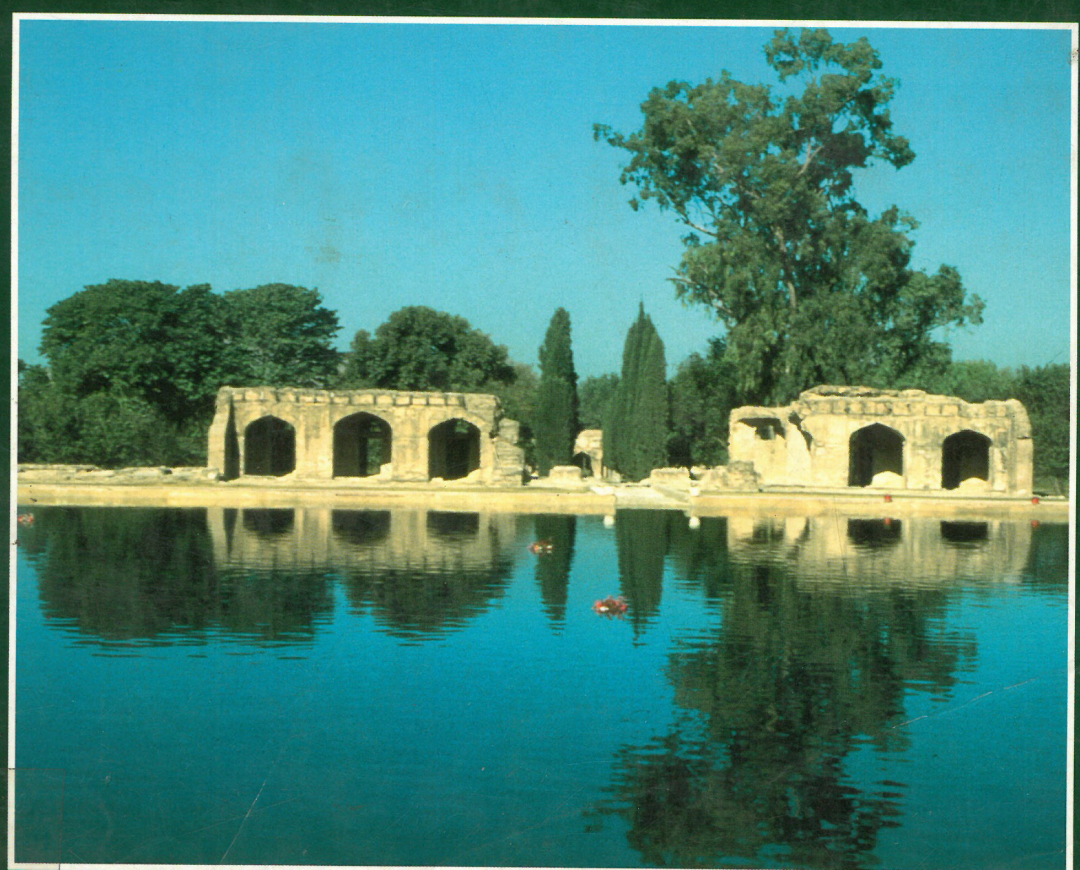
THE MUGHAL GARDEN

INTERPRETATION, CONSERVATION AND IMPLICATIONS



Edited by

Mahmood Hussain, Abdul Rehman & James L. Wescoat Jr.

THE MUGHAL GARDEN

INTERPRETATION, CONSERVATION AND IMPLICATIONS



THE MUGHAL GARDEN

INTERPRETATION, CONSERVATION AND IMPLICATIONS

Based on a Collaborative Study Sponsored by
Smithsonian Institution, Washington, DC
Department of Archaeology and Museums, Government of Pakistan
University of Engineering and Technology – Lahore

10126

Edited by
Mahmood Hussain, Abdul Rehman & James L. Wescoat Jr.

FEROZSONS (Pvt.) LTD.
RAWALPINDI-LAHORE-KARACHI

ISBN 969 0 01299 1

First Published 1996 by
Ferozsons (Pvt.) Ltd.
60, Shahrah-e-Quaid-e-Azam, Lahore-Pakistan
277, Peshawar Road, Rawalpindi
Mehran Heights, Main Clifton Road, Karachi

The Mughal Garden: Interpretation, Conservation and Implications

Edited by Mahmood Hussain, Abdul Rehman & James L. Wescoat Jr.

