effective presence on the public road and avoiding the present anomaly of the indirect approach that does not encourage an even spread of visitor activity across the complex. Judicious modification and reorganization of entrances and paths will increase accessibility to the older parts of the complex and allow visitors to easily traverse the whole site and understand its sequential development rather than restrict their experience to only a part of the area. A path system based on the history of the site could play a vital role in enriching the visitors' experience of this large, deep and complex historical site.

Though conservation works in November 2013 commenced with emergency repairs, future conservation and landscape works will be carried out in a phased manner to ensure that only

|6| Lifting and re-setting masonry blocks of the Badi Baoli, which had collapsed during 2012–13.

|7| Plan of the 16th-century Badi Baoli.

portions of the site are inaccessible to the visiting public at any given time. Two international peer reviews have been held in 2014 to review the Conservation Plan and the Landscape Master Plan.

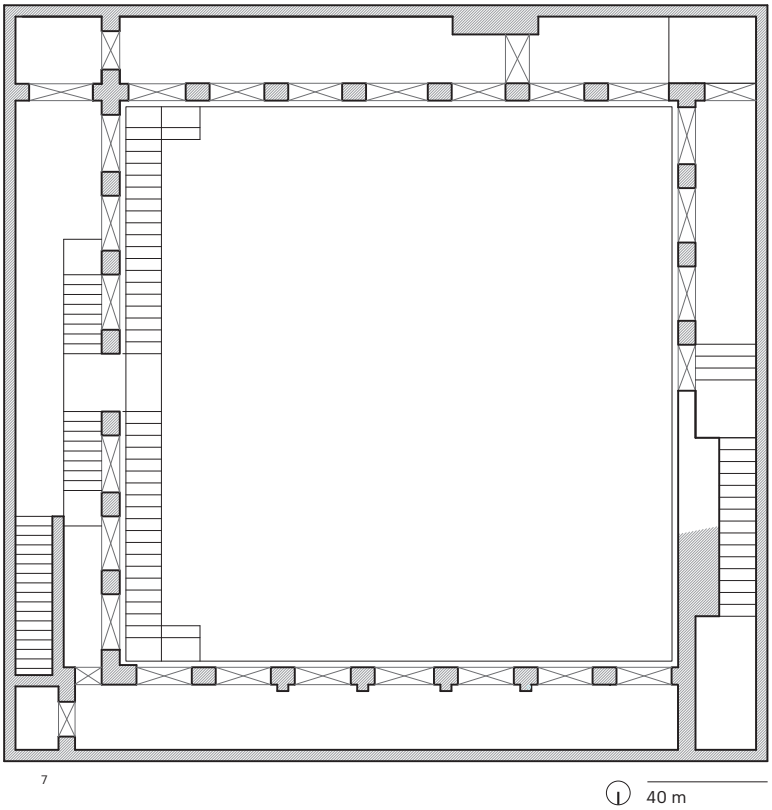
Badi Baoli

Of all the step-wells found on the site, the Badi Baoli seemed the best preserved when AKTC commenced surveys in 2012. However, through 2013, heavy storms led to the collapse of the west wall, threatening total collapse of the structure.

Archival research revealed that although originally built only as a tank in a depressed portion of the site, the arcade was, in fact, a nineteenth-century addition and prone to significant water pressure as large portions of the site drained into the area. However, the Badi Baoli was to be restored as found prior to the collapse.

In a dangerous and intense effort, several months were required to remove the collapsed masonry as well as centuries of accumulated material from the base of the well. Once the bedrock was found, a raft foundation was built to stabilize the site. Six hundred cubic metres of stone masonry has since been built over this base with lime mortar.

Rainwater drainage into the well from the western side has been created in a manner that does not allow water to exert pressure on the stone masonry. The arcade and remaining portion will be restored in 2015 once the rebuilt masonry has stabilized.



7

8

Jamshed Quli Qutb Shah's Tomb

The removal of deteriorating cement plaster from the domed surface required no tools since the plaster had lost all strength and could be removed by hand. This was followed by the application of a layer of traditional lime mortar to prevent further water ingress, which was causing significant cracks. The stucco plasterwork is also being restored on both the internal and external wall surfaces, as is the stone edging of the lower plinth, clearly visible in archival images.

To decide on the most appropriate conservation strategy for the stucco plasterwork, one of the most visible architectural elements on all structures, AKTC has created a template. This aims at ensuring that no original stucco is removed while also taking into account a tolerance for variations.

Abdullah Qutb Shah's Mosque

At the request of the local community, emergency repair works have also commenced on Abdullah Qutb Shah's Mosque, the roof of which was leaking and from where nearly half a metre of cement concrete weighing over ninety tonnes was manually removed.

The entire interior chamber was found to have been plastered in cement, and the inappropriate flooring is also now being replaced. Agreements with the Mosque committee will allow AKTC to design and implement the sensitive installation of electric fittings in order to ensure that the impact on the historic character of the Mosque is minimized.

|8| Removing cement and re-plastering the walls of Abdullah Qutb Shah's Mosque with lime plaster.

|9| Opposite page: restoring the original plasterwork of Jamshed Quli Qutb Shah's Tomb.

Lahore

The Walled City of Lahore

Badshahi Mosque, Lahore, Pakistan, built by Alamgir Aurangzeb and completed in 1674.

Masood Khan

The origins of Lahore are shrouded in the mists of time and legend. Tradition has it that Lahore was settled by Loh, Ramchandar's older son. The city first appears in historical records in the second century AD[1] under a name associated with its mythological origins. It is mentioned in the seventh century by the Chinese pilgrim Hiuen Tsang, in the ninth century by al-Baladhuri,[2] in a tenth-century Arabic manuscript[3] by an unknown Central Asian author, and in the eleventh century in the *Kitab al Hind* by Abdur Rahman al-Biruni. Lahore was occupied by the Ghaznavids in the early eleventh century after their long conflict with the Hindu Shahi dynasty came to an end in 1002.

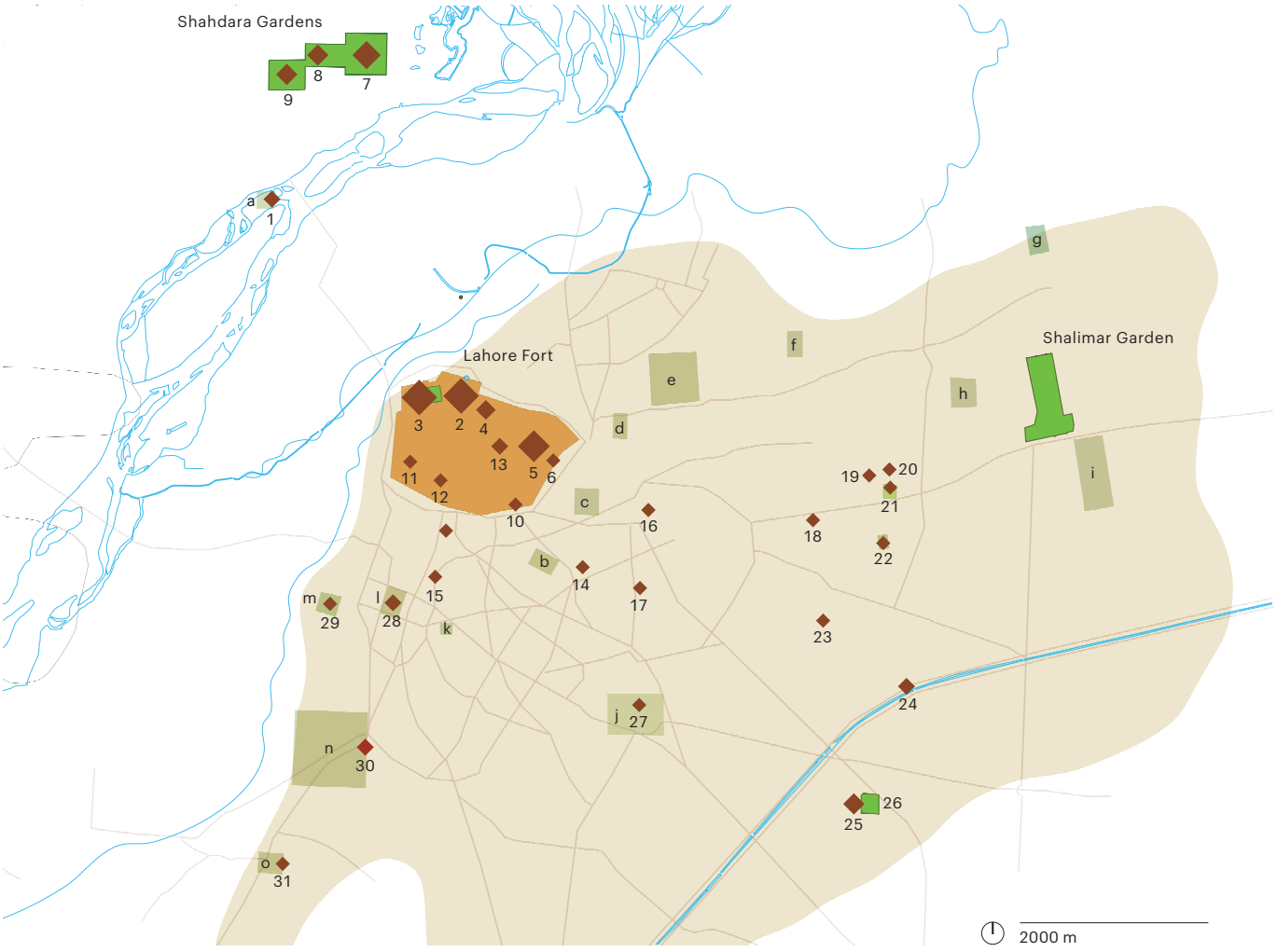
Archaeological evidence of the origins of the city is scant. The only serious excavations carried out in Lahore Fort in 1959 revealed settlement strata that date back to the sixth century AD. In fact, little can be said about Lahore's architectural history before the Mughals. Qutubuddin Aibak, second in line of the Ghurid Slave kings, died in Lahore playing polo in 1206; ruined remains of his mausoleum were discovered in the 1960s and a new mausoleum was built over them in the following decade. There is the mosque known as Niwin Masjid, said to belong to the early Muslim period and thus named because its floor is two metres below the street level in Nawa Bazaar between Lohari Gate and the Shah Alami area.

Morphological features such as the long stairs leading down to the Bhati Gate bazaar lead to speculation about how the city might have changed due to natural causes. Where the bazaar is now located might have been *ghatis* on the banks of the Ravi as it lapped up to the edges of the city some centuries before historians' accounts from the Mughal period describe the river having receded. It is also known that the burned, brick, city walls constructed by Akbar brought large tracts of land into the new confines of the city. To the west of the city, this land would have

2

3

|1| Shalimar Garden, Lahore, Pakistan.
|2| Shahdara, Lahore, the Akbari Serai – entrance forecourt to the Dilkusha Garden and the mausoleum of Jahangir.
|3| Shahdara, Lahore, the mausoleum of Asaf Khan (d.1641).



- Monuments
- Extant Mughal-period gardens
- Other Mughal-period gardens
- The Walled City
- Notional extent of the settled area
- River Ravi meander bed

Some extant monuments of the Mughal period

1 *Bardari* of Kamran
2 Lahore Fort
3 Badshahi Masjid
4 Mosque of Maryam Zamani
5 Wazir Khan's Mosque
6 Wazir Khan's Hammam
7 Mausoleum of Jahangir and Bagh-E-Dilkusha
8 Mausoleum of Asif Khan and garden
9 Mausoleum and garden of Noor Jahan
10 Masjid Mohammad Saleh Kamboh
11 Masjid Kharasian
12 Unchi Masjid
13 Sonehri Masjid
14 Mausoleum of Sheikh Musa Ahangar
15 Mausoleum of Sheikh Abdur Razaaq Makki (Neela Gumbad)
16 Masjid Dai Angah
17 Mausoleum of Mohammad Saleh Kamboh
18 Buddhu ka Awa
19 Mausoleum of Hazrat Khwaja Mahmud
20 Mausoleum of Sharf-un-nissa Begum
21 Gulabi Bagh Gateway and Dai Angah's Mausoleum
22 Mausoleum of Ali Mardan Khan
23 Mausoleum of Nusrat Khan
24 Mausoleum of Zafar Jan Kokaltash
25 Shrine-Mausoleum of Mian Mir
26 Mauseum of Nadira Begum
27 Tomb of Mohammad Qasim (now embedded within the Governor's House)
28 *Bardari* of the garden of Wazir Khan
29 "Anarkali" tomb
30 The Chauburji Gateway
31 The Nawankot monuments

Known Mughal-period gardens which do not exist any longer

a Bagh-e-Mirza Kamran
b Zain Khan's garden
c Naulakha Bagh
d Bagh-i-Faiz Bakhsh
e Bagh-e-Pervez
f Bagh Bilawal Shah
g Bagh-Mian Khan
h Bagh-e-Mahabat Khan
i Angoori Bagh
j Bagh-Rauza-e-Mohammad Khan
k Bagh Rauza-e-Shah Chiragh
l Bagh-e-Wazir Khan
m Bagh-e-Anarkali
n Bagh-Jahan Ara (Chowburji Garden)
o Nawakot Bagh

5

primarily been in the Bhati Gate bazaar area on land left empty by the river, which now flowed further west. On the eastern side, the newly walled areas would be the area between Delhi Gate and the Wazir Khan Mosque, east of the Sufi *takiye* of Syed Ishaq Gazruni (d. AD 1284) whose grave-shrine is now integrated in the raised podium of the Wazir Khan Mosque.

Lahore's natural terrain is flat, as evidenced by the canal-irrigated agricultural expanses around it. Its area is only a small part of the arid flatlands that comprise the Indus valley and that slope only 213 metres to the sea in just over a thousand kilometres. But the many humps in the settled area of present-day Lahore suggest buried settlements of uncertain origin. Within the Walled City there are several *tibbas* (mounds), the highest being fifteen metres from the Circular Road in the north. Geophysical investigations for construction projects and recent exploratory excavations invariably turn up the debris of earlier remains of buildings – 'cultural' layers that are as deep as ten metres from today's street level even in the lower parts of the city.

During the early Sultanate period, Lahore experienced some stability and growth during the time of the Ghaznavids, but its fate remained uncertain thereafter throughout the centuries leading up to the Mughal invasion by Babur in 1526. The city saw its greatest growth during the reigns of Akbar, Jahangir and Shah Jahan, from 1556 to 1658. During this time Lahore was famed for its opulence, its palaces and gardens, its cultural and intellectual ferment, and its carpets. Lahore was intermittently the capital of the empire during the reigns of all three emperors, not only because of the increasing revenues the province generated but also due to its continued strategic and military importance as the centre from which Kandahar, Kabul and Kashmir could be controlled. Of interest is the family of architect-engineers from Lahore beginning with Ustad Ahmad Lahori, who appear to have served on imperial projects during Shah Jahan's reign and thereafter during Aurangzeb's.[4]

Akbar's new fortifications made it possible for more people to safely reside behind the city walls. But even during Akbar's

|4| Opposite page: Lahore in the Mughal era.

|5| Shahdara, Lahore, entrance pavilion to the mausoleum of Jahangir.

7

time, the nobility had started to construct gardens outside the fortified city and these soon acquired the status of neighbourhoods. By the time the first Afghan raids began just before the mid eighteenth century, the city had grown numerous garden suburbs and its population had increased to approximately 500,000 people.[5]

The first important Mughal-period development in Lahore is the garden and *baradari* of Mirza Kamran, Humayun's troublesome half-brother who had been assigned the charge of Kandahar and Kabul. The garden appears to have been built between 1526 and 1529 and was situated across the river from the city. In subsequent decades Kamran's nephew Akbar the Great would find rest and recuperation there from running a burgeoning empire. The garden is now lost, though a ruined *baradari* has survived the ravages of the Ravi over the centuries.

During Akbar's time the many gardens established by the nobility outside the Walled City or at some distance from it were occasionally created at the emperor's behest. Lahore's reputation as a city of gardens appears to have been well established by the time of Jahangir. One of the major works of the Mughal period is the Dilkusha Garden, built by Nur Jahan, where Jahangir was buried in the summer of 1628. Her own mausoleum and the mausoleum of her illustrious brother Asaf Khan are in adjacent funerary gardens, forming a complex of considerable expanse and historical interest.

Certain elements in Lahore Fort, which was as much the seat of political power as a place of impressive residences of the Mughal royalty, are said to be Akbari-period projects. During the reign of Jahangir, the massive northern and western walls of the Fort with their palaces and chambers came into existence, with Shah Jahan characteristically adding magnificent elements such as the Saman Burj palace and its famous glazed-tile mosaics that extend along the northern walls of the Fort. The Fort itself appears to have grown as a series of *chahar-baghs* and is of the

|6| Preceding pages: Lahore Fort, the Diwan-i Khass.
|7| Lahore Fort, the quadrangle of Saman Burj (the Shish Mahal).
|8| Saman Burj, mirrored walls of the entrance *dalaan*.

same inspiration as the Forts at Agra and Delhi. To Aurangzeb's long reign belong the addition of the Badshahi Mosque and the imposing architectural composition of the Hazuri Bagh, which brought the Badshahi Mosque into a masterfully articulated relationship with a new western entrance into Lahore Fort, the Alamgiri Gate. The overall result of these developments is an urban composition of impressive scale and grace.

The most celebrated Shah Jahan-period project is the Shalimar Garden, inscribed together with Lahore Fort as a UNESCO World Heritage Site and situated seven kilometres to the east of the Fort in what then would have been the outskirts of the expanding city.

Lahore is known for numerous other Mughal and late Mughal-period gardens,[6] the remains of which still exist in many cases. Of these, the garden of Jahan Ara, Aurangzeb's sister,[7] deserves mention for historical reasons, as much as for the ornate eastern gateway of the garden, known as the Chauburji, that now occupies a traffic island.

Hakim 'Ilm Uddin[8] from Chiniot, which is on the banks of the River Chenab, was a physician at the court of Prince Khurram, and as a token of high esteem for his services he was granted the title Wazir Khan in 1620. When the prince ascended the throne in 1628, becoming Emperor Shah Jahan, he appointed the *hakim* governor of Lahore. The name Wazir Khan appears in connection with three extant monuments in Lahore built during the six years when the *hakim* held this position. Of these monuments, two exist within the Walled City: the Wazir Khan Mosque and the Wazir Khan Hammam (the Shahi Hammam), described here in some detail. The third building is a *baradari* which has housed a portion of the Punjab Public Library since at least 1880. It is all that remains of Wazir Khan's large garden situated two kilometres south of the Walled City.

Wazir Khan remained one of Shah Jahan's most trusted aides in the earlier years of his reign. He was appointed *subedar* of the province of Lahore in 1632 and was transferred to Agra in 1639. In 1632, along with Prince Shah Shuja, Wazir Khan was entrusted with the task of moving the remains of the deceased queen Mumtaz Mahal from Burhanpur to Agra to be buried at the Taj Mahal.

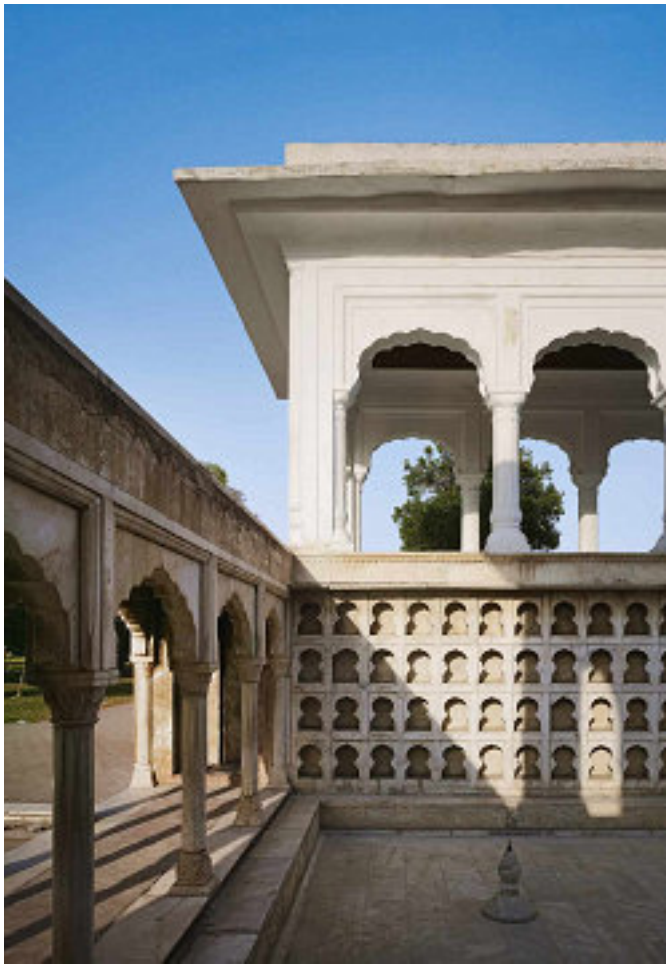
The great *havelis* of Mughal nobility were monumental enterprises in themselves, each occupying a few hectares, in brazen contrast to the small footprints of ordinary houses in the Walled

8

City. Almost all of these great *havelis* have now disappeared, although some can be made out on satellite imagery by the rectilinear configuration of the neighbourhoods which are known by their names. An example is the great *haveli* of Mian Khan, begun by Nawab Sa'adullah Khan during the reign of Shah Jahan. Some of these *havelis* were occupied by Sikh notaries of Ranjit Singh's court, extensively modified by new owners and today known by their Sikh owners' names. The Chuna Mandi *haveli* complex, now a women's college, was owned by Jamadar Khushhal Singh, a notary in Ranjit Singh's court, and may well be the *haveli* of Asif Jah described by Mohammad Saleh Kamboh. The *haveli* of Dhyan Singh, where Lahore's famed Government College was started by Gottlieb Lietner in 1863, has today largely been overrun by squatters, although its main building survives.

The decline of the empire after Aurangzeb (d. 1707) and the Afghan invasions of Nadir Khan and Ahmad Shah Durrani resulted in a general evisceration of Lahore's political and cultural strengths and in the devastation of the garden suburbs. A period of Sikh power followed, and its first ten years brought further plunder and pillage. This was halted when the Sukherchakia chieftain Ranjit Singh came to power in 1799. Later styled maharaja, Ranjit created a powerful regional empire that lasted until the British annexation of the Punjab in 1849, a decade after his death. This small interregnum of pre-colonial stability resulted in the repopulation of the Walled City and in many new buildings, gardens and other developments, some using marble and other claddings removed from Mughal-era buildings and mausolea. During this period many Mughal-period monuments

9



10

11

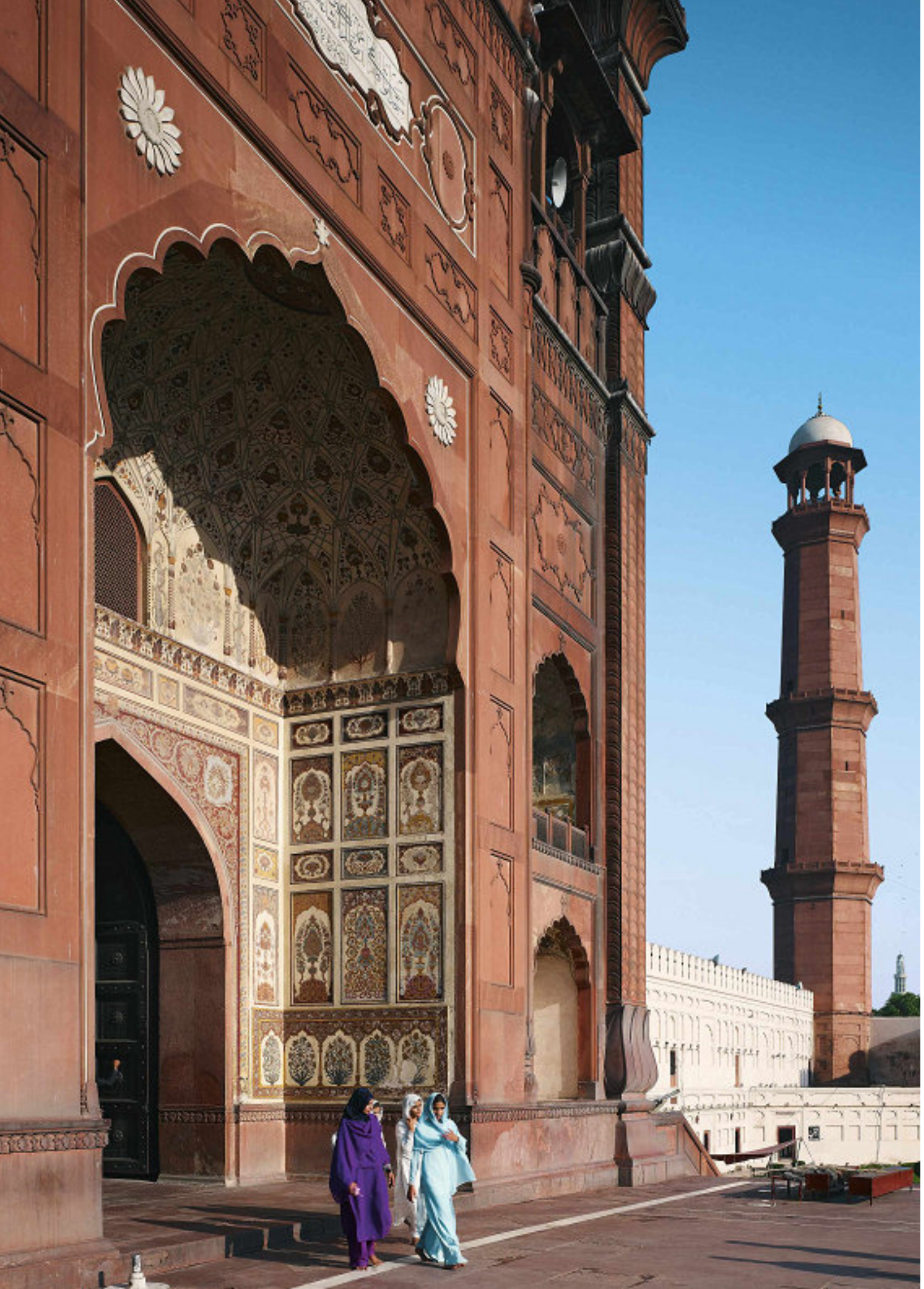
fell into alternative uses as stables and ammunition depots. Kanhaiya Lal Hindi[9] mentions the smaller *haveli* of Mian Khan, near Mochi Gate, which was clad extensively in stone and which imparts its name today to a neighbourhood in the city known as Mohalla Pathron wali Haveli.[10] The *haveli* was used to manufacture gunpowder during the reign of Ranjit Singh and was destroyed in a 1807 explosion that flung slabs of stone for miles around.

The colonial period under British rule brought about a virtual reconstruction of Lahore over the waste land of Mughal-period neighbourhoods, gardens and monuments that existed in the immediate area of the Walled City. The early demand for rapid development of military barracks, administrative headquarters, residential and commercial buildings, new cantonments, and a massive railway carriage and locomotive facility required a ready supply of construction material. In general, during the first fifty years, bricks for construction were removed from Mughal- and Sikh-period ruins. Even foundation structures were relentlessly excavated for brick. However, new institutional buildings such as the Lahore High Courts, the museum and art school, and the Aitcheson College for boys were built in less ad hoc fashion and formally introduced the standard English brick to vernacular use. These buildings and others that were to follow impart colonial Lahore with considerable charm.

|9| Hazuri Bagh, the Alamgiri Gate seen from the central pavilion built during the Sikh era.

|10| Shalimar Garden, the Chini Khana.

|11| Badshahi Mosque, the great staircase and entrance pavilion looking down on the Hazuri Bagh quadrangle.



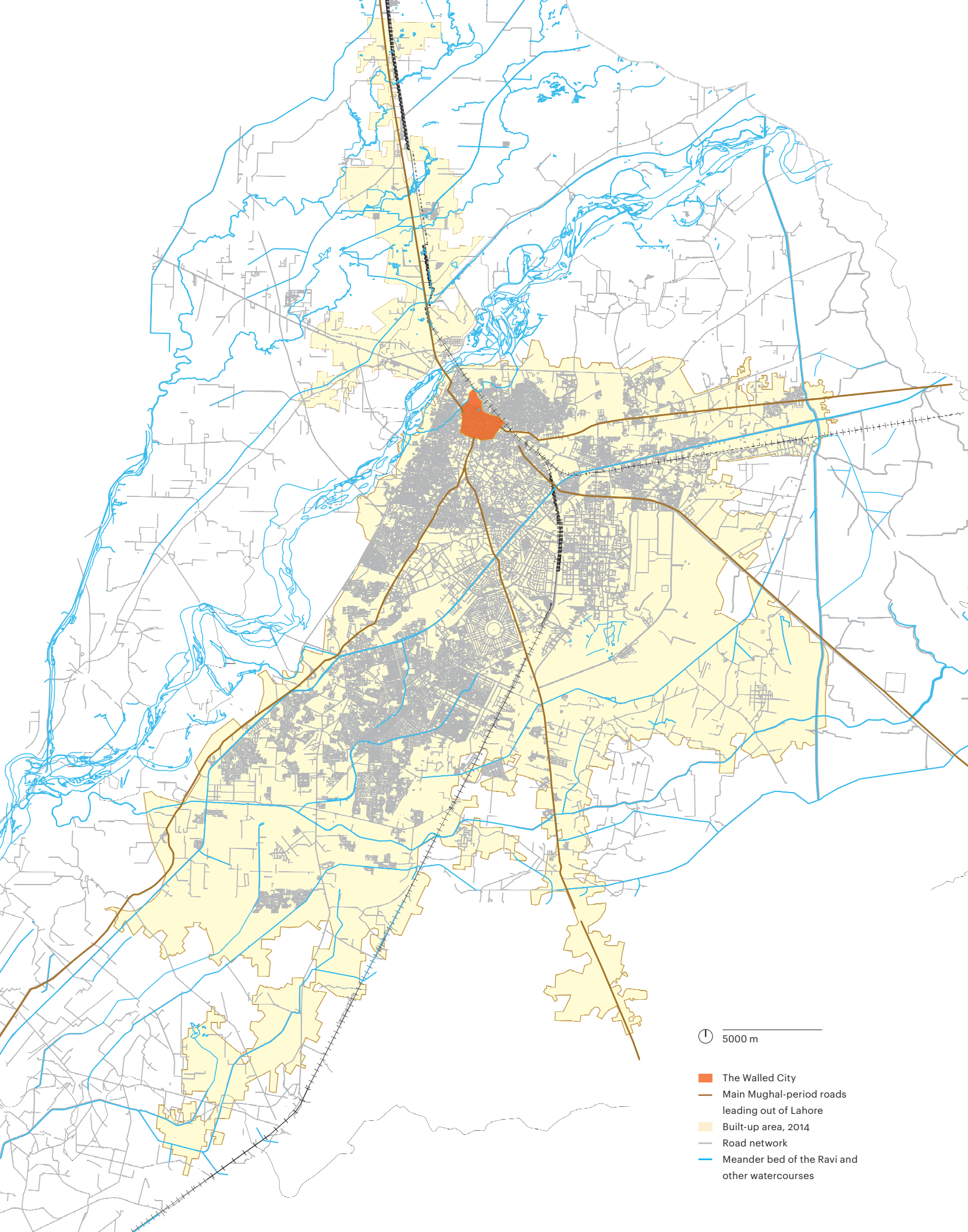
The Walled City of Lahore

Lahore's Walled City, its historic core, also known as *androon shehr*, the inner city, is located in the north-western part of the city and is a compact clearly demarcated mass of high-density urban fabric measuring about 285 hectares, including the area of the Circular Road and the British-period Circular Gardens that surround it. Within this relatively small space are packed 130 kilometres of bazaars and narrow, tortuous streets and lanes, and no less than 22,000 individual buildings. The urban zone formed by these buildings and spaces attests to an urban heritage of considerable historic interest and charm, and contains several elements of Mughal origin. The hierarchy of urban occupation ranges from *guzars*, the main thoroughfares that were the basis of Mughal urban administrative units and which usually contained the main bazaars and markets, the neighbourhood *mohallas* (clusters of houses and streets), *galis* (narrow streets and alleyways) and finally *koochas* (residential cul-de-sacs). Dotted among this network of streets there are still hundreds of buildings of architectural worth, dating from the late Mughal era to the early twentieth century. Some parts of the city still contain townscapes of great appeal.

Akbar's fortified city walls were added to in the Sikh period with a further layer and a moat that still existed twenty-five years after British annexation. Subsequent to 1864, the walls and gates were demolished, the moat was converted into a drain and, by 1912, a wide band of land surrounding the old city became what is known as the Circular Gardens. Entrance to the city continued to be possible through thirteen access ways, with some of the gates rebuilt by the British government in a mixture of Mughal stylistic elements and allusions to various European revivalist themes – Gothic, Renaissance or Neoclassical. Only one of the original gate structures from the Mughal era – the Roshnai Gate – still remains. The historic names of all the gates were maintained, even where there is no longer any gate structure.

The British government undertook a number of other interventions in the Walled City in the nineteenth century. Surveys were carried out and cadastres established. A new gravity-fed,

|12| Badshahi Mosque, the *iwan* entrance into the prayer chamber.
|13| Above: the Walled City – *havelis* of the Mughal period and later.


5000 m
The Walled City
Main Mughal-period roads leading out of Lahore
Built-up area, 2014
Road network
Meander bed of the Ravi and other watercourses

clean-water supply system was established with a reservoir built at the highest point on the city's historic mound. A pump house on the northern periphery of the city, powered by steam engines, fed water into this reservoir. Prevailing unsanitary conditions in the Walled City concerned the colonial administration a great deal and sustained efforts were made to replace local practices of removing night soil from the city. An attempt was made to replace the prevailing system with a 'conservancy tramway' running on the city's perimeter. This idea, proposed in 1897, came into effect in a ten-year period. Within a year and half of its introduction, plans were already being made to do away with the tramway: instead of managing to replace the 'repugnant' ox-driven filth carts that left their trace across the city, the new system in fact reinforced their use. It was soon realized that it was not practical to efficiently carry away night soil in hand carts through lanes sometimes as narrow as their width to filth depots along the tram line. The introduction of a piped water supply ultimately necessitated the construction of a major underground sanitary sewer outside the city to carry away waterborne waste.

The Partition riots of 1947 and accompanying arson affected about ten per cent of the Walled City's historic fabric. Redevelopment efforts carried out in the 1950s focused on commercial development. Over the following decades this resulted in further and more intense commercial investments in a progressively unregulated environment. Aggressive speculative demolition and rebuilding at the expense of the residential urban fabric became the established pattern.

Development programmes introduced by the World Bank in the late 1970s were oriented to upgrade infrastructure, but technical standards were tied strictly to what the beneficiaries residing in the Walled City, already comprising lower income settlers from across the border with India and from the countryside, could afford, leading to conditions of infrastructure collapse over the succeeding quarter century. The World Bank initiative of 2006 and afterwards involved a greater recognition of the Walled City's urban heritage status and was markedly different from earlier approaches to the rehabilitation of the historic city. Social and economic improvement, seen as a desirable outcome of increased tourism, was an important objective with its related emphasis on the rehabilitation of heritage elements in the Walled City, on townscape improvement and in a more general way on the sensory and visual environment.

The Shahi Guzargah Project

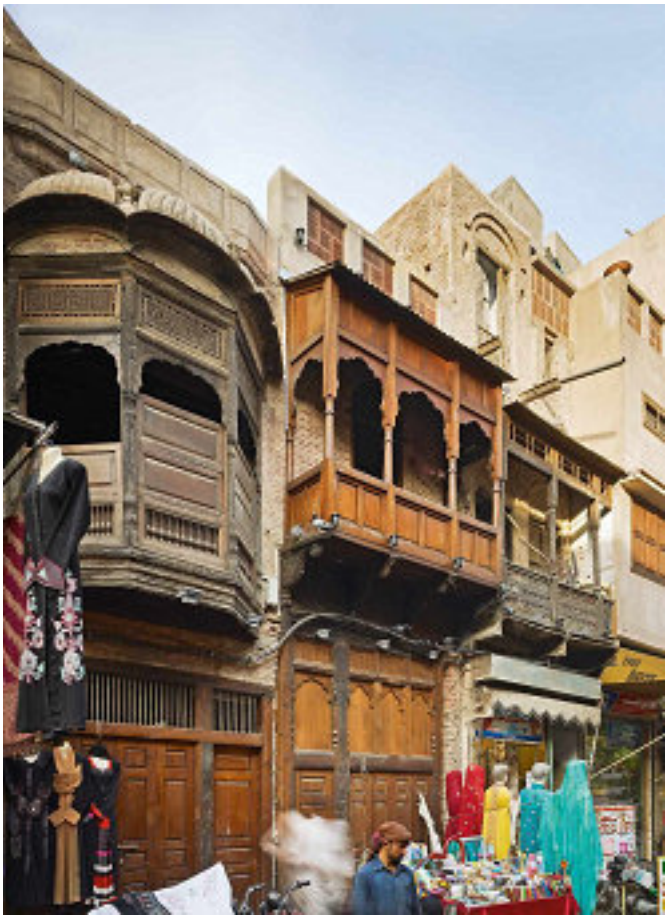
In 2006 the Government of Pakistan signed a loan agreement with the World Bank for the Punjab Municipal Services Improvement Project, which was aimed at building technical and human resource capacity for urban management in a number of small municipalities in the province. A small part of this loan was earmarked for a project to be carried out in the Walled City of Lahore. The project was conceived as a Pilot Urban Rehabilitation and Infrastructure Improvement Project aimed at removing the health and safety drawbacks of the existing infrastructure as well as improving the qualities of the historic landscape with a view to drawing greater number of visitors. The Shahi Guzargah trail from Delhi Gate to the eastern gate of the city of the Lahore Fort palace and the associated urban fabric were identified as the zone of intervention for the Pilot Project. Scholars have indicated the Shahi Guzargah to be the probable ceremonial route the Mughal royalty would have traversed to arrive at the Fort palace after entering the city on its eastern side. It is punctuated by a number of important public buildings from the Mughal era. These monuments include the Wazir Khan Hammam, the Wazir Khan Mosque, the eighteenth-century Sunehri Masjid (Golden Mosque) of Nawab Bhikari Khan and the Begum Shahi Masjid (Maryam Zamani Mosque) said to have been built by Raja Man Singh. Interspersed among these are Sikh- and British-period monuments such as Delhi Gate itself and the large complex of the Chuna Mandi *havelis*, the latter said to be based on Mughal-period foundations of Asif Jah's *haveli* and one of the last surviving sites of the great *havelis* of the seventeenth century.

The Larger Context

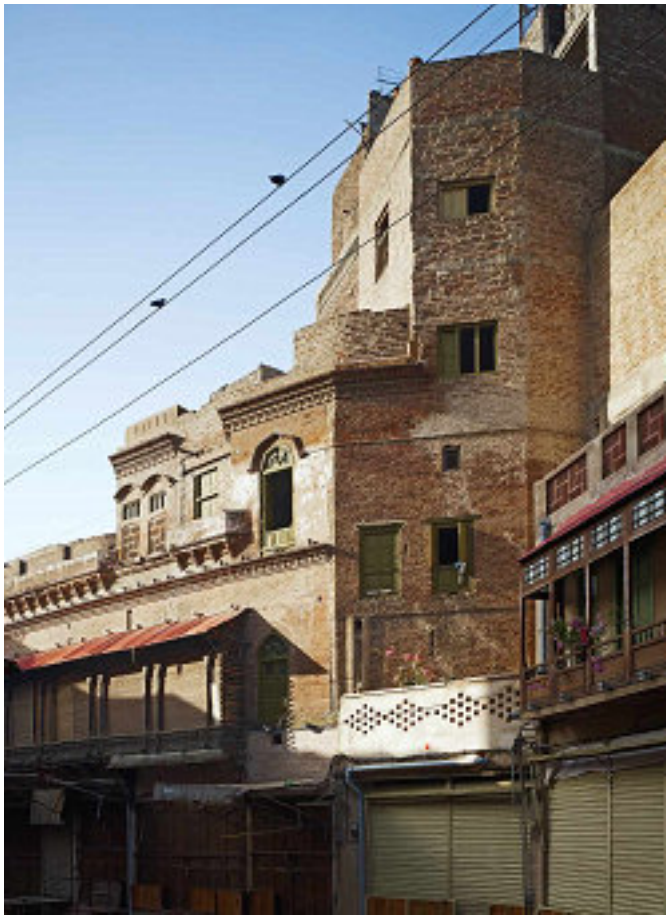
The Walled City is miniscule in comparison to the current 850-kilometre-square built-up area of greater Lahore. Its physical form and social characteristics are now separated by a gap of nearly two hundred years, marked by major cultural transformations, from the modern low-density residential suburbs that

|14| Preceding pages: Hazuri Bagh and Roshnai Gate, the last remaining city gate of the Mughal period.

|15| Opposite page: Lahore, the Walled City in the metropolitan context.



16



17

now constitute most of Lahore. This is not to say that the inner city has not itself undergone major transformations: the extent to which its surviving historic urban fabric lends support to the continuity of its intangible heritage, remarkable as it is, is pitted against major forces of change, of external origin, that should be understood in their proper context.

The urban districts that immediately surround the Walled City fall into two distinct groups: the first group comprises the bulk of colonial-period urban development and which, except for the ceremonial Mall Road with its important nineteenth- and twentieth-century institutional buildings, are now largely overgrown with new buildings of largely indifferent quality. Located today in this zone are major regional markets specializing in chemicals, metals, and construction and agricultural machinery, as well as important regional rail and road transport functions on which these regional economic entities depend. These are areas of Lahore from which a vibrant and urbane twentieth-century lifestyle has disappeared as those that practiced it have moved in ever-increasing numbers to the new suburbs.

The other distinct part of the central areas surrounding the Walled City is new residential development on lands that until 1947 were largely uninhabited because they were prone to river flooding. These are areas where the bulk of the lower- and lower-middle income groups of Lahore's ten million inhabitants live in close proximity to industrial and fabrication units dealing chiefly in steel and metal works.

Paradoxically, the historic Walled City shares many of its problems with the city that immediately surrounds it. The shared characteristics are to be found in several dimensions: a primarily low- to lower-middle-income residential population serving the labour requirements of regional commerce and industry located here; businesses linked in dependence on entrenched freight transportation activity; poorly serviced residential neighbourhoods and commercial precincts; increasing warehousing; and a pronounced trend for established residential population to emigrate to upcoming low-density neighbourhoods in the newer suburbs. Failing urban governance with inadequate land use and building control accompanies these characteristics.

|16|17|18| Several historic buildings along Delhi Gate bazaar (the "Shahi Guzargah"), conserved as part of the urban rehabilitation project.

Surprisingly the urban zones that surround the Walled City appear to correspond to the very territorial expanse that would have been dotted with magnificent architectural and landscape projects during the heyday of Mughal Lahore. Apart from the high-profile Lahore Fort, the Badshahi Mosque, Hazuri Bagh and Shalimar Garden, scores of buildings that have not fared as well still exist as the remains of Mughal garden pavilions and gateways, mosques and mausoleums, and in the Mughal-period names of many neighbourhoods.

Existing Conditions in the Walled City of Lahore

At the time of British occupation in 1849, the Walled City accommodated almost the entire population of Lahore. A century of strife and political turbulence had shrunk back a Mughal city of 500,000 people, of grandiose neighbourhoods and gracious gardens *extra muros*, to a bedraggled existence behind the crumbling city walls with only 50,000 inhabitants. A century of British rule had revived the Walled City, and its fluctuating fortunes had risen again to achieve a population of nearly 250,000 at the time of Independence. However, since that time, the Walled City has been steadily losing population, contrary to the trends of Lahore as a whole. A Conservation Plan prepared in 1988[11] estimated that the population in the Walled City had declined by twenty-nine per cent between 1972 and 1981 to 189,976. The 1998 census figures attest to the continuation of this process, with the population recorded at 160,734. Extrapolating on this trend the Walled City's current population might be estimated at 146,267, a cumulative absolute decline of twenty-three per cent as compared to the 1981 figures.

18

In the Walled City, land use has constituted a fragile balance between the historic residential quarters and fast expanding, mainly wholesale, commercial enterprises that are concentrated in the heart of the city and in effect divide it into eastern and western residential halves. The riots in 1947 are said to have resulted in the destruction of six thousand buildings in the Walled City. The subsequent demolition of buildings affected by arson and structural damage was viewed as unavoidable. Planned as well as informal reconstruction processes led to the current physical and spatial features of the major regional markets that have arisen in the damaged areas, features that are distinct from the traditional building stock and the city's historic footprint. These regional markets within the old city have an impact on a range of urban services, the financial sector and the real-estate market. They have replaced linear traditional bazaars with their accompanying residential neighbourhoods, which like other surviving bazaars matched the scale of the residential neighbourhoods and served the prevailing craft-based commerce.

The propensity to encourage informal sector commerce has dominated and has decreased residential land use. The ever-expanding commercial sector dominates the Walled City's urban landscape. 'Plazas'[12] conform to a new typology alien to the Walled City. These new buildings contain warehouses and manufacturing outlets that stand in stark contrast to the monuments, *havelis* and other heritage buildings. There have been symptoms of growing disrespect for heritage sites on the part of the population. A significant part of the heritage sites held in trust by the *waqf* department and the federal Evacuee Trust Properties Board are utilized solely as rental properties and leased out

to traders to generate a steady flow of revenues that have little bearing on how the buildings are cared for.

The unchecked growth of large-scale regional commercial enterprises has impacted the environment as well as the social milieu of the Walled City in a number of ways. The Walled City has been characterized by high levels of pollution, traffic congestion and building obsolescence. Provision of substandard service delivery infrastructure further exacerbates problems associated with densely populated localities.

Over a century after the failed colonial 'conservancy tram', several urban upgrade initiatives have been undertaken by the authorities in the post-Independence era. In the late 1970s, a major component of the Lahore Urban Development and Traffic Study was devoted to the Walled City and the resulting development work continued through the decade of the 1980s. These interventions resulted in raised street levels, covering of open drains, the provision of a natural gas supply and the laying of new water pipes in certain locations. The introduction of some services, such as gas supply for the first time, induced demand for alterations to dwellings, which in most cases were done indifferently by inadequately skilled masons and technicians. The addition of flushing toilets and extra washing/cooking facilities soon resulted in the conversion of buildings and facilitated the advent of independent tenements. Since the technical standard of the infrastructure was linked to affordability, it significantly compromised the life of the new infrastructure and consequently the well-being of residents. Streets and alleyways have suffered from the consequent stench, dampness and infestations of rodents and other pests.

In 1986 a survey of the traditional building stock aimed at assessing structural conditions as well as identifying key causal factors was conducted in the historic core.[13] Structural failure in buildings was widespread, comprising "distress, distortion, [and] instability ..." The main factors affecting buildings were a combination of subsoil conditions affected by water ingress over time, unregulated and structurally inadequate alteration of buildings motivated by the need for more space, lack of knowledge among stakeholders (government agencies, private developers and residents) about the nature of the problem and the absence of trained personnel who would develop the necessary framework to implement remedial measures. Additionally, seismic activity was a factor to be noted.

Present Social and Economic Conditions

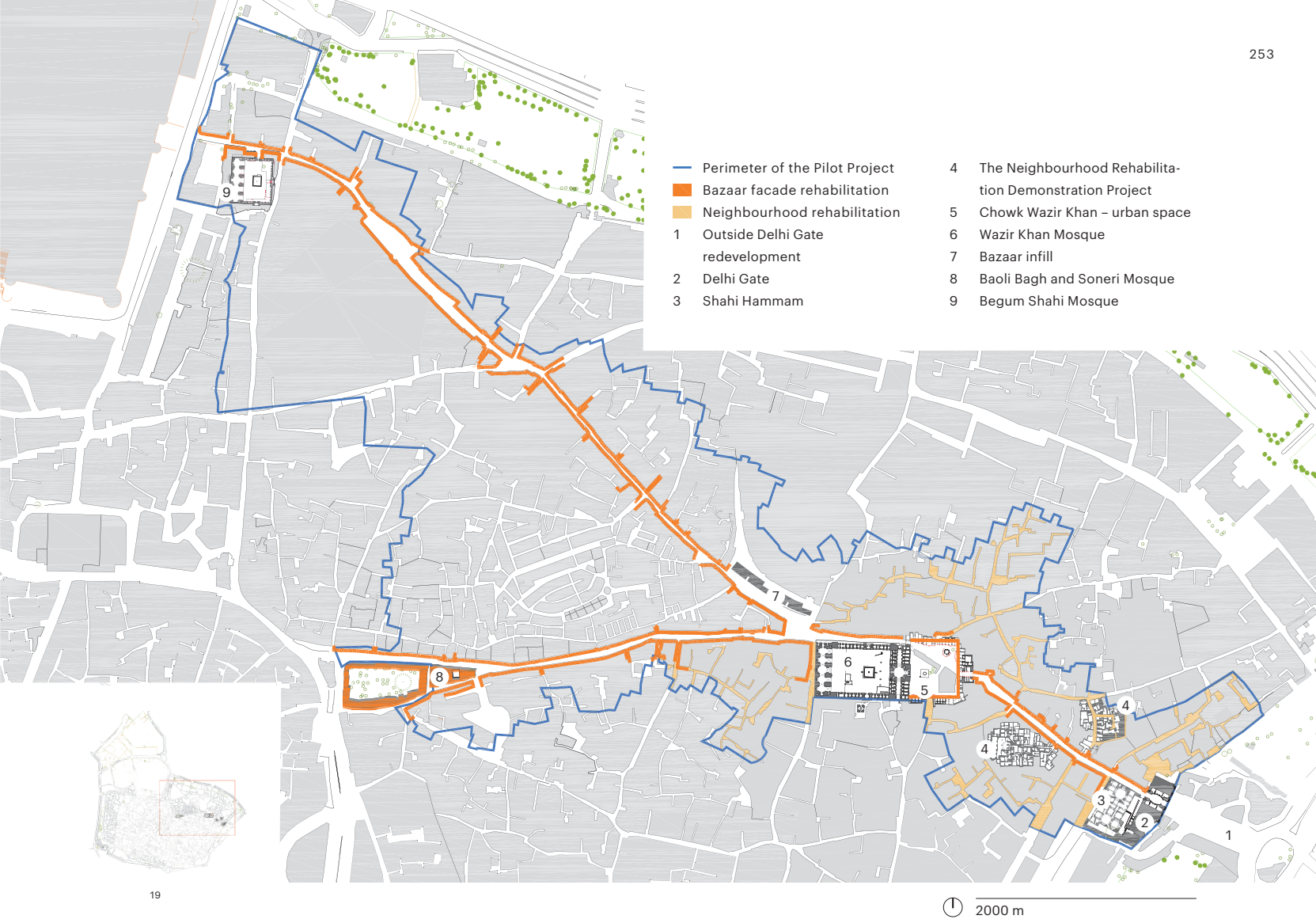
According to a sample household and quality-of-life survey carried out by the Aga Khan Trust for Culture (AKTC) in 2008–10, a large majority of the population are low-income households, constrained by the lack of secure jobs or regular sources of earnings. Forty-four per cent of the sample households face monthly income deficits ranging from just under one per cent to a substantial part of actual income. Primary occupations generally entail employment in the private (and informal) sector, ownership of small enterprises and daily wage employment. Survey findings further indicate the incidence of child labour and individuals working past the official retirement age.

Overall consumption patterns reflect relatively higher proportion of expenses incurred by households that earn below the median income as compared to those which earn above the median income. Moreover, per capita expenditure on food logically constitutes a greater percentage of income among low-income groups. Young people are especially affected by the lack of adequate job opportunities. Public sector schools are generally associated with low-quality education and there is a preference for education in the private (informal) sector. Access to higher education is naturally constrained by household income levels.

The Aga Khan Trust for Culture and Its Historic Cities Programme in Lahore

In 2007 AKTC signed a three-year 'Public-Private Partnership Agreement' with the Government of Punjab under which AKTC would provide technical assistance to the Punjab Government for the conservation and development of the Walled City and for implementation of the Pilot Project.

AKTC work on the project was preceded by planning input for the entire Walled City, establishing an overarching framework within which a number of planning, urban management, urban conservation and project development strategies were



19

developed. AKTC planning work included baseline topographic surveys, quality-of-life and socio-economic surveys and a strategic planning framework prepared in February 2008. This document contained preliminary proposals for several local development schemes in various parts of the Walled City. For the area of the Pilot Project this document also proposed the remodelling and rehabilitation of the area outside Delhi Gate, the conservation and adaptive reuse of the Wazir Khan Hammam and the improvement of the urban spaces associated with the Wazir Khan Mosque, all as part of the spatial confines of the Pilot Project.

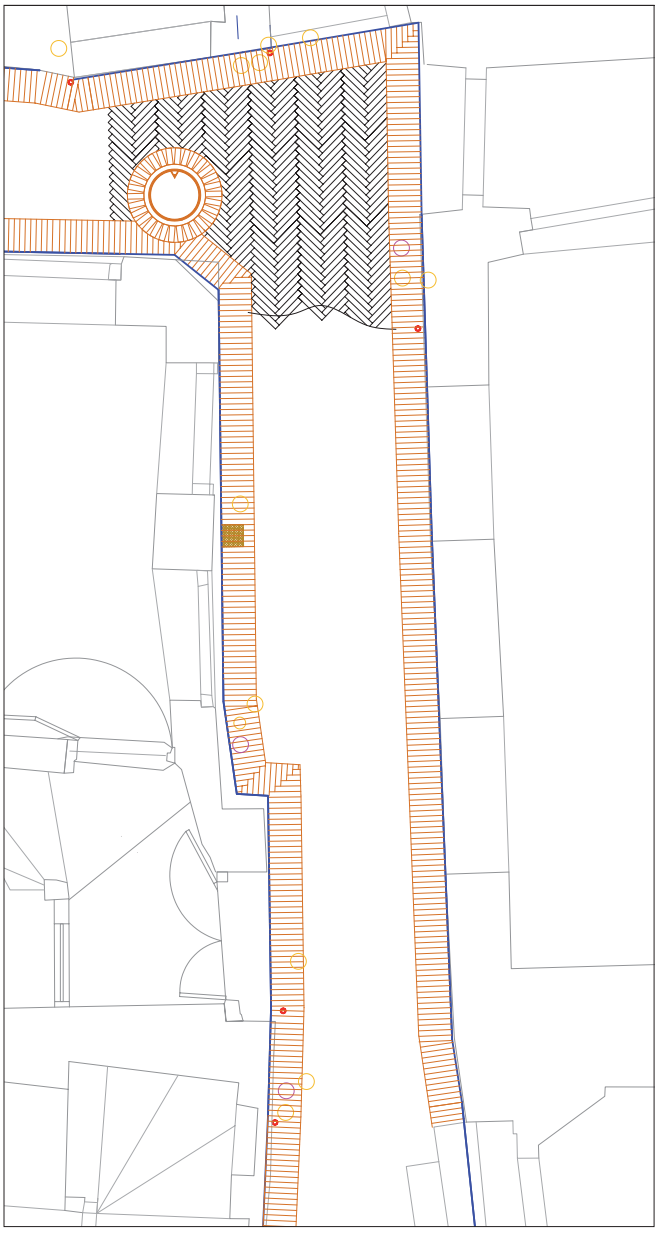
As originally conceived the project was primarily focused on infrastructure and street surfaces, and the project planners considered that this would be an adequate intervention to bring about a certain amount of cosmetic change. Of particular importance to the planners were the disorganized tangles of the overhead wires of the electricity and telecommunication distribution system, with the project aiming to put these underground.

With AKTC advice, the boundaries and components of the Pilot Project were refined to turn it into a more comprehensive undertaking addressing all components of the urban morphology: the main bazaar spines; secondary streets as well as the residential neighbourhoods that comprised the catchment zones of the rainwater and sewage effluent draining into the main bazaars; as well as the social and economic uplift of the mainly low-income population of the residential zones in the project area. This involved establishing an effective institutional support for advocacy and social mobilization, and better defined spatial and technical parameters for the project area, based on the natural drainage catchments of the main bazaars. In collaboration with World Bank representatives, an important change to the criteria of intervention brought about the inclusion of facades of private buildings in the public realm, acknowledging the fact that these facades would carry infrastructure elements.

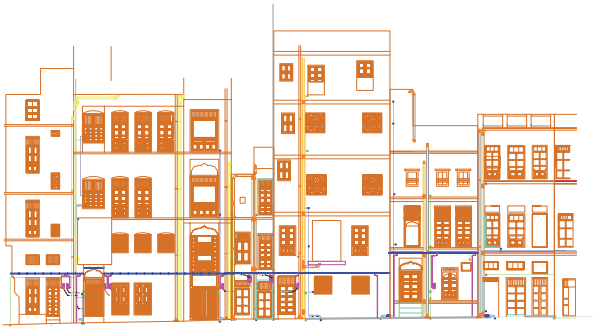
An extensive project preparation stage followed. To provide a framework of technical and management standards, AKTC developed a conceptual technical design and development

| 19 | Lahore, the Walled City: the Shahi Guzargah Pilot Urban Rehabilitation and Infrastructure Improvement Project.

Koocha Charkh Garan
Gali Surjan Singh
Masjid Wazir Khan
Delhi Gate
10 m



Koocha Charkh Garan –
existing conditions



Koocha Charkh Garan
proposed services

10 m

- Water
- Sewerage
- Electricity
- Telecom
- Natural gas
- Storm water disposal
- Historic homes rehabilitation

charter for utility infrastructure for the entire area of the Walled City, intended to be phased over twenty-five years. The design parameters and guidelines prepared were used to draw up the detailed infrastructure design for the Pilot Project. AKTC staff working with Government of Punjab personnel prepared the complete urban design and facade improvement components for the project.

AKTC and their Pakistani affiliate, the Aga Khan Cultural Services-Pakistan (AKCS-P), provided design and advisory services for the management of the project. Completed in the spring of 2014, the work included a trunk infrastructure component as well as an infrastructure system for the delivery and distribution of utility services. The project saw the replacement of the trunk infrastructure for water supply, high voltage electricity and telecommunications in the main bazaar. In addition, a new trunk rainwater sewer was introduced which will be the spine of a storm-water disposal system. A total of six distribution and delivery infrastructure elements were replaced in both the main streets and the residential neighbourhood and the narrow lanes: water supply, sewerage, rainwater disposal system, electricity, telephone and telecom, as well as television cables. In addition to the infrastructure, the facades of all buildings in the main bazaar and the residential lanes were rehabilitated and structurally consolidated to render them strong enough to bear the structural loads imposed by the electricity and telephone cable networks which were installed with respect to the architectural features that constitute the facades. All street surfaces in the bazaars and in the neighbourhoods were replaced to correct slope and to a new heritage-sensitive design.

These interventions were carried out on a stretch of the bazaar about 400 metres in length, and sixty-three *galis* measuring a total of 5.1 kilometres were rehabilitated. The facades of about 670 properties were rehabilitated. In addition, 150 non-monumental historic buildings were fully or partially restored, while adapting them to present-day needs.

The technical know-how and experience needed for this was generated by AKTC and AKCS-P, by designing, funding and implementing a pilot demonstration project between 2008 and 2010. This small project comprising two *galis* and a total of twenty-three residential buildings was carried out to demonstrate infrastructure replacement and street facade improvement in the fine-grain urban fabric that comprises most of the Walled City.

The main aim of this pilot demonstration was to generate understanding and experience that could inform the larger project. This experience would be that of a response to the full range of questions that urban rehabilitation in Lahore's Walled City posed, and to create a set of exemplary interventions that could be replicated. The questions posed related first to the

22

23

basic philosophical issues of what constitutes urban heritage, and what this heritage and its care in such a situation entails. Here the most current sense of the term was employed, through expressions such as 'historic urban landscape' and 'urban fabric'. This involved comprehending and working with the historic built environment in its totality, understanding it at the intersection of the tangible and the intangible, of the individual and the collective, and of the city and its elements in their objectivity and in their subjective values. These considerations were to be understood at the level of the individual citizen and the individual building, on the one hand, and on the plane of a community and the urban fabric in its integrity that the community inhabited, on the other. Cultural and place identity and the intangible cultural processes of daily life were to be comprehended. Related to this was the inescapable conflict between public and private interest and how this dichotomy is felt and dealt with at the individual and collective levels. There were clearly two distinct spheres of control that had to be dealt with: a) the public realm and its collective concern with community organization, representation, relationship with municipal governance, and legally mandated and/or corporate service agencies for providing transport, utility services, public safety, and the rehabilitation of the historic townscape; and b) the private realm of individual houses and the life that goes on within them. In the unfolding of the demonstration project the areas of overlap between the public and private spheres were found to be of special importance and sensitivity. This overlap occurred in the rehabilitation of building facades as components of the public realm, and the improvement of functional elements of each residence that impinged on public space. The intersection of the public and the private domains also occurred in intensive work with the community-based organizations established for the purposes of the project.

The venue of the implementation of the demonstration project was Gali Surjan Singh and its cul-de-sac offshoot Koocha

|20| Historic homes restored in Gali Surjan Singh and Koocha Charkh Garan: demonstration project carried out by AKTC.
|21| Infrastructure redevelopment and street facade improvement in Gali Surjan Singh and Koocha Charkh Garan.
|22| Street view in Koocha Charkh Garan.
|23| A house after restoration as part of the pilot project.

Charkh Garan. Gali Surjan Singh is approximately half way between Delhi Gate and the square of Wazir Khan Mosque, and one arrives there after having passed the Wazir Khan Hammam and a short, but dense section of the bazaar. Prior to the project interventions, the overwhelming presence of multi-storey buildings with awnings, electric poles, transformers and wires along the bazaar and the intense, disorderly and multimodal traffic camouflaged access to residential streets such as Gali Surjan Singh. The *gali* is predominantly residential, with a growing tendency for street-level rooms and properties to be converted to commercial use. The Koocha Charkh Garan cul-de-sac is, however, purely residential.

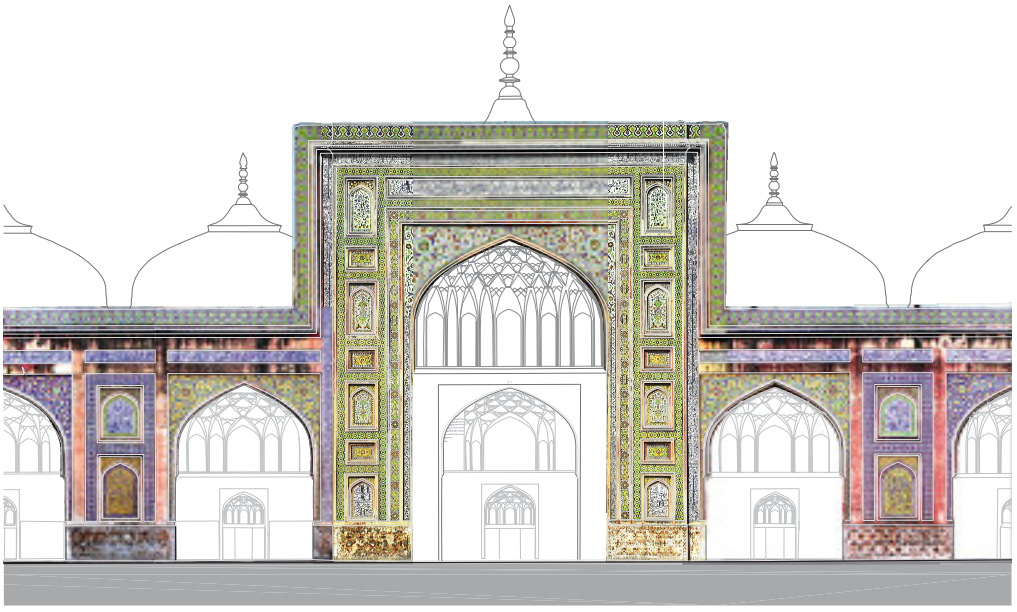
The conditions in the streets were representative of many residential lanes and cul-de-sacs. Infrastructure conditions in these two *galis* were typical. They had last seen a major change of infrastructure in the 1980s when the open drains that ran through the middle of the street, collecting waste water and sewage from the houses on either side, were covered with concrete slabs and the street level consequently raised and repaved. Water supply still relied on the pipes laid down in the colonial period, augmented by newer supply mains that ran on the surface. Electrical wires were typically haphazard and ad hoc, contributing to a sense of disorder and a real safety hazard.

The houses in the streets had mostly been built in the late nineteenth or early twentieth centuries, and nearly every one was structurally compromised. Water ingress because of substandard plumbing and lack of roof maintenance was a principal cause of the structural decay of composite masonry bearing walls, which were typically brick rubble masonry in earth mortar sandwiched in two thin skins of brick laid in lime mortar. Decaying timber joists had in many cases been stabilized with steel rolled beams. The point loads imposed by the steel beams had resulted in major structural cracks. Foundation settlement and associated structural damage was found in some houses. The houses had been subjected to undesirable functional and typological changes that had imposed stresses harmful to the building fabric. These included cantilevered slabs that supported kitchens and bathrooms projected out intermittently from houses on either side into the narrow streets. In addition, concrete platforms that served as display areas for shops at street level projected out of the buildings into the public way, and were sometimes protected from the weather by metal sheets. It should be noted that some of these platforms also serve as locations for socializing among the older men. Older, traditional buildings had also undergone typological changes from single-family multi-storey houses: they had been turned into separate tenements on each floor, with increased occupancy rates and physical changes that had affected their formal and structural integrity.

The complete project involved the replacement of all infrastructure at standards that satisfied basic criteria of technical and human safety. Individual building facades were rehabilitated as part of the street and electricity and telecom distribution cables installed to accord with architectural features. Street lighting and street illumination were designed and implemented in the context of the overall streetscape concept. Streets were repaved, and building entrances and entrance steps were rebuilt along the lines of traditional design precedents.

In addition, the project included a component that addressed the structural and architectural rehabilitation of private buildings. With grant funding from the German government, supported by funding from the owners themselves, this demonstration project also included the rehabilitation of thirteen of the eighteen historic, privately owned homes contained in the two *galis*. This historic-home-improvement component of the demonstration project comprised intensive social mobilization and community participation, a pilot skills improvement programme for youths and a preventive health campaign developed in close association with other Aga Khan Development Network units. Residences that were part of the historic-home-improvement programmes were rehabilitated in accordance with decisions arrived at with the full participation of homeowners. The financial participation of homeowners was set up to coordinate with the construction programme with each funding instalment monitored by the AKTC social mobilization team, working with community leaders and the counterpart social mobilization team of the Punjab Government.

|24| The Shahi Hammam (Wazir Khan's hammam). Hypocaust revealed during sub-floor excavations.



25

4 m

Appendix A

The Wazir Khan Mosque

Construction of the Wazir Khan Mosque was completed in AD 1635 (AH 1044). At the time the Mosque was considered the largest in Lahore and superseded the Begum Shahi Mosque built in 1614 (AH 1023) during the reign of Jahangir. Much of the historical and contextual background to the Mosque can be gleaned from the *waqf* document published in Latif's late-nineteenth-century book on the history of Lahore. From the *waqf* we find that the Mosque was built together with a bazaar, a hammam, a 'large' serai, some wells and *katras*. The *waqf* also mentions twenty shops (and their upper storeys) intended for use by calligraphers and bookbinders free of charge as part of the endowment, an obvious reference to the shops forming the 'bazaar' on the north and south of the entrance (*dewrhi*) and the four niches built into the four closed sides of the octagonal space that comprises the domed *dewhri*.

As part of the royal thoroughfare connecting Delhi Gate and Lahore Fort, the Wazir Khan Mosque and its *chowk* (square) formed an important element punctuating the urban fabric of the Walled City and is the centrepiece of a historic ensemble representing urban design trends of the first half of the seventeenth century.

The *chowk* represents a typology of urban space described by the term '*jilau khana*', which signifies an introductory space of arrival and first sighting, and has its parallels in other great mosques and funerary monuments of the period. The shops or cells lining the perimeter of the square would have played an important role in creating a formal urban ambience and in supporting commercial activities in the square.

Today the monument itself is limited to the mosque building, the entrance portal – part of what used to be a 'calligraphers' bazaar' – the mosque courtyard, the main prayer chamber, the *minars*, the *hujras*, a pair of two-storey pavilions on the central axis transversely crossing the courtyard and the shops at street level on the northern and eastern sides.

The layout of the Mosque is rectangular in plan, measuring 86.17 × 50.44 metres at its extreme limits. The four imposing *minars* define the corners of the main courtyard. The main prayer chamber, courtyard, *hujras*, vestibule and bazaar constitute the key elements of the mosque complex. Among the architectural elements and decorations of the Wazir Khan Mosque, which represent influences from the pre-Mughal era and from neighbouring regions like Persia and Central Asia, one special feature is the formal 'bazaar' which constitutes a vital element of the entrance system to the courtyard of the Mosque.

This bazaar comprises two rows of shops facing each other and traversing the entire width of the site. In a unique arrangement, the principal entrance facade of the Mosque is also the external facade of the outer layer of shops that form the calligraphers' bazaar, and not of the enclosure of the Mosque proper. Half way along its length, the linear axis of this bazaar crosses the axis of the entrance to the Mosque, a point marked by an octagonal dome. This is the first example in the subcontinent of a purpose-built bazaar in an adaptation of a Central Asian *charsu*.

The entire facade of the *iwan* on the eastern side is decorated with *kashikari* (glazed-tile work), of which a predominant component comprises calligraphic work, described below. The arched recess of the *iwan* is decorated with *qalibkari* (*muqarnas* or stalactite work) and *naqqashi* (fresco work), including on the intrados of the *iwan* arch. The recess also contains three oblong arched windows that open onto the level 2 gallery that looks into the entrance *dewhri*. This whole eastern facade is well separated from the rest of the front, projecting outwards 58.6 centimetres. It is distinguished by two small octagonal minarets on either ends of the face of the *iwan*, each topped by a miniature *chhatri*.

The most interesting feature of the facade is the presence of two projected balconies that mark the points at which the facade is fenestrated at the upper level. The balconies enrich the facade of the *iwan* by providing geometric interest and establishing a strong outward spatial relationship of the facade with the space of the *chowk*.

The large open courtyard, measuring 52.62 × 40.02 metres, is paved in brick and divided in two parts marked by a small change in level. Each facade facing the courtyard is well decorated with *kashikari* work and *tazzakari* (faux brickwork). The lower portion of the courtyard has an ablution pool in the centre. A variety of brick patterns constitute the floor surface of the courtyard.

The north and south sides of the courtyard are formed by rows of small *hujras* (rooms for study and meditation) intended for the staff, teachers and students at the Mosque, which open into the courtyard. These *hujras* stretch between the pair of *minars* on either of these sides. At the centre of each row of *hujras*, a double-storey pavilion establishes a north-south axis and breaks the monotony of the linear mass. The pavilion structure on the south side has an old cascade recessed in its southern wall, clearly marking the point at which water was brought into the courtyard from the well on the other side of the wall in order to feed the ablution pool. This structure also has a small access way into the southern neighbourhood.

The main prayer chamber is situated on the western side of the courtyard. It is the centrepiece of the mosque complex, a large structure covering an area of 710 square metres. The area occupied by its massive walls is 273 square metres, about thirty-nine per cent of the total covered area.

Five massive, double-layered domes cover the entire space of the prayer chamber. The central part of the chamber holds a larger space with a higher and bigger dome than the domes on either side. A local precedent of this type of arrangement is to be found in the earlier Begum Shahi Mosque.

The *minars* of the Mosque are the most visible features at the urban scale, located on each corner of the courtyard. The square bases of the *minars* on the western side are completely visible from the courtyard and are set out from the body of the main prayer chamber. On the contrary, the bases of the eastern *minars* are embedded within the assembly of architectural forms containing the *hujras* and the calligraphers' bazaar. The total height of a *minar* from the floor level of the courtyard is 30.5 metres while the height of the *minars* from the road level on the northern side is 32.91 metres.

The square base and the octagonal section of the *minars* are decorated with *kashikari* composed in recessed rectangular panels. The uppermost section of the octagonal shaft is also decorated with *kashikari* but in a more elaborate manner by including the lower parts of the projected section of the gallery. Similarly, the existing fragments of glazed tile on the dome and the base of the *chhatri* suggest that the surface used to be covered with glazed tiles.

Artistically, the Mosque displays some of the best examples of Mughal architectural, ornamental and decorative techniques, surpassing others in its delicacy and comprehensive decorative scheme. Most of the other Shahjahani-era monuments – Dai Anga Mosque, Asaf Khan Tomb, Gulabi Bagh entrance in Lahore – also have a combination of *kashikari* (glazed-tile work), *naqqashi* (fresco work) and *tazzakari* (faux brickwork) as architectural decor but the enormous scale of these decorations in the Wazir Khan Mosque certainly makes this Mosque notable for its artistic worth.

On the exterior, the decoration is dominated by brilliant *kashikari* work, applied on panels created in fine exposed brickwork and a framework of plaster render with a thin layer of incised faux brickwork as a general field or background. The dramatically coloured glazed tiles are found in floral and arboreal motifs as well as calligraphic verses in geometrically coordinated panels placed in recessed niches and surrounded by the brickwork or the faux-brickwork schema. This forms the overriding organizational basis for the facades.

The superb design, executed by well-known master calligraphers, contains verses from the Qur'an, the Hadith and Persian poetry in elegant forms of *nastaliq* and *thuluth*. Calligraphic work and geometrical and floral decoration in *kashikari* and *gachkari* (raised relief in lime plaster) coexists with large-scale fresco painting, stone and *tazzakari* decoration.

In the interior of the Mosque, the chief architectural and artistic characteristic resides in its profuse fresco work, bordered occasionally by floral *tazzakari* work.

26

Appendix B

The Shahi Hammam

The building known as the Shahi Hammam was built as part of the endowment of Wazir Khan in the year 1635. It is a large public bath in the tradition of the hypocaust heated public baths of Turkey and Iran, and is probably the last remaining public bath of this type on the South Asian subcontinent.

No mention of this Hammam appears in any of the Mughal-period histories, nor except for one, in the several nineteenth- and twentieth-century explorations of the history of Lahore. Latif's[14] authoritative history includes a *waqf* deed in respect of the Wazir Khan Mosque, which mentions a public bath as part of the endowment.

Recent exploration has revealed this building to be much larger and more elaborate, attesting to its importance as a public bath of civic importance in the time of Shah Jahan. These explorations are part of the conservation project being carried out by the Historic Cities Programme of the Aga Khan Trust for Culture in collaboration with the Walled City of Lahore Authority.

Endnotes

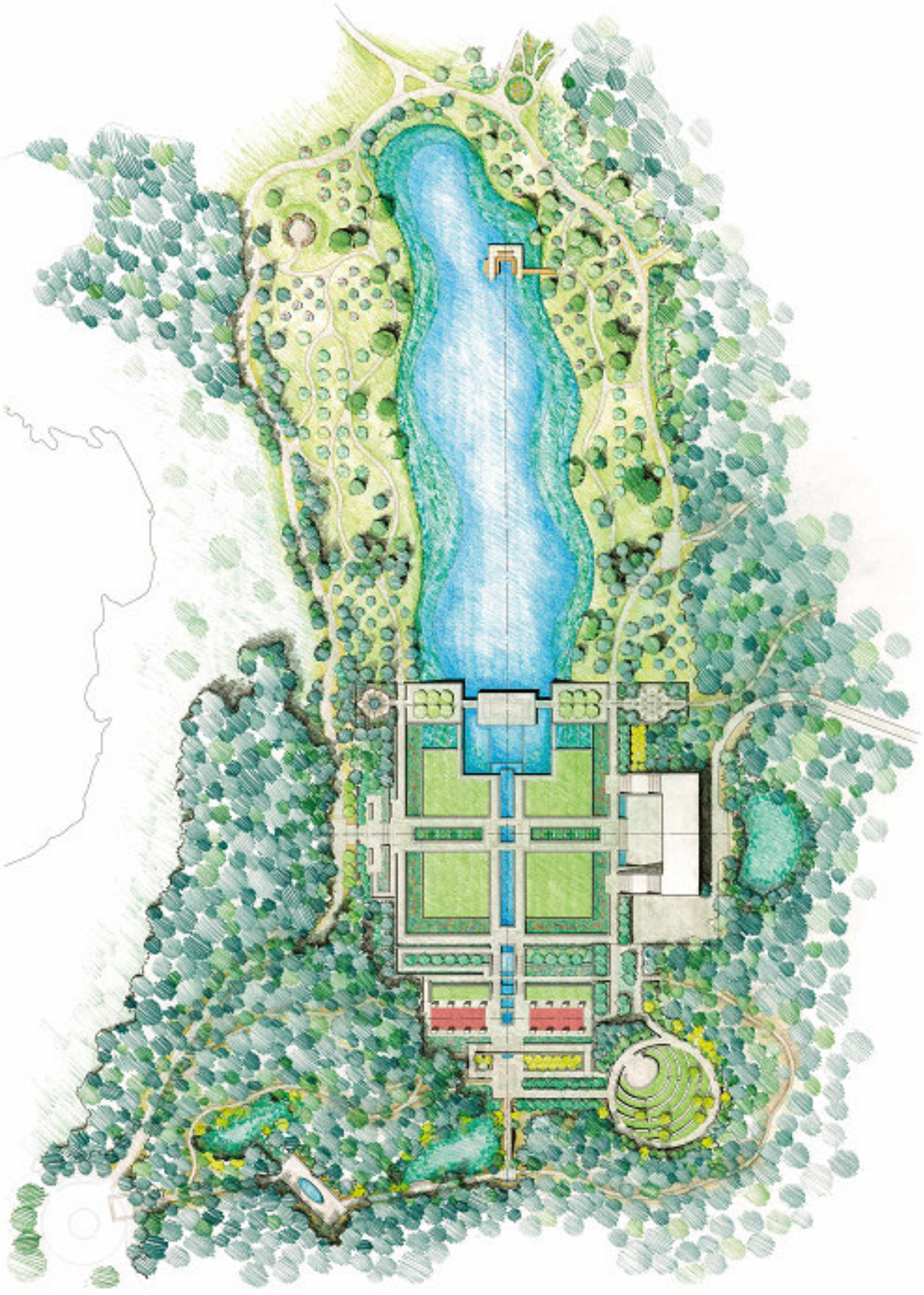
1 J. W. McCrindle, *Ancient India as Described by Ptolemy*, Trubner, London, 1885.
2 *Futuh al-Baldan* (The Book of Conquests), quoted in H.M. Elliot and J. Dowson (eds.), *The History of India as Told by Its Own Historians* (8 vols), Trübner and Co., London, 1867.
3 V. Minorsky (ed. and trans.), *Hudood ul-'Alam. The Regions of the World: a Persian Geography, 372 A.H. – 982 A.D.*, Luzac/OUP, London, 1937.
4 Muhammad Abdullah Chaghatai, *Ahmad Me'mar Lahori*, Kitab Khana-e-Nauras, Lahore, 1957.
5 Lahore Development Authority/ Metropolitan Planning Wing and World Bank/IDA, *Lahore Urban Development and Traffic Study; vol. 4 Walled City Upgrading City*, Lahore, 1980, p. 3.
6 Saifur Rehman Dar, *Some Ancient Gardens of Lahore*, Popular Publishers, Lahore, 1977.
7 Often mistaken for one built by Aurangzeb's daughter Zaibunnissa, further south at Nawakot.
8 Also transcribed from various historical Persian and Urdu manuscripts as 'Ali-uddin and 'Alim-uddin.
9 Kanhaiya Lal Hindi, *Tarikh-e-Lahore*, Majlis-e Taraqqi-e-adab, Lahore, 1977.
10 The neighbourhood of the stone *haveli*.
11 PEPAC (Pakistan Environmental Planning and Architectural Consultants Ltd.), *Conservation Plan for the Walled City of Lahore*, 1988.
12 Popular term for commercial buildings used for retail, wholesale, warehousing and manufacturing purposes.
13 Daryl Fowler and Gilmore Hankey Kirke (GHK Architects), "Endemic Structural Failure in the Walled City of Lahore" (unpublished), 1986.
14 Syed Muhammad Latif, *Lahore: Its History, Architectural Remains and Antiquities*, New Imperial Press, Lahore, 1892.

|25| The Wazir Khan Mosque: documented facade of the prayer chamber and its glazed-tile calligraphy.
|26| The Shahi Hammam, fresco work on the walls of the great hall.

The Mughal Tradition in Gardens

A Mughal Garden for a New World: An Islamic Garden in Edmonton

In Alberta, Canada, the proposed Islamic Garden and *bustan* are conceived as productive landscapes and as a way to reveal local ecology.



1

50 m

D. Fairchild Ruggles

When His Highness the Aga Khan gave Nelson Byrd Woltz Landscape Architects (NBW) the commission to design an Islamic garden for the University of Alberta's Devonian Botanic Garden in Edmonton (Canada), His Highness insisted that the firm's principal, Thomas Woltz, go to see the great historic Islamic and especially Mughal gardens. Thus, before beginning to plan the new garden, Woltz went to Cairo to see Azhar Park and to India to see the majestic Taj Mahal and nearby Ram Bagh on the banks of the Yamuna River in Agra. The itinerary included Fatehpur Sikri, Deeg Water Palace, Amber Fort and, in Delhi, the Red Fort, Humayun's Tomb and the adjacent Sunder Nursery – the last two being conservation projects sponsored and undertaken by the Aga Khan Trust for Culture (AKTC).[1] In this way, the new Edmonton garden – which at that point was nothing more than a hope and a concept – was from the beginning intentionally connected to historical precedents half a world away.

Islamic gardens are renowned for the geometrical precision and clarity of their four-part plans, the taming of uneven terrain through flat stepped terraces and the exuberant water displays that contrast sharply with the arid land that usually surrounds such gardens. Particularly in the Islamic landscape, water is a primary element. It appears as a vertical jet in fountains, a reflective surface in rectangular pools, a complex texture as it flows over scalloped stone slabs called *chadars*, or running in channels that give axial structure to the space (see pp. 262–263).

Many of the gardens Woltz saw were of the classic type called a *chahar-bagh* ('four gardens') in which the enclosed garden was divided into quadrants by cross-axially arrayed water channels or pathways |2|. In observing the classic layout and elements of the gardens, Woltz took especial note of the forces that generated those forms, specifically the way that the need for irrigation in agriculture produced the axial water channels

2

|1| Plan of the Islamic Garden at the Devonian Botanic Garden, Edmonton, Canada.
|2| Water cascades over a *chadar* at Humayun's Tomb, Delhi, India.

that divided the land into individual bedded plots, and the way that the need to store water produced the reflecting pools and cisterns. Thus, while he saw the gardens as visually beautiful designs, he also looked at them as representations of transformative landscape processes. This was an important insight because, in many ways, the designed garden tells a story 'about' landscape: the story of overcoming aridity in the desert or the story of how melting snow rushes down a mountainside to a valley lake. To tell new stories successfully, the landscape architect has to be able to read the existing landscape and imagine how the narrative of water management, plant cultivation and land shaping can be told. Moreover, the architect cannot simply reiterate the story of another place but must communicate something important about 'this' place, whether it be Cairo, Delhi or Edmonton.

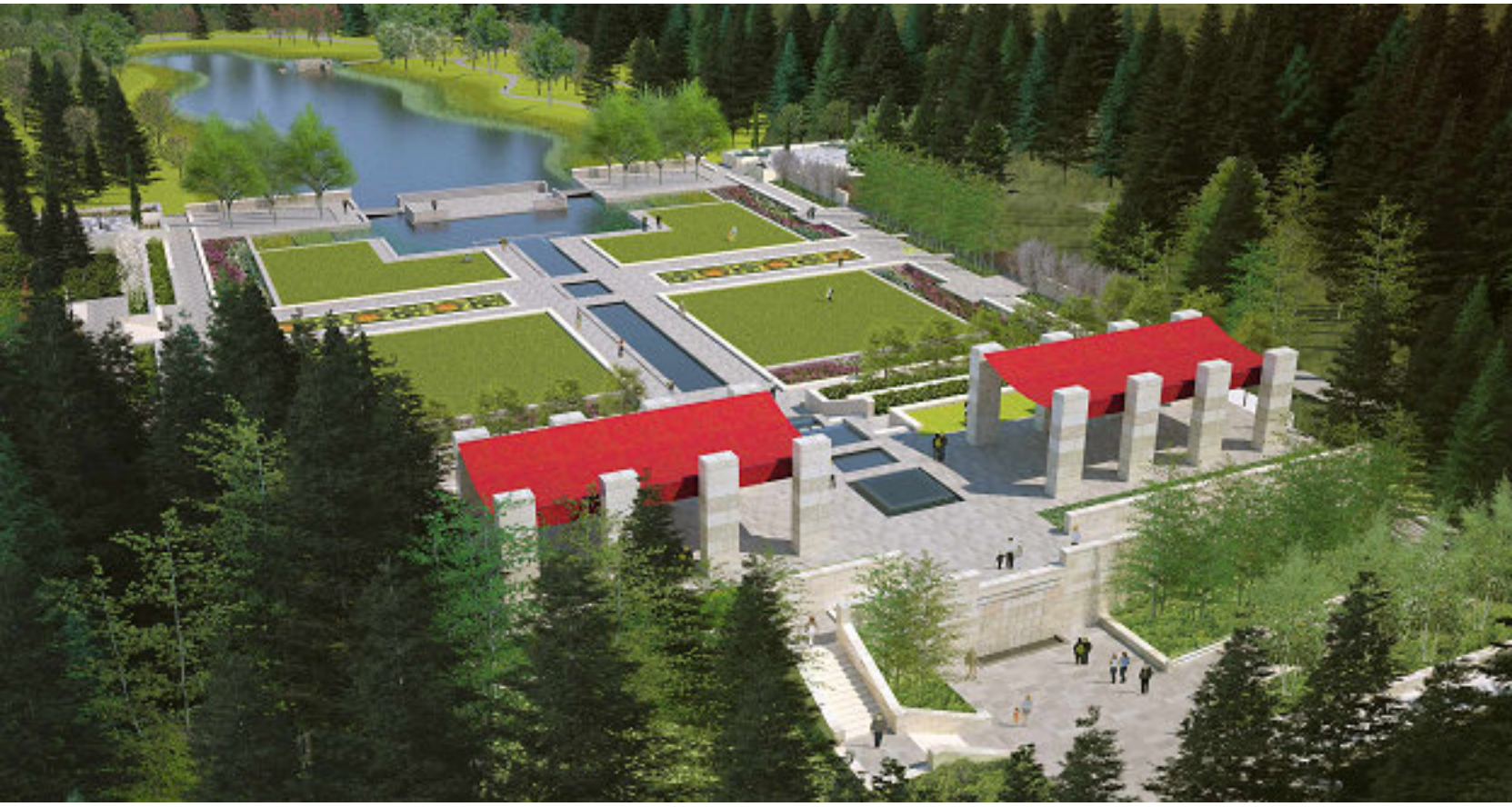
With the Devonian Botanic Garden's Islamic Garden |1|, the goal was to tell the story of the Edmonton landscape while at the same time forging a connection between contemporary Alberta and the Islamic world of the sixteenth and seventeenth centuries so that the garden would evoke recognizable Islamic forms in modern terms. Woltz explained: "We were asked to look beyond the bounds of the traditional Islamic garden and to develop ideas that could bring a new kind of relevancy in the twenty-first century".[2] His Highness called for "the most beautiful space which man can create using the best of our earth's features". The challenge faced by Woltz and NBW project manager Breck Gastinger was how to enter into such a distinguished tradition of garden-making without resorting to copy or pastiche. Furthermore, since the garden was to be part of a public park, it had to be appealing in all four seasons of the year.

To make a garden in Edmonton with its extreme climate conditions, sandy soil and limited plant palette, and with the mandate that it should offer opportunities for community socialization as well as privacy, required a reconceptualization of the Islamic garden as a public park.[3] The new Islamic garden is located within the seventy-six-hectare site of the Devonian Botanic Garden (established by the University of Alberta in 1959). The area, called the Alberta Parkland Region, has broad expanses of prairie with shallow surface depressions in ancient sand dunes that form 'pothole wetlands'. It experiences hot summers and extremely cold winters with temperatures averaging –8 to –12°C, the chill intensified by strong winds. Winter is not unknown in the Islamic garden: after all, gardens in Kabul and Kashmir flourish in cold climates. But Edmonton is at a latitude 20 degrees north of those and thus, while the winter season itself was not a challenge, the extremity of the cold and the limitations that it places on the available plant palette has required imagining the Islamic garden in different terms |3|. The designers could not simply copy existing historic gardens but had to find new solutions appropriate for Canada.

In designing an Islamic garden for four seasons, Woltz and Gastinger are drawing upon the expertise of the Devonian Botanic Gardens horticultural staff to identify plants that will flourish despite the extreme cold and sandy soil of the Devonian site. But the bar is set higher than simply the garden's survival; it has to be a place of pleasure and beauty in all four seasons of the year. Thus they have searched for plants that offer colourful winter berries, evergreen foliage and that are attractive for their shape or bark colouring even during winter's dormancy. The

3

4



5

garden's structure must be bold enough that it will be recognizable under a layer of snow.

The Islamic Garden is laid out in three parts: woodland valley, central court and pond framed by an orchard |5|. From a natural rise at its south-west end, it unfolds in rectangular terraces down to Calla Pond, a natural collection basin belonging to the hydraulic system that includes the wetlands area beyond the site to the north. Surrounded on all sides by a lush backdrop of semi-wild forest, the Garden appears as a calm oasis in a sea of green. On the highest point of the rise stands a pavilion that enjoys a sweeping vista of the Islamic Garden along its main axis and, from its back face, opens onto an intimate clearing with a path that leads through the woods to the Japanese Garden (added to the Devonian Botanical Garden in 1978). Inside the pavilion, water emerges from a fountain and runs in a channel embedded in the floor – a playful illusionistic device found in many Mughal pavilions that inverts expectations by bringing an outdoor 'spring' indoors. The stream flows through a stone-lined channel that broadens to a rectangular stream as it drops from one terrace level to the next via dynamic *chadars* |4|. It fills a square basin in the *chahar-bagh* on the lower level, and then falls gently into Calla Pond. At that liminal moment, it transitions from a highly structured rectilinear scheme to a looser, curving, more apparently naturalistic design. Calla Pond's surface will rise and fall depending on the seasonal water levels, retaining its wetland character. A pump circulates the water up to the topmost level to feed the fountain, but the water itself is a natural resource that is stored in the pond below. Thus, as the garden is nestled into an existing context, it actively participates in the environmental process of water catchment. Moreover, it makes that process visible through the stone framing that formalizes and draws attention to the channelized stream, the water's cascade, the pond's rim.

As Woltz studied the great historic Mughal gardens (which included gardens made by other princely families of India during the era of Mughal rule) as well as the twenty-first-century Azhar Park in Cairo, he looked beyond the visual appeal of the forms and began to develop a concept based on process and productivity. He explained the importance of "looking at the roots of those iconic gardens and finding that the constructs of

|3| The Calla Pond of the Devonian Botanic Garden in late summer.
|4| Water connects the major garden spaces along the spine of the Central Rill.
|5| The Upper Terrace provides vistas across the Central Court to the reconstructed Calla Pond and *bustan* beyond.

6

the Islamic garden – the simple conveyance of water, rill, cistern, tank, sunken beds – were about the modulation, stewardship and 'care' for water". The enormous, extravagant gardens of the Taj Mahal and others came from the careful management and display of a singularly precious resource. The tending of plants, the organization of discrete cultivation plots, the introduction of water in channels to irrigate the planted beds were all processes derived from the working agricultural landscape.[4]

However, at the Devonian site, the problem was not the acquisition of water in an arid context but its abundance in a wetland context. The designers observed that the same system that was developed historically to obtain, store and transport water in conditions of scarcity could also be used to drain it and manage it in conditions of plenitude. It was because of this understanding of the garden as a process, rather than a set of interchangeable visual forms, that led Woltz to think critically about not what an ideal Islamic garden should look like, but what an actual garden 'does'. The design team was thus able to reactivate a key process, inverting a system designed to bring water to an arid landscape, by using the same techniques to drain the land in wetland conditions and control erosion.

A significant element in the Devonian Islamic Garden is the *bustan*, a term meaning 'orchard' with associations of productivity and fertility. The *bustan*, which is aligned along the sides of Calla Pond, contains fruit trees – the cherry, apple, plum and pear are cold-climate natives – that begin in formal rows but gradually melt into the forest on the north-western edge. But this modern Islamic garden does more than appeal to the eyes and produce edible fruit: it can make a significant contribution to its regional ecology, as did the gardens of the past through their water management practices that transformed bare desert into beautiful and productive groves of palm and olive trees.

In the province of Alberta, the most pressing conservation issue pertains to the effects of tar sands mining and its impact on wetland infrastructure. The standard method in mineral extraction is to strip the land surface and rebuild the marshes elsewhere, a problematic practice because, as Woltz points out: "Wetlands occur where they 'need' to occur". As a response that encourages remediation and contributes to wetland restoration, the Islamic Garden's *bustan* will include diverse native plants in such abundance that the seed can be gathered to provide stock for planting new wetlands. In this way, the model of an Islamic garden that NBW is proposing for the twenty-first century is one that engages actively and beneficially with its environment, whether it be in Edmonton or Agra. Gastinger says: "It is exciting

|6| The Central Court is based on the idea of the *chahar-bagh*, or fourfold garden.

to think about the Islamic garden as a machine of ecological change and improvement. The flexibility of that structure allows it to adapt to radically different topographies, situations and horticulture." Whether responding to aridity, flood or ecological adversity, the garden can be a healthful place for its human visitors as well as a means of helping the larger regional landscape recover from environmental stress.

The emphasis on process and productivity offers a slightly different perspective than one that contemplates leisure and repose (an attribute of the garden of paradise). In thinking about the differences between historic and contemporary Islamic gardens, Woltz asked: "What makes us happy in the present? Hearts may be uplifted by leisure, beauty and the sense of well-being that accrues when we do good, and that can happen when we engage productively with the world around us, caring for and curating the world of creation." In this respect the garden has an important social dimension as well, as a tool for cultural dialogue that will unite diverse publics now and into the future through the shared experience of nature at its most graceful. Richard Pogue Harrison, in his 2008 book, *Gardens*, writes movingly about humanity and history:

"We inhabit relatively permanent worlds that precede our birth and outlast our death, binding the generations together in a historical continuum... Work builds the world that makes us historical. The historical world in turn serves as the stage for human action, the deeds and speech from which human beings realize their potential for freedom and affirm their dignity in the radiance of the public square."[5]

With the *chahar-bagh* as its centrepiece and the performance of water as a primary player in its narrative drama |6|, the Islamic Garden at the Devonian Botanic Garden evokes the great Mughal gardens of history. In so doing, it promises profound beauty and pleasure to its visitors. Yet, as a site for seed propagation that has the potential to help heal contemporary landscapes damaged by exploitation, it acknowledges the ecological continuum that binds generations worldwide and promises good stewardship. In this it echoes past gardens while providing for the present and, indeed, the future.

Endnotes

1 The conservation of Humayun's Tomb-Garden was completed in March 2003 as a joint project of AKTC and the Archaeological Survey of India (ASI), under the aegis of the National Culture Fund. The Sunder Nursery project, begun in 2007, is supported by AKTC, the Aga Khan Foundation, ASI, the Central Public Works Department of Delhi and the Municipal Corporation of Delhi. Azhar Park in Cairo was an extensive park design and social rehabilitation project by AKTC that opened in 2005 (see http://www.akdn.org/hcp/).

2 All quotations and information from the designers are from an interview conducted by the author on 17 March 2014 with Thomas Woltz, principal of Nelson Byrd Woltz Landscape Architects (NBW), and project manager and Senior Associate Breck Gastinger.

3 The landscape architecture firm Nelson Byrd Woltz has created major parks in the United States for the Coastal Maine Botanic Garden, the Bok Tower Botanic Garden in Florida, Citygarden in St Louis (Missouri), Memorial Park in Houston, Centennial Park in Nashville, Hudson Yards in New York City and Lafon Park in New Orleans. In New Zealand, the firm recently completed a 100 year master plan for Cornwall Park in Auckland.

4 The agricultural landscape as a historic source of garden design is developed in D. Fairchild Ruggles, *Islamic Gardens and Landscapes*, University of Pennsylvania Press, Philadelphia, 2008, chapter 2.

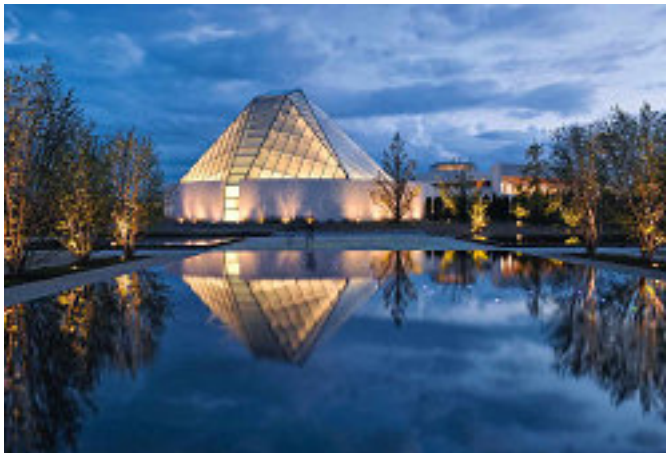
5 Richard Pogue Harrison, *Gardens: An Essay on the Human Condition*, University of Chicago Press, Chicago, 2008, chapter 1, especially pp. 9–10. Woltz was reading this book while touring India to see its great Mughal-era gardens.

Inspired by the Garden of Paradise: The Aga Khan Park in Toronto

The Aga Khan Museum, designed by Fumihiko Maki, seen from the Aga Khan Park, Toronto, Canada.

Philip Jodidio

An international competition was held in 2006 to select the landscape architect who would be given the task of uniting the Aga Khan Museum designed by Fumihiko Maki and the Ismaili Centre and Jamatkhana by Charles Correa on the seven-hectare site selected in Toronto for both institutions. The young Lebanese landscape architect Vladimir Djurovic was chosen over far better known people. Djurovic, a cosmopolitan figure who owes his name to his Montenegrin father, states the goals of his scheme in direct terms: "The competition covered the entire Wynford Drive site and was an ideal exploration platform in search of the most appropriate solutions that could address the complex challenges of the site and the brief. In the midst of highly charged surroundings, we sought to unify and integrate the architectural volumes and provide open, welcoming spaces for all while maintaining privacy. We also sought to create a platform for education that inspires and unifies without alienating or segregating, and a serene environment where contemplation finds spirituality."[1] Though he is clearly inspired by modern landscape design and architecture as much as he is by the past, Vladimir Djurovic continues: "Our vision for the project is one that captures the essence of the Islamic garden and translates it into an expression that reflects its context and contemporary age. Embracing the five senses as the means to reach the soul, every space and every garden is imbued with the delicate sensations that we seem to have lost in this fast-paced era. The ephemeral and the eternal are both essential to our composition of spaces. Shadows, light, petals, leaves and water in motion are complemented by the solidity and purity of created forms. All is not at once apparent; the garden reveals itself slowly to the visitor, who experiences hidden aspects with serendipity." Being the designer who has to navigate the space between two such well-known architects as Maki and Correa could not have



2

3

|1|2|3| Water mirrors define the Formal Garden, transforming it with their reflections as the day goes by.

been simple, but Djurovic has succeeded in creating "a unique, harmonious and welcoming garden with two landmark buildings in it. The garden," he says, "could be viewed as fluctuating between formal spaces around the buildings and informal spaces as one moves away." Djurovic continues: "One of the main roles of the landscape scheme was to merge and compliment the architectural direction set forth by the two buildings. Their programme, interior spaces and architectural spirit had to be seamlessly extended into the outdoors, while striving to come up with one unified environment for the enjoyment of the public. The reading of two structures embedded in a memorable park was always a main aspiration of His Highness the Aga Khan for this project. The Museum's architecture, and its evolution since inception, has been a major source of inspiration for our gardens. Its resounding presence, yet simplicity and delicacy, had to be reflected and complemented in our outdoor spaces. The surrounding gardens nestle the Museum into its site, and further amplify its experience through its arrival sequence and formal layout."[2]

A Taste for Minimal Architecture

Vladimir Djurovic was born in Lebanon in 1967. He received a degree in Horticulture from Reading University in England in 1989 and his Master's in Landscape Architecture from the University of Georgia in 1992 (Athens, GA), after having worked with the large landscape firm EDAW in Atlanta. Vladimir Djurovic Landscape Architecture (VDLA) was created in 1995 in Beirut, and has practiced an intriguing mixture of minimalist architecture and landscape design since then, in particular for a number of prestigious private clients. Djurovic admits to being attracted to the craftsmanship of the Swiss architect Peter Zumthor, or the ways in which another Pritzker Prize winner, the Portuguese architect Eduardo Souto de Moura, integrates his work into its natural settings. His Samir Kassir Square (Beirut, Lebanon, 2004) was a winner of a 2007 Aga Khan Award for Architecture. Located in the recently reconstructed Beirut Central District, the 815-square-metre park was conceived around two existing ficus trees that had somehow managed to survive the violence that wracked Beirut for years. "The challenge of this project," says Djurovic, "was to create a quiet refuge on a limited piece of land surrounded by buildings, while addressing the prominent street frontage that it occupies. In essence, to become a small escape dedicated to the city and its people." A raised 'water mirror' is a central feature of the Square, faced by a twenty-metre-long solid stone bench. The jury citation for the 2007 Award reads: "The Samir Kassir Square is a restrained and serene urban public space that skilfully handles the conditions and infrastructure of its location in a city that has undergone rapid redevelopment. The Award will go to Vladimir Djurovic, the pre-eminent landscape architect working in Lebanon today."

A Magical Mughal Garden

"After our design was selected as the winning scheme," explains Vladimir Djurovic, "His Highness asked me to take an extensive trip around the world to visit remarkable places that he has selected for me. I remember vividly him telling me, 'After your visit, you can resubmit your scheme *as is* and we'll build it, or present any changes that you imagine as a result of your trip'. I was not told anything about the reasons or motives behind the trip, and was left wondering as I travelled from continent to continent. I went from the truly timeless Alhambra in Grenada to the Cordoba Mosque, and on to some sublime monuments and gardens across Egypt and India, where I encountered the enchanting Fatehpur Sikri in Agra. Towards the end of this journey, while I was at Humayun's Tomb in Delhi, a magical Mughal garden, it all became clear to me. The goal of His Highness is not only anchored in meaningful projects for the present. He thinks also about the generations to come... I realized there and then, in that captivating Mughal garden, that anything in our

4

5

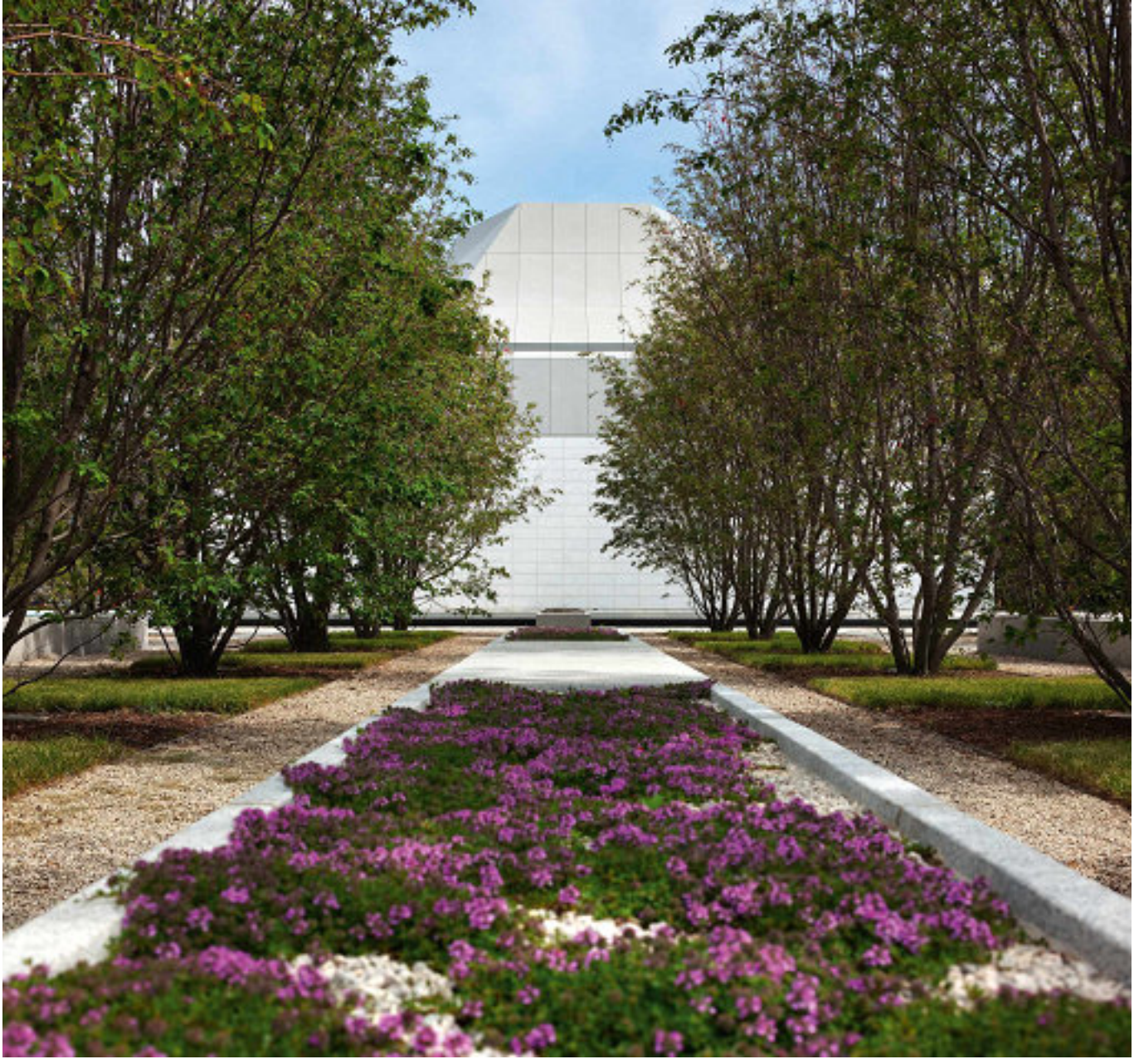
approach that strayed from such noble goals, any detail that we had designed that could not stand the test of time, at all levels, had to be changed or omitted, and we presented a new scheme. I must admit that since that time, these values and aspirations have remained with us in each and every project that we take on…"[3]

Built in honour of Sufi saint Salim Chishti in 1571 by the Mughal emperor Akbar, Fatehpur Sikri might be considered a revealing choice in the context of the itinerary of Djurovic. Unlike other Mughal cities, it demonstrates a certain informality and improvisation, and blends influences from Hindu and Jain sources as well as Islamic elements. Further, Fatehpur Sikri is known to have influenced such modern figures as Charles and Ray Eames, and Balkrishna Doshi. After visiting India, Djurovic finished his whirlwind tour in Azhar Park in Cairo, but retained above all the lessons of Humayun's Tomb. "Humayun's Tomb-Garden," states Djurovic, "has become one of my favourite gardens in the world… Its proportions, its purity and simplicity, indeed its presence, still intrigue me. For me, this garden expresses the ability of a place to somehow make time stand still. The visitor is present only there, at that moment, and nowhere else… I believe that this sense of captivation was one of the underlying threads in the conception of the formal garden in Toronto."

The tomb of the second Mughal emperor Humayun, who ruled modern Afghanistan, Pakistan and parts of northern India from 1530–40 and again from 1555–56, is one of the twenty-three World Heritage Sites in India. The *chahar-bagh*, or four-part paradise garden, is the earliest existing example of the Mughal garden-tomb. Humayun's Tomb and Gardens in Delhi are considered one of the precursors of the Taj Mahal. The first privately funded restoration of a World Heritage Site in India was completed in March 2003 through the joint efforts of the Aga Khan Trust for Culture (AKTC) and the Archaeological Survey of India (ASI), under the aegis of the National Culture Fund. The objective of the project was to revitalize the gardens, pathways, fountains and water channels of the garden surrounding Humayun's Tomb, according to the original plans. The landscape architect's reference to these gardens as one of his sources of inspiration for the Aga Khan Park is also revealing in that they

|4| The lighting of the park has been closely coordinated with that of the architecture in order to achieve a sense of continuity.

|5| The Formal Garden was conceived as an extension of the Museum. In this photo, a temporary floor painting by a Pakistani artist covers its central paved area.



7

are striking above all for their simplicity – a kind of minimalism 450 years before Vladimir Djurovic began to practice his own modern art.

Nor are the thoughts of His Highness the Aga Khan far from Djurovic's interest in the gardens of Humayun's Tomb, or its better known successor, the Taj Mahal. The Aga Khan states: "You cannot go to a place like the Taj Mahal without being acutely aware of the site use and that is true of most of these great historic buildings. The use of gardens and water is a very strong part of Islam, that is, the references in the theological context to the quality of the environment."[4] The landscape architect's concern for the inclusiveness of the gardens in Toronto can also be related to the Aga Khan's often-repeated commitment to pluralism within a generous and open interpretation of Islam.

As he makes clear, the interests of Djurovic, even after the visits requested of him by His Highness the Aga Khan, were not limited to Mughal gardens but extended also to other creations of Islam. He states: "Islamic gardens across the world were our main sources of inspiration. Our design attempts to capture the essence of these gardens and translate it into an expression that reflects this new context and contemporary age. Following the example of many of the great Islamic gardens, the involvement of all the senses in order to create a complete sensual experience became a guiding principle in the conception of this project. Our formal garden has a strong geometric layout that is based on a traditional *chahar-bagh* (four-quadrant garden). Water, in the form of reflecting mirrors, is the main component of this composition. The reflective qualities of these raised water

|6| Preceding pages: an aerial view of the Aga Khan Park and its context.
|7| Solid granite benches with carved-out planters filled with aromatic herbs in the orchard.
|8| A view of the Ismaili Centre's prayer hall from the orchard.

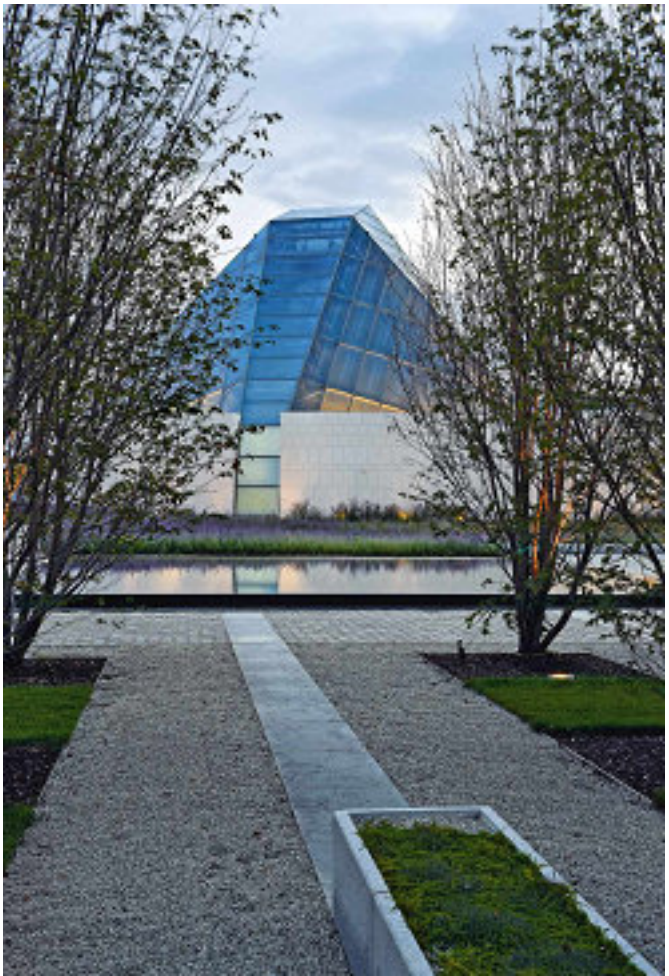
mirrors somehow dematerialize the surrounding buildings and landscape, providing a tantalizing experience."[5]

Reinterpreting the Spirit of the Islamic Garden

The designs of Vladimir Djurovic for the 79,300-square-metre Toronto gardens are an intentional attempt to render contemporary the very spirit of the Islamic garden. "I think that His Highness is happiest when he is working and discussing the gardens. He really wants us to reinterpret the Islamic garden in a contemporary way. We did not copy any garden – it is more about what you feel and smell and hear in an Islamic garden. What it is that I love about Alhambra is the sound of water and the smell of jasmine. I wanted to use a very contemporary language. The architecture of the buildings is very contemporary. The garden must reflect its context as well – a place covered with snow. I like this challenge: how to reinterpret the Islamic garden."[6] Indeed, for an architect who has worked more in Lebanon and the Middle East than in North America, the climate of Toronto posed new challenges. "Our intent is always to produce lasting environments," he says, "both physical and aesthetic. Hence durability was a major parameter for us to focus on in this new climate, starting from choice of materials, thicknesses, details and construction techniques, as well as the appropriate selection of plant species. Our close collaboration with Moriyama & Teshima,[7] with their extensive experience in such climates and major involvement with the project, was more than instrumental in guiding, fine-tuning and resolving all the technical issues for the project to achieve its ultimate goals."[8]

One area of particular attention and concern in the frigid winter climate of Toronto was the use of water in the gardens. "In one preliminary scheme we created translucent cast acrylic elements with water flowing over the edges. Covered with snow, they would appear like lit ice cubes. The edges would have been angled out so that freezing ice would fall off the edge of the basins," explains the designer. This idea was abandoned in favour of solid granite basin walls because Djurovic could not vouch for the long-term reliability of acrylic slabs, which tend to turn yellow with time. The newly designed granite basins still have their edges angled out to allow expanding ice to fall out and reduce ice pressure on the walls. A small rose garden is part of a 'green room' (multipurpose area for temporary events) that is located behind the formal garden which is between the Museum and the Ismaili Centre. A 'stone carpet' is set at the entrance to the Museum.

8



A Haven of Pluralism

All of the elements imagined by Vladimir Djurovic for the Aga Khan Park share a simplicity and regularity bordering on minimalism, though there are frequent surprises and changes of mood, progressing from a more formal configuration near the buildings and becoming less apparently ordered further from the heart of the site. "The Park is first and foremost a giant buffer zone protecting the sanctum of the project and creating a setting for the architectural volume. It also acts as a generous gesture to the city from the Ismaili community to the people who embraced them, providing a green public environment and

9

linking two previously disconnected parts of the city. The Park is a sanctuary for wildlife and a place for people to immerse themselves in a natural environment. All plants have been selected to entice an array of birds and butterflies and a pond created to help them breed and flourish."[9] It is this essential modesty, expressed by a younger creator in the context of work with two very accomplished architects, that has allowed Vladimir Djurovic to conceive of a garden that responds to numerous requirements while retaining its own identity. Through his seductive but quite realistic computer perspectives, Djurovic conquered the enthusiasm of those involved in the Toronto projects, giving a sense of unity to what could have become a disparate whole, especially given the decidedly urban context of the site, with major traffic arteries located just beyond this green vision of paradise. Through sight, but also sound and smell, this Lebanese designer with a Montenegrin name recreates an Islamic garden in a land of snow, a garden of pluralism. "What is unique about this Park," he says, "as is the case in most projects, is its specificity; the site, programme and most importantly in this case, the client and his vision. Inspired by the 'garden of paradise', the Park intends to offer the visitor a contemplative and sensual experience that reaches its peak in the serenity and tranquillity of the formal garden (the heart of the project) embraced by the Aga Khan Museum and the Ismaili Centre. Having the presence of these two unique institutions embedded within the Park makes this place a special destination. We envision these gardens perpetually changing, with different happenings and activities, becoming true extensions of the life and programmes of both the Ismaili Centre and the Aga Khan Museum."[10]

Indeed, the particular climate of Toronto, unlike that of the locations of the most celebrated Islamic gardens, has led the designer to adapt his creativity to the circumstances of the site. He says: "Time is what makes gardens develop their own souls. No doubt as the Park ages the planting will further belong to and ultimately possess the place. The plants were selected to go

|9| Water reflections seem to dematerialize the garden and the architecture.

through dramatic transformations, capturing and highlighting the beauty of each passing season."[11] Vladimir Djurovic selected the plants used in the garden according to their presence, but of course also in relation to their capacity to thrive in the climatic extremes of Toronto. He explains: "The main trees in the formal garden are native serviceberries (*Amelanchier*) that make up the *bustan* (orchard). Cedar hedges enclose the garden, endowing it with the characteristic containment and privacy of Islamic gardens. On its southern edge there are black locust trees, while large redwood trees anchor the garden's western corner. We tried to get trees as mature as we possibly could to properly anchor the project and provide the right feeling for experiencing the gardens. The serviceberry trees at full maturity and uniformity were crucial to find in order to make the formal garden's scale work. The dawn redwoods are quite mature, but the *Magnolia x soulangeana* are the oldest specimens at approximately fifty years of age."[12]

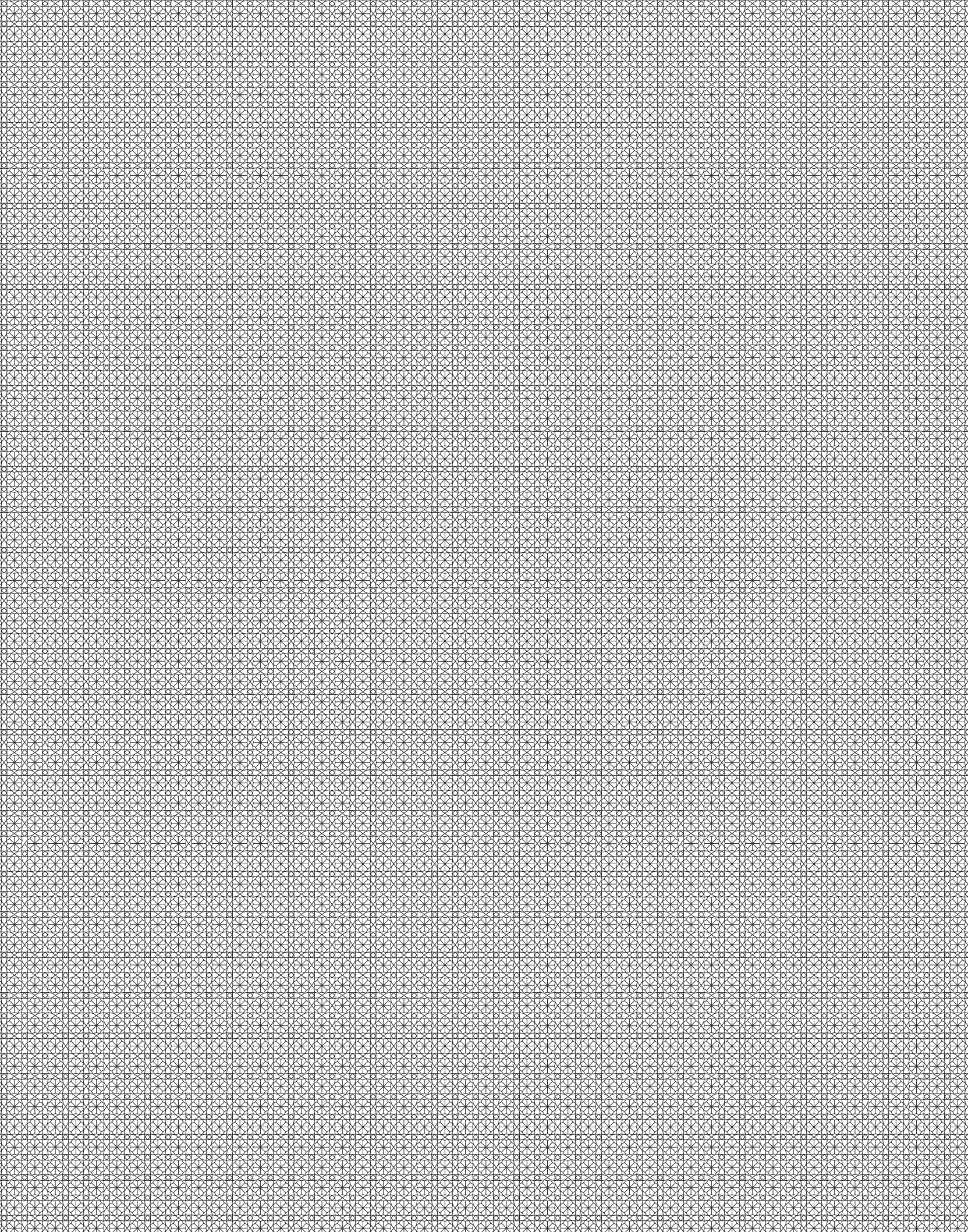
Evidence of God's Creation

Though the avowed and assumed modernity of the designs of the entire Aga Khan Park place it very firmly in the present, there is a deep current that runs below the gardens of Vladimir Djurovic, and that is the current of belief. It is clear that His Highness the Aga Khan has followed the work of the landscape architect with particular attention. Djurovic states: "His Highness's passion for gardens is intoxicating. His ideas for creating appropriate and memorable outdoor spaces became our main source of inspiration and motivation to truly excel in this project. His insights, recommendations and unwavering involvement throughout the design process has shaped and effectively resulted in the gardens that we have developed for this project."[13] His Highness the Aga Khan has long been interested in landscape design, and as he makes clear there are good reasons for this: "One of the issues in the Islamic world is the relationship between an ability to create and what we see of that creation. Nature is one of the evidences of God's creation. I am very sensitive to that personally."[14] In the case of the Aga Khan Museum, His Highness wrote to Fumihiko Maki about two kinds of light – the light of God's creation and the light of man's work – imagined as the sun changing the colour of the white stone of the Museum and the glow of the building from within at night. The gardens of Vladimir Djurovic will also share a fundamental duality – that of nature "as evidence of God's creation" within an ordered plan imagined by men.

> Unto those who do right shall be given an excellent reward in this world; but the dwelling of the next life shall be better; and happy shall be the dwelling of the pious! Namely, gardens of eternal abode, into which they shall enter; rivers shall flow beneath the same; therein shall they enjoy whatever they wish. Thus will God recompense the pious (Qur'an, Sura 9:72).

Endnotes

1 Vladimir Djurovic, written interview by the author, 3 June 2008.
2 Ibid.
3 Vladimir Djurovic, e-mail to the author, 19 June 2014.
4 His Highness the Aga Khan in conversation with the author, London, UK, 6 March 2007.
5 Vladimir Djurovic, e-mail interview with D. Fairchild Ruggles, 14 May 2014, published in H. S. Kim, R. Kana'an, P. Jodidio and D. Fairchild Ruggles, *The Aga Khan Museum Guide*, The Aga Khan Museum for Islamic Art, Toronto, 2014.
6 Vladimir Djurovic in conversation with the author, Paris, France, 31 January 2007.
7 Moriyama & Teshima were Architects of Record for both the Ismaili Centre and the Aga Khan Museum.
8 Vladimir Djurovic, written interview by the author, 3 June 2008.
9 Vladimir Djurovic Landscape Architecture, "The Ismaili Centre and Aga Khan Museum, Toronto", pamphlet for internal use, 2007.
10 Vladimir Djurovic, e-mail interview with D. Fairchild Ruggles in *The Aga Khan Museum Guide* op.cit.
11 Ibid.
12 Ibid.
13 Vladimir Djurovic, written interview by the author, 3 June 2008.
14 His Highness the Aga Khan in conversation with the author, London, UK, 6 March 2007.



Appendix

Sites of Mughal Heritage

Christian A. Hedrick and
Sharon C. Smith

For over three centuries the Mughal dynasty produced some of the world's greatest architecture. Emerging originally from Afghanistan, the Mughals celebrated their victory over much of South Asia with an aggressive building campaign. The result of this effort generated an architecture that not only harkened back to their origins in Central Asia, but imaginatively conflated the architecture of the conquered Hindus with architectural symbols of Islam.

The following short list of thirty monuments was selected out of hundreds of buildings in order to illustrate several important ideas. The assembled list not only demonstrates key moments in Mughal history, but, as will be seen from the diversity of their programs and time periods that they represent, allows for a broad consideration of Mughal culture and history through its architecture. Furthermore, we thought it important that the monuments chosen be, at least to some degree, still extant in order to further encourage their visitation and study. Some monuments, such as those representing the grand expressions of power embodied in the rich tradition of royal tombs, demonstrate the evolution of forms and organizational strategies that were clearly seen as fundamentally important to the Mughals as each ruler outdid his predecessor. Also included are important mosques, or specific parts of mosques and other religious buildings, that demonstrate the dynasty's evolving relationship with its subjects, its symbolic expressions of political power, or its fervent dedication to Islam. Indeed, Mughal history, culture and, ultimately, its heritage were written in stone and, as such, can still be read today.

1
Bagh-e Babur
Kabul, Afghanistan, founded *c.* 1528

This eleven-and-a-half-hectare terraced Garden on the western slopes south of Kabul was laid out by the founder of the Mughal dynasty, Zahir-ud-Din Muhammad Babur. It was his favourite among the ten gardens that he built in and around Kabul, and he decreed that it be his final resting place.

2
Jahangiri Mahal
Agra, India, 1560–70

This residential palace was built by Akbar within the Agra Fort complex. Situated at the southern end of the Fort and facing the Yamuna River, it is one of the few original structures that has survived, nearly intact, from Akbar's time. It is thought that the building was originally constructed as a *zenana* (a residential palace for the imperial women).

3
Humayun's Tomb
Delhi, India, 1560–70

Probably commissioned by either Humayun's widow and principal wife, Haji Begum, or his son Akbar, the Tomb provides the first example of the monumental scale set within a *chahar-bagh* that would characterize subsequent Mughal imperial architecture. Designed by Sayyid Muhammad and his father, it is also the first to mark the grave of a Mughal emperor.

4
Lal Qil'a
Agra, India, 1565–73

Begun by Akbar in 1565 on top of the foundations of a fortress attributed to Sikandar Lodi (r. 1489–1527), Agra's "Red Fort" has been modified many times. However, Akbar was responsible for the use of the red sandstone veneer. Inspired by the architecture of Gujarat and Bengal, the fort features trabeated construction and Hindu decorative motifs.

5
Fatehpur Sikri
India, 1571–85

Founded as the new capital of the Mughal Empire, this "City of Victory" was begun by Emperor Akbar. Based on Persian planning principles, the city comprises dozens of significant monuments and one of India's largest mosques. The city served as the Mughal capital for fourteen years but was subsequently abandoned.

6
Buland Darwaza
at the Jami Masjid, Fatehpur Sikri, India, 1571–72

The Buland Darwaza, or "Lofty Gate", is a massive and imposing forty-metre-high gateway into the mosque. Conflating Hindu and Persian elements, the gate is reminiscent of Humayun's Tomb in Delhi. Since it symbolically faces Gujarat, it may have been created to commemorate Akbar's victory there or in the Deccan.

7
Panch Mahal
Fatehpur Sikri, India, 1571–74

The Panch Mahal is a rectangular, colonnaded structure open on all sides. It is positioned to act as a 'transition' building between the semi-public spaces that surround the Daulat Khana courtyard. Its function is unknown, but some believe it played a role in Emperor Akbar's daily ritual of displaying himself to the public.

8
Salim Chishti's Tomb
Fatehpur Sikri, India, 1571–80

Set within the Jami Masjid, the white marble Tomb occupies a prominent position opposite the Buland Darwaza |6| and was built by Akbar to honour the Sufi saint. Legend has it that Akbar, who lacked an heir, sought assistance from the saint, who predicted the birth of Jahangir.

9
Hujra-i-Anup Talao
Fatehpur Sikri, India, 1572

Near the Anup Talao |12| is a profusely ornamented chamber popularly referred to as the "Pavilion of the Turkish Sultana", but now officially known as the Anup Talao Pavilion. According to some, Akbar used this structure to receive visitors and honoured guests. However, its intended function has been the subject of much scholarly debate.

10
Diwan-i Khass
Fatehpur Sikri, India, 1572–75

This small building houses a massive ornamental column at its centre, upon which sits a massive capital with four *jali*-lined bridges. Theories describe this structure as having been used for religious discussions or as a "Jewel House". The building's plan has attracted many interpretations based on its symbolism.

11
Diwan-i Am
Fatehpur Sikri, India, 1572–75

This public audience hall served various purposes of a public nature. It was where the emperor made his first daily public appearance and was also the site of court ceremonies, the reception of guests, and the administration of justice, as well as major festivals and celebrations of military victories.

12
Anup Talao
Fatehpur Sikri, India, 1576

The Anup Talao, or "peerless pool," was built on a wide platform (*chabwtara*) set in a pool to the north of the imperial apartments in the Mahal-i Khass courtyard. As part of a system of mini tanks and canals, it served to cool the air in the vicinity of the royal living quarters. In 1578 Akbar's court historian recorded an order to fill the Anup Talao with copper, silver and gold coins, which were later distributed by the emperor himself.

13
Mausoleum of Akbar
Sikandra, India, 1612–14

Most probably begun by Akbar and finished by his son Jahangir, the Mausoleum expands upon themes seen earlier in Humayun's Tomb. It comprises a larger pavilion at the centre of a still larger *chahar-bagh*, yet at the same time symbolically harkens back to India's Hindu architecture by including *chhatris* and corbelling.

14
Gateway to the Mausoleum of Akbar
Sikandra, India, 1612–14

This tall, sandstone-clad gate with ornate marble *pietra dura* inlay, carvings and inscriptions marks the entry to the *chahar-bagh*. It consists of a colossal arched niche flanked on either side by double-stacked balconies surmounted by four towering, white marble minarets at each corner.

15
Mausoleum of Itimad ad-Daula
Agra, India, 1622–28

Built in the *hasht bihisht* style, the pavilion has *chhatri*-topped towers in each corner that provide views of the Yamuna River and more than thirty gardens on its banks. Commissioned by Empress Nur Jahan in honour of her father, Mirza Ghiyas Beg (called Itimad ad-Daula, "Pillar of the Empire") (d. 1622), the tomb stands in a *chahar-bagh*.

16
Tomb of Abdul Rahim Khan-i-Khana
Delhi, India, 1627

The mausoleum of the poet and minister known as "Rahim" (1556–1626) is a precursor to the Taj Mahal in terms of architectural style. The Aga Khan Trust for Culture announced plans to restore the Tomb in 2014.

17
Jahangir's Tomb
Lahore, Pakistan, 1627–37

The Tomb, a *chahar-bagh rawza* (paradise garden mausoleum), is set in the Bagh-i Dilkusha on the Ravi River. The combination of red sandstone and white marble floral inlay in the *takhgah*, which measures eighty-four square metres, echoes Humayun's Tomb in Delhi. Inside, a white marble cenotaph with *pietra dura* and calligraphic motifs rests on a *chabwtara* (platform).

18
Shish Mahal
Lahore, Pakistan, 1631–32

Shah Jahan built this pavilion, located within the Shah Burj of the Shahi Qila, for an empress. It has a highly ornate chamber, and the central portion of the facade is composed of five cusped marble arches supported by coupled marble columns on bases inlaid with precious stones. The interior is decorated in *ayina kari*-style glass mosaic.

19
Taj Mahal Complex
Agra, India, 1631–53

Encompassing about seventeen hectares, this walled garden-tomb complex on the Yamuna River includes a mosque, guest house, gates and, most famously, the mausoleum of Mumtaz Mahal, considered the greatest architectural achievement of the Indo-Islamic world. Constructed in white marble with *pietra dura* inlay, it rises above the garden over a reflecting pool.

20
Nishat Bagh
Srinagar, India, *c.* 1633

Attributed to Asaf Khan, Nur Jahan's brother, Nishat Bagh sits on Dal Lake, near Srinagar. Rising through a progression of terraces, its main feature was a watercourse. Its jets, steps and pools allowed a near continuous flow to the lake over twelve levels, one for each sign of the zodiac.

21
Diwan-i Khass
Delhi, India, 1635

Situated within the Lal Qil'a, this hall of private audience was constructed of white marble inlaid with precious stones. The building features engrailed arches on all sides and each of its corners is topped by a pillared *chhatri*. The Peacock Throne rested on a pedestal in the centre until its removal in 1739 by Nadir Shah.

22
Wazir Khan Mosque
Lahore, Pakistan, 1634–35

Commissioned by Hakim 'Ilm Uddin, also known as Wazir Khan, the Mosque is located between the Delhi Gate and Shahi Qila, over the shrine of a thirteenth-century Iranian saint. Much of the Mosque, including its octagonal minarets, is constructed of brick and decorated with *kashi* (faience tile).

23
Shalimar Garden
Lahore, Pakistan, 1641/42

Among the best preserved Mughal gardens, Shalimar Bagh was constructed in the *chahar-bagh* tradition. Encompassing three large terraces over various levels, the Garden features canals, pools, pavilions, fountains and *abshar* (cascades) with fragrant flowering plants. The last terrace, known as Farah Bakhsh (Dispensary of Pleasure), was a *zenana*; the two lower ones, collectively called the Faiz Bakhsh (Dispensary of Plenty), served more public functions.

24
Jama Masjid
Delhi, India, 1644–58

One of Shah Jahan's final building projects, the Jama Masjid served as the main mosque of his new city of Shahjahanabad, which it overlooks. Sitting on a high plinth on top of a hillock, it features three gates, four towers and two forty-metre-high minarets clad in red sandstone and marble. A projecting *pishtaq* accentuates the prayer hall entrance.

25
Diwan-i-Khas-o-Am
Lahore, Pakistan, 1645

Within the Shahi Qila, this *sang-e murmur* (marble) pavilion was placed to provide transition from the highly public area of the Diwan-i Am to the private apartments of the imperial harem. Its core of vaulted chambers is bordered on three sides by an arcaded veranda.

26
Moti Masjid
Lahore, Pakistan, 1645

The small marble "Pearl Mosque" was built as the private mosque for the royal harem. Standing on the western side of Shahi Qila, Moti Masjid is one of the few buildings within the fort that deviates from the overall north-south orientation of the complex, allowing the *mihrab* to face Mecca.

27
Moti Masjid
Agra, India, 1647–53

Shah Jahan had this "Pearl Mosque" built in the Lal Qil'a |4| for the royal court. Predominately made of white marble, the building features common motifs including multi-lobed arches, *chhatris* and domes. The understated mosque with minimal ornamentation rests on a high plinth, with a red sandstone-clad blind wall marking the perimeter.

28
Badshahi Mosque
Lahore, Pakistan, 1673–74

Commissioned by Alamgir Aurangzeb, Badshahi Masjid is one of the world's largest mosques; it is also considered one of the last great monuments of the Mughal period. Standing opposite the main gate of the Shahi Qila, it features grand gateways, four red sandstone, tapering minarets, three vast marble domes and an open courtyard.

29
Lalbagh Fort Complex
Dhaka, Bangladesh, 1678

Located in the Mughal provincial capital of Bengal, the never-completed fort was begun by then-governor Muhammad Azam Shah and continued by Shaista Khan. A large *chahar-bagh* and three axially aligned buildings comprise the site: a mosque; the *hasht bihisht*-style tomb of Pari-Bibi; and the Diwan-i Am with a hammam (bath).

30
Mausoleum of Safdarjung
Delhi, India, 1753

The last example of a Mughal enclosed garden-tomb in Delhi, the Mausoleum of Safdarjung recalls earlier models such as Humayun's Tomb and the Taj Mahal, albeit on a less grand scale. Red sandstone and marble, set within a *chahar-bagh*, the two-storey structure retains all the elements of its noble prototypes, including the *chhatri*, *pishtaq* and central dome.

Acknowledgments and Credits

The Aga Khan Trust for Culture would like to acknowledge the teams and individuals who have contributed to this publication on the heritage of the Mughal world and to the Historic Cities Programme. Some of these individuals planned the publication, some contributed essays, and others contributed to analytical references and images that, combined, make the narrative more fascinating in its breadth.

AKTC Geneva

Luis Monreal, General Manager; Cameron Rashti, Director HCP; Jurjen Van Der Tas, Deputy Director HCP; Nicholas Bulloch, Director Finance; Shiraz Allibhai, Deputy Director; William O'Reilly, Librarian; Lobna Montasser, Media and Documentation Officer; and Hong Tang, Digital Production Officer.

AKTC's Service Companies/ Project Offices

Ajmal Maiwandi, CEO, Aga Khan Cultural Services (Afghanistan); Ratish Nanda, Programme Director, AKTC India Office; Salman Beg, CEO, Aga Khan Cultural Services (Pakistan); Masood Khan, Technical Director, Aga Khan Cultural Services (Pakistan)/ Senior Urban Planning Consultant, AKTC.

AKDN Resident Representatives

Where the Trust is active, it receives valuable support from fellow colleagues within the Aga Khan Development Network and from the Ismaili community. The Trust is grateful for this support and would like to acknowledge:t: Nurjehan Mawani, AKDN Resident Representative, Afghanistan; Gulam Mohamed Rahimtoola, National Council President, India; Iqbal Walji, National Council President, Pakistan; Malik Talib, National Council President, Canada; and Akbarali Pesnani, Pakistan, Chairman, AKCS(P) Board/AKDN Resident Representative in Tajikistan.

HCP Project Technical Teams and Main Consultants

AKTC and the Historic Cities Programme wish they could list individually the many specialist consultants, staff, contractors and suppliers who have contributed to the realization of the projects presented in this publication. Many such individuals or firms are acknowledged in existing AKTC publications and brochures on specific countries or initiatives. The following lists of credits by country expand on the contributions of the various project teams. The work in this publication should make manifest the fact that initiatives involving the safeguarding and preservation of historic cities and sites is a collaborative effort, spanning significant periods of time and relying, besides specialist professionals, on a very wide base of involvement by the public and private sector. The Programme thanks all who have been associated with its initiatives, past and present.

Editing Credits

This publication benefited from a true collaboration between Prestel publication's art department and a number of individuals under AKTC's direction who interacted with project teams, photographers, the editor and essay writers to achieve the fine balance required for a publication that combines cultural, social, historical and architectural concerns.

The Trust would like to thank, in particular, Philip Jodidio, Editor; Anja Besserer, Prestel Editor; Katharina Haderer, Prestel Editor-in-Chief; Harriet Graham, Copy-Editor; and Torsten Köchlin, Graphic Designer.

Working closely with the Prestel team on AKTC's behalf, Shiraz Allibhai coordinated graphic, text and case study materials across the number of AKDN project teams and consultants; William O'Reilly worked closely with the above in ensuring optimum image selection and caption development.

Drawing Credits

The underlying architectural drawings throughout this publication derive from the years of professional work by in-house professionals and consultants working on the individual projects. Except where otherwise noted, these drawings represent original and field-based surveys and design originating from AKTC's initiatives on the sites in question. These drawings represent an impressive set of assets that the Trust treasures and is pleased to add to the intellectual capital of the already impressive heritage of these sites.

Photo Credits

A publication on a range of sites and communities as dispersed and intriguing as those featured could not succeed without a parallel set of high-resolution photography to complete the story. The photographs displayed in this publication come from a wide array of sources, some more historic and some recent. In 2014 Christian Richters was commissioned to tour and photograph many of the sites that are included in the case studies, supplementing photography he did in 2009.

The AKTC and Public Partners and Donors and Credits for the Project

AKTC would like to acknowledge the generous support of the following project donors in addition to AKTC and who have made this project feasible.

PROJECT: BAGH-E BABUR, KABUL

Co-Funding

Federal Republic of Germany
United States of America
Save the Children

The rehabilitation of Babur's Garden and ongoing post-completion operational support have been provided by the Aga Khan Trust for Culture in partnership with the respective institutions of the Government of the Islamic Republic of Afghanistan. Key members of this collaborative effort are listed below.

Partner Organizations

Kabul Municipality
Directorate of City Services: Department of Culture, Department of Sanitation and Department of Greenery

Ministry of Information and Culture (MoIC)
Department of Historic Monuments and Department of Archaeology

Bagh-e Babur Trust (BBT) Board (Current)
Khughman Ulomi (Deputy Mayor, Kabul Municipality: Chair of Board); Rahila Kohestani (Director, Cultural Department, Kabul Municipality); Nasrin Sabary (Director, Greenery Department, Kabul Municipality); Abdul Ahad Abassi (Director, Department of Historic Monuments, MoIC); Massouma Nazari (Director, National Archives, MoIC); Sakhi Munir (Independent Member) ; Ajmal Maiwandi (AKTC Afghanistan) ; Abdul Wassay Najimi (AKTC Afghanistan)

Garden Management Team (GMT)
Amanullah Sahibzada, Garden Manager; Ahmad Shah Wardak, Operations; Abdul Latfi Kohestani, Horticulture; Hamidullah, Building Maintenance; Javid Zafari, Finance

AKTC Project Team

Kabul Programme/Project Management
Ajmal Maiwandi (2010–to date), Jolyon Leslie (2004–10), and Karel Bos (2003–04): AKTC Afghanistan CEOs. Ratish Nanda: Bagh-e Babur Restoration Project Manager

Project Consultants
Benedict Bull, Deborah Dunham, Ute Franke-Vogt, Zahra Hassan, Ebba Koch, Beat Laubli, Christian Richter, Mohammad Shaheer, Thomas Urban, Simone Ricca

Project Supervision and Liaison
Mustafa Ahmadi, Wahid Amini, Farkhod Bagirov, Arash Boostani, Mahmood Dost, Esmatullah, Mustafa Ghaznawi, Jamshid Habib, Hamidullah, Latif Kohestani, Farzana Saber, Allah Mohammad, Muneeb Musamim, Abdul Wassay Najimi, Ratish Nanda, Mohammad Rafi, Wahidullah Sabawoon, Amanullah Sahidzada, Ghulam Sakhizada, Anna Soave, Naime Wahidi

Project Administrative Support
Jamila Afzalyar, Bilal Alam, Ghowsuddin Amirian, Abdul Khalil, Sharifa Hekmat, Katrin Lotz, Shafiq Mashal, Sayed Muhibullah, Mustafa Munir, Shahla Naimi, Ahmad Nasir, Amanullah Nasrat, Abbacin Nessar, Narges Nemat, Mario Ragazzi, Haseeb Rasooli, Khadim Hussain Rohani, Abdula Satar Rustami, Abdul Azim Saleh, Nauroze Shah, Susanne Wik

India – Delhi and Hyderabad

AKTC would like to acknowledge the generous support of the following project donors in addition to AKTC and who have made this project feasible:

PROJECT TEAM: DELHI PROJECT

Partner Organizations

Archaeological Survey of India, Central Public Works Department, Municipal Corporation of Delhi

Co-Funding

Ministry of Tourism, Government of India; Sir Dorabji Tata Trust and Allied Trusts; Inter Globe Foundation; Norwegian Ministry of Foreign Affairs; US Ambassadors Fund for Cultural Preservation; Ford Foundation; Delhi Urban Heritage Foundation, Delhi Development Authority; State Department of Archaeology, Government of Delhi; World Monument Fund; Embassy of the Federal Republic of Germany; US Embassy, India; Sir Ratan Tata Trust; Housing and Urban Development Corporation; National Culture Fund; J. M. Kaplan Fund; GSRD Foundation; Ministry of Culture, Government of India

Core Team

Ratish Nanda, Rajpal Singh, Jyotsna Lall, Guntej Bhushan, Archana Saad Akhtar, Deeti Ray, Shveta Mathur, Somak Ghosh

Conservation and Construction

N. K. Agarwal, KP Singh, Balbir Singh, N. C. Thapliyal, M. P. Mishra, Mohd. Nayeem, Sangeeta Bais, Neetipal Brar, Divya Nandini, Tara Sharma, Prashant Banerjee, Mohit Dhingra, Sangeetha KT, Nikul Kumar, Suraj Kumar, Saroj Pandey, C.L. Meena, M.C. Gautam, Arshad Rizvi, Ranjit Kumar, Imran Khan, Mona Jazi, Aftab Jalia, Vishal Kakkar, Ashish Panwar, Kapil Mangla, Sandeep Kumar, Narendra Swain, Attar Singh, Babu Lal, Amirak, Dhani Ram

Socio-Economic Programmes

Kishwar Khan, Deepak Padhi, Hyder Rizvi, Gursimran Kaur, Vardhana Puri, Harshika Sahni, Swati Batra, Ratna Sahni, Syed Faisal Mahmood, Rukhsana Khan

Principal Consultants

Mohammad Shaheer, Shakeel Hossain, Vir Mueller Architects, Ram Rahman, Stuart Tappin, Mayank Mehta, Shubham Mishra, Himanshu Dhanda

HUMAYUN'S TOMB SITE MUSEUM

Architecture Design

vir.mueller architects: Pankaj Vir Gupta and Christine Mueller, Principals; Himanshu Parikh: Structural Engineering; Jhaveri Associates: Mechanical / Electrical / Fire Safety / Plumbing; Fifth Dimension Technologies: Acoustic Consultant.

Landscape Design

Shaheer Associates

QUTB SHAHI HERITAGE PARK, HYDERABAD

Co-Funding

Sir Dorabji Tata Trust and Allied Trusts; US Ambassadors Fund for Cultural Preservation

Partner Organizations

Department of Archaeology and Museums and Quli Qutub Shah Urban Development Authority, both of the Government of Telangana

Core Team

Ratish Nanda, Rajpal Singh, K.K. Muhammed, Yoshowant Purohit, Ganesh Reddy, Poornima Balakrishnan, Archana Saad Akhtar, M.V. Bharathi Prasad

Project Credits for the AKTC Work in the Walled City of Lahore

Co-Funding

Government of the Punjab
World Bank
Royal Norwegian Embassy, Islamabad
Foreign Office Funds, Federal Republic of Germany
J. M. Kaplan Fund

Partner Organizations

Planning and Development Department, Government of the Punjab
Sustainable Development of the Walled City of Lahore Project
Local Government and Community Development Department, Government of the Punjab
The Walled City of Lahore Authority
Sufi Deen Mohammad Welfare Society
Ittefaq Khawateen Tanzim

AKTC Project Team for the Walled City of Lahore

Project Management

Masood Ahmed Khan (2007–12), Francesco Siravo (2008–09), Shukurullah Baig (2013–to date), Fatimah Khan (2007–12), Shahid Mahmood (2008–12).

Project Consultants

Sohail Ahmad (Mechanical)
Masood Ahmed Khan (Project Design and Management)
Rashid Makhdum (Architecture and Urban Design)
Ahmad Ali Tariq (Electrical)

Project Design, Technical Services and Supervision

Muneer Ahmad, Anwar Ali, Jafar Ali, Nek Ali, Wajahat Ali, Saboohi Arif, Mehrunnisa Asad, Waqas Baig, Waseem Baig, Tahemina Baluch, Asma Fayyaz, Naheed Iftikhar, Javed Iqbal, Shahid Jan, Hamid Karim, Amin Khan, Maryam Liaqat, Hala Bashir Malik, Ali Madad, Salman Muhammad, Shoaib Muhammad, Fatima Munir, Waqas Nadeem, Rabia Naeem, Sehrish Nizam, Robert Pilbeam, Maryam Rabi, Basma Shafiq, Durre Shahwar, Shehrish Shakeel, Rashid Shoaib, Hassan Sarmad, Sumaira Shahbaz, Maha Tariq, Tanvir Johar, Haider Ali, Hira Sehr, Rozina Razzaq

Project Administrative Support

Rashid Ahmad, Zahid Ali, Mahbub Ali, Amin, Musa Baig, Amina Batool, Saqib Altaf, Jennifer Demello, Afsar Jan, Asif Masih, Muhammad Nawaz, Karim Sakhi, Shahid Ali Khan, Sadruddin, Ghulam Sarwar, Fateh Sher, Andrea Wylde, Muhammad Zubair

Canada

AN ISLAMIC GARDEN IN EDMONTON, CANADA

Nelson Byrd Woltz Landscape Architects (NBW)

Thomas Woltz, Breck Gastinger, Jen Trompetter, Nathan Foley, Sandra Nam Cioffi, Siobhan Brooks, Alisha Savage

THE AGA KHAN PARK IN TORONTO, CANADA

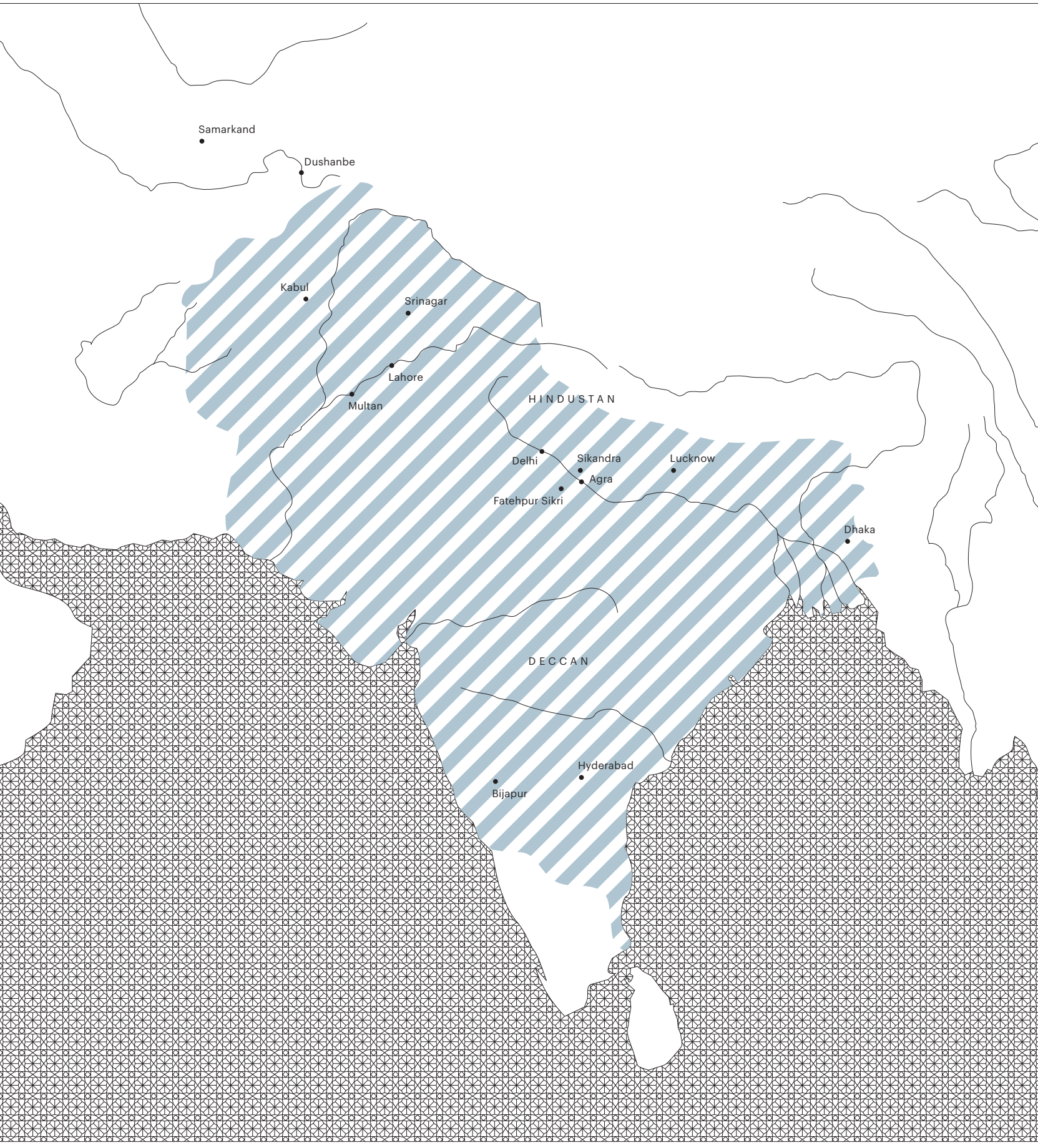
Vladimir Djurovic Landscape Architecture (VDLA)

Vladimir Djurovic: Principal; Federico Arrieta: Senior Design Architect in Charge; Rafi Karakachian: Senior Design Architect; Nathalie Rizk: Project Architect in Charge; Paul De Mar Youssef: Senior Design Architect; Steve Eid: Project Architect; Salim Kanaan: Technical Architect.

Moriyama & Teshima Architects: Executive Architects

As this book went to print, on 8 May 2015, we received news of the tragic death of the Norwegian Ambassador to Pakistan, H.E. Mr Leif H. Larsen. The Ambassador was a highly accomplished diplomat who had previously served in Saudi Arabia, Iceland and Belgium, and who had also headed Norway's Section for Security Policy. He was Norway's Special Representative for Afghanistan and Pakistan during the years that preceded his ambassadorship and he knew the region well. Leif Larsen showed intense interest in AKTC's work and we mourn the loss of a friend and supporter. The insight and vision of experts is a key to AKTC projects, and for our work in the Walled City of Lahore the involvement of Ambassador Larsen was a source of inspiration to many.

Limits of the Mughal Empire under Aurangzeb (1707)


Samarkand
Dushanbe
Kabul
Srinagar
Lahore
Multan
HINDUSTAN
Delhi
Sikandra
Agra
Fatehpur Sikri
Lucknow
Dhaka
DECCAN
Hyderabad
Bijapur

Author Biographies

Luis Monreal

is the General Manager of the Aga Khan Trust for Culture. He is a conservation specialist, art historian and archaeologist. He was previously Secretary General of the International Council of Museums at UNESCO (1974–1985), Director of the Getty Conservation Institute (1985–1990) and Director General of the Caixa Foundation (1990–2001).

Cameron Rashti

is the Director of the Aga Khan Historic Cities Programme. A graduate of Dartmouth College, Pratt Institute and Columbia University, he is a registered architect in the US and the UK. He served as a Vice President of Perkins and Will International for European projects prior to joining the Historic Cities Programme in 1994. During his tenure with the Trust he has had close interface with all of AKTC's projects on Mughal sites.

Azim Nanji

is a Kenyan-born professor of Islamic Studies. From 1998 until 2008, he served as Director of the Institute of Ismaili Studies in London. At present, he is the Senior Associate Director of the Abbasi Program in Islamic Studies at Stanford University. He is also on the Board of Directors of the Global Centre for Pluralism, a joint partnership between His Highness the Aga Khan and the Government of Canada.

Assadullah Souren Melikian-Chirvani

is a historian of the art of Iran and Hindustan. An Emeritus Research Director at the CNRS in Paris, he took up the post of Research Director of the Aga Khan Trust for Culture and Curatorial Director of the AKTC in May 2012. He retired from the *International Herald Tribune* in October 2013, after having run a weekly art column since March 1969.

Susan Stronge

is a Senior Curator in the Asian Department of the Victoria and Albert Museum in London. Her main area of research is Mughal court art, and she has written extensively on the Mughal art of the book and decorative arts. She is also a specialist on the artistic patronage of the South Indian Muslim ruler Tipu Sultan, and of the nineteenth-century Sikh ruler Maharaja Ranjit Singh.

James L. Wescoat Jr

is the Aga Khan Professor in the Department of Architecture at the Massachusetts Institute of Technology. He was previously the head of Landscape Architecture at the University of Illinois at Urbana-Champaign, and a professor in the Department of Geography, University of Colorado.

Ajmal Maiwandi

trained as an architect at SCI-Arc in Los Angeles and the Bartlett School of Architecture in London. He worked extensively in Europe, including at Studio Daniel Libeskind in Berlin, before returning to his native Afghanistan in 2004. Based in Kabul, he currently serves as CEO of AKTC's local office and has written widely about urbanism and architecture in the city.

Ratish Nanda

has been the Project Director for the India office of the Aga Khan Historic Cities Programme, Aga Khan Trust for Culture, since 2006. He obtained an MA in Conservation Studies (Historic Buildings) at the University of York (UK, 1998). He has directed AKTC's projects in Delhi and Hyderabad and was Project Manager for the Bagh-e Babur restoration project in Kabul.

Mohammad Shaheer

is qualified in architecture, urban design and landscape architecture. He has participated in the planning and design of large public open spaces in India and elsewhere. At present his firm is landscape consultant to the Aga Khan Trust for Culture for the Hazrat Nizamuddin Urban Renewal Initiative at Delhi; it has in the past contributed to AKTC's works at Humayun's Tomb in Delhi and at Bagh-e Babur in Kabul.

Pankaj Vir Gupta and Christine Mueller

Pankaj Vir Gupta and Christine Mueller established vir.mueller architects in New Delhi in 2003. Pankaj Vir Gupta is a licensed architect in the United States, and a registered member of the Council of Indian Architects. He received a Bachelor of Science in Architecture from the University of Virginia, and a Master of Architecture from the Graduate School of Architecture at Yale University. Christine Mueller received her Bachelor of Arts in Architecture from Washington University in St Louis and her Master of Architecture from the Graduate School of Design at Harvard University.

Masood Khan

is an architect and urban conservation planner with a consulting practice in Massachusetts specializing in the conservation of buildings and historic cities. He carried out projects in Gilgit-Baltistan for the Aga Khan Trust for Culture, before heading the AKTC participation in the Lahore Walled City Project, in which he has been involved since 2007.

D. Fairchild Ruggles

is a Professor in the Department of Landscape Architecture at the University of Illinois at Urbana-Champaign. She obtained her PhD in the History of Art at the University of Pennsylvania (1991).

Philip Jodidio

(book editor) is the author of more than a hundred books on contemporary architecture. He was Editor in Chief of the French art monthly *Connaissance des Arts* (Paris, 1980–2002) and studied Economics and Art History at Harvard.

Christian A. Hedrick

is a recent graduate of MIT's doctoral programme in the History, Theory and Criticism of Architecture and the Aga Khan Program for Islamic Architecture. Currently he is a researcher at the Aga Khan Documentation Center at MIT.

Sharon C. Smith

PhD, is the Program Head of the Aga Khan Documentation Center at MIT. She also serves as Co-Director of Archnet, a globally accessible, intellectual resource focused on architecture, urbanism, environmental and landscape design, visual culture, and conservation issues related to the Muslim world.

Photo and Illustration Credits

Aga Khan Award for Architecture / Michael Peuckert: p. 40
Aga Khan Cultural Services – Afghanistan: pp. 142, 144
Aga Khan Cultural Services – Pakistan: pp. 236, 245, 248, 253, 254, 255, 256, 275, 260
Aga Khan Historic Cities Programme: p. 286 (no. 1)
Aga Khan Museum, Toronto: pp. 53, 61 (bottom), 82 (top left)
Aga Khan Trust for Culture: pp. 99, 108/109
Aga Khan Trust for Culture – Delhi office: pp. 157 (top), 161, 165, 166 (top, bottom), 167, 181, 186, 196, 203 (bottom), 204 (bottom), 212 (bottom), 216, 222 (top), 224, 225, 227
Aga Khan Trust for Culture – Delhi office: "courtesy of the British Library": p. 149
Aga Khan Trust for Culture – Kabul office: p. 141
Aga Khan Visual Archive, Courtesy of the Aga Khan Documentation Center at MIT: 1987 James Wescoat: pp. 12, 42, 286 (no. 5), 287 (nos. 7, 10, 12, 15), 288 (no. 19)
Aga Khan Visual Archive, Courtesy of the MIT Libraries: 1980 Azra Hameed: pp. 288 (nos. 17, 18, 21), 289 (no. 28); 1982 Prof Dr Muhammad Sirajul Islam: p. 289 (no. 29); 1987 Kazi Khaleed Ashraf: p. 288 (no. 23); 1987 Maryann Thompson: p. 288 (no. 20); 1988 Alfred De Costa: pp. 286 (nos. 2, 3, 4), 288 (no. 25), 289 (no. 30); 1988 Khalil Pirani: p. 288 (no. 22); 1992 Gauvin Bailey: pp. 90, 287 (nos. 13, 14); 2011 Masood Khan: p. 289 (no. 26)
Archana Saad Akhtar / Aga Khan Trust for Culture – Delhi office: pp. 156, 229
ASI Archives: p. 214
Poornima Balakrishnan / Aga Khan Trust for Culture – Hyderabad office: pp. 220, 229
bpk – Bildagentur für Kunst, Kultur und Geschichte, Berlin / The Metropolitan Museum of Art: p. 82 (right)
Samuel Bourne: p. 32
Samuel Bourne (photographer), Private Collection: p. 73
British Library, London: p. 87 (bottom)
British Museum, London: p. 87 (top)
Himanish Das: (illustrations) pp. 164, 180
Justin Fitzhugh: p. 98
Fitzwilliam Museum: p. 46
Getty Images, Photographer Exotica.im: p. 94
Golestan Palace Library, Tehran: p. 68
India Office Library: p. 143
Janet Kimber Photography: pp. 274, 276, 277
MAK-Austrian Museum of Applied Arts / Contemporary Art, Vienna / Georg Mayer: p. 72
Massachusetts Institute of Technology Archives: pp. 222, 287 (no. 9)
Massachusetts Institute of Technology, photographs by G. E. Kidder Smith: pp. 54, 56, 57, 58, 60, 77, 287 (nos. 6, 8, 11), 288 (no. 24), 289 (no. 27)
Assadullah Souren Melikian-Chirvani: pp. 59, 61 (top left, top right), 62
Museum of Fine Arts, Boston © (2015): pp. 71, 81, 85
Vijendra Nagar and team: pp. 152/153, 154, 211 (top), 223
National Museum, New Delhi: p. 194
Nelson Byrd Woltz Landscape Architects: 264, 266, 267, 268 (top, bottom), 269, 270
Simon Norfolk: pp. 128, 133, 134/135
Gary Otte: pp. 7, 272, 275 (top, bottom), 278/279, 281, 282
Photographer unknown, Private Collection: pp. 30, 33, 34, 35, 38
Ram Rahman: pp. 43, 160, 212 (top), 226
Christian Richters by Aga Khan Trust for Culture, Geneva: front cover, back cover, pp. 2, 4 (top, centre), 8 (top, bottom), 14, 15 (top, bottom), 16, 17, 18, 19 (bottom left, bottom right), 20, 22, 23 (top, bottom), 24, 25, 26, 39, 55 (right), 102/103, 111, 114/115, 116, 118, 119 (top, bottom), 120, 121, 122, 123, 124/125, 127, 129, 130, 136, 138, 140, 145, 146, 148, 151, 168, 170/171, 184, 196, 198/199, 210 (left), 211 (bottom left), 230/231, 232, 234, 235 (top, bottom), 237, 238/239, 240, 241, 242 (left, right), 243, 244, 246/247, 250 (left, right), 251, 258, 261, 262/263
RMN-Grand Palais (Musée du Louvre) / Mathieu Ravaux: p. 52
Royal Collection Trust/© Her Majesty Queen Elizabeth II 2014: p. 83
John Edward Sache: p. 209 (bottom)
John Edward Sache / Aga Khan Trust for Culture – Delhi office: p. 157 (bottom)
Naeem Safi / Aga Khan Cultural Services – Pakistan: pp. 36/37
San Diego Museum of Art, www.TheSanDiegoMuseumofArt.org: p. 84
SCALA, Florence, LACMA, Los Angeles: p. 45
Shaheer Associates: pp. 190 (left, top, bottom), 191
State Museum of Oriental Art, Moscow: pp. 78, 79, 80 (left)
Narendra Swain / Aga Khan Trust for Culture – Delhi office: pp. 4 (bottom), 55 (left), 158 (left), 158 (top right), 158 (bottom right), 159, 162/163, 169, 172, 173, 174, 175 (left, top right, bottom), 175 (bottom right), 176, 177, 178 (top, bottom), 179, 182, 183, 192, 195, 197, 200 (top left, top right, bottom left, bottom right), 201, 202 (left, right), 203 (top), 204 (top), 205, 206, 208, 209 (top), 210 (right), 211 (bottom right), 213, 218/219, 288 (no. 16)
The Art and History Collection. Courtesy of the Arthur M. Sackler Gallery, Smithsonian Institution, Washington DC: p. 89 (bottom)
The Bodleian Library, University of Oxford, MS. Douce Or. A. 3, fol. 14: p. 86
The British Library Board (Add.Or. 3079): p. 88
The British Library Board (Add.Or.2): p. 89 (top)
The Metropolitan Museum of Art, New York: Image source: Art Resource, NY: p. 217
The Trustees of the British Museum: p. 80 (right)
Tom Arban Photography: p. 280
Victoria and Albert Museum, London: pp. 48, 49, 51, 66, 69, 74, 75
vir.mueller architects: pp. 187 (top, bottom), 188, 189 (top, bottom, right)
James L. Wescoat Jr: pp. 96, 97, 100, 105, 106, 107

Imprint

The Editor wishes to thank Luis Monreal, Cameron Rashti, Shiraz Allibhai and William O'Reilly for their guidance and help putting this book together.

© Prestel Verlag, Munich · London · New York
and the Aga Khan Trust for Culture, Geneva, 2015
© for the texts by the authors
© for the illustrations see photo credits page 295

Front Cover: Badshahi Mosque, Lahore, Pakistan
Back Cover: Badshahi Mosque, Lahore, Pakistan
page 2: Maqbara-i Jahangir, Jahangir's mausoleum, podium, looking south, Lahore, Pakistan.
page 4, top: Humayun's Tomb, aerial view over the main mausoleum and garden, Delhi, India. Middle: Bagh-e Babur restoration, view towards the Shah Jahan Mosque, Kabul, Afghanistan. Bottom: aerial view over tombs in the Qutb Shahi Heritage Park, Hyderabad, India.
pages 114–115: overall view of the city of Kabul, Afghanistan.
pages 152–153: Humayun's Tomb, Delhi, India.
pages 218–219: aerial view over tombs in the Qutb Shahi Heritage Park, Hyderabad, India.
pages 230–231: people strolling outside the Maqbara-i Jahangir, Jahangir's mausoleum, looking south, Lahore, Pakistan.
pages 262–263: Shalimar Garden, view along the central axis towards the north upper terrace, Lahore, Pakistan.

Prestel Verlag, Munich
A member of Verlagsgruppe Random House GmbH

Prestel Verlag
Neumarkter Strasse 28
81673 Munich
Tel. +49 (0)89 4136-0
Fax +49 (0)89 4136-2335

www.prestel.de

Prestel Publishing Ltd.
14–17 Wells Street
London W1T 3PD
Tel. +44 (0)20 7323-5004
Fax +44 (0)20 7323-0271

Prestel Publishing
900 Broadway, Suite 603
New York, NY 10003
Tel. +1 (212) 995-2720
Fax +1 (212) 995-2733

www.prestel.com

Library of Congress Control Number: 2015935358

British Library Cataloguing-in-Publication Data: a catalogue record for this book is available from the British Library; Deutsche Nationalbibliothek holds a record of this publication in the Deutsche Nationalbibliografie; detailed bibliographical data can be found under: http://www.dnb.de

Project management Prestel: Anja Besserer
Copy-editing: Harriet Graham, Turin
Design and layout: Torsten Köchlin, Berlin
Production: Cilly Klotz
Photolithography: Reproline Mediateam, Unterföhring
Printing and binding: Kösel GmbH & Co. KG, Altusried

Typeface: Graphik
Paper: 150 g/qm Luxo Art Samt 1,05 f.

MIX
Paper from responsible sources
FSC® C013736
FSC
www.fsc.org

Verlagsgruppe Random House FSC® N001967
The FSC®-certified paper Luxo Art Samt was delivered by Papyrus.

ISBN 978-3-7913-5379-1
(trade edition)
ISBN 978-3-7913-6550-3
(Aga Khan Trust for Culture edition)