Copyright © Ferozsons (Pvt.) Ltd., 1996

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

Typeset in 10.5 on 14 point Palatino
Designed, Printed and Bound in Pakistan by
Ferozsons (Pvt.) Ltd., Lahore.

CONTENTS

FOREWORD ... 7
Ahmad Nabi Khan

INTRODUCTION: The Mughal Gardens Project in Lahore ... 9
James L. Wescoat Jr.

Part I **REINTERPRETING THE MUGHAL GARDEN**

1. Timur's Gardens: The Feminine Perspective ... 29
   Lisa Golombek
2. Whither the Historical Gardens of Punjab?
   Garden Traditions of Punjab ... 37
   Saifur Rehman Dar
3. The Char Bagh Conquers the Citadel: An Outline of the Development of the Mughal Palace Garden ... 55
   Ebba Koch
4. Gardens of the Nobility: Raja Man Singh and the Bagh-i-Wah ... 61
   Catherine B. Asher
5. The Mughal Garden 'Wah' Near Hasanabdal: Source Material, Report of Excavations of 1993-94 and New Discoveries ... 73
   Shahid Ahmad Rajput
6. The Gardens of Peshawar ... 89
   Abdur Rehman
7. Qutb Shahi Garden Sites in Golconda and Hyderabad ... 93
   Ali Akbar Hussain

Part II **CONSERVING THE MUGHAL GARDEN — Texts, Places and Policies**

8. Theory and Practice in Garden Conservation ... 111
   M. Rafique Mughal
9. The Mughal Concept of Gardens: An Enquiry into Shah Jahani Sources ... 115
   Abdul Rehman
10. Surveying Shahdara ... 123
    Michael Brand
11. Conservation of Lahore Fort Gardens ... 129
    Masood ul Hassan Khokhar
12. Shalamar Garden, Lahore ... 133
    Sajjad Kausar

13. Conservation of Historic Buildings and Gardens in Lahore: Implications for a National Conservation Policy for Pakistan ... 143
Muhammad Yusuf Awan

Part III IMPLICATIONS FOR PLANNING AND DESIGN

14. Conservation of Garden Sites and Urban Sprawl in Lahore ... 165
Mahmood Hussain
15. Shalamar Garden, Lahore: The Other Side of the Square ... 173
Muhammad Naeem Mir
16. Qur'anic Concept of Landscape Architecture: A comparison with Shalamar Garden ... 181
Ikram Ali Shah Gelani
17. Gardens and Urban Design ... 187
Attilio Petruccioli
18. Floral and Garden Imagery in the Poetry of Allama Iqbal ... 201
Annemarie Schimmel

AFTERWORD ... 205

CHRONOLOGY OF MUGHAL LANDSCAPE HISTORY IN LAHORE ... 207

FOREWORD

Ahmad Nabi Khan
Former Director-General
Department of Archaeology and Museums

Some six years ago, the Department of Archaeology Government of Pakistan received a proposal from our American colleagues, Drs. Milo Beach, James L. Wescoat Jr. and Michael Brand, to conduct research under the title of **"Garden, City and Empire, The Historical Geography of Mughal Lahore,"** in collaboration with the Department of Archaeology. The proposal was received with enthusiasm and we were glad to see that it got immediate approval of the Government. I was particularly glad because the subject was also of personal interest to me. Soon Brand, Wescoat, Beach and myself sat down to work out the details. It was also agreed that the Department of Architecture, University of Engineering and Technology, Lahore, should be associated with the project. Since then the work has been progressing speedily, and I am glad to say that much useful materials on the survey and documentation of Mughal Gardens in and around Lahore have been collected and collated.

A couple of years ago we had a seminar of similar scope and nature to the one that produced this book in Washington DC. Now we have had this second seminar in Lahore. The purpose of this exercise was to assess the progress made so far in a broader perspective. However, let me hasten to state that this achievement is not the end of it, rather it is the beginning of tasks to be undertaken in much more detailed and in-depth treatment. I would like to suggest the following strategy for its logical conclusion.

1. Study and publication of the data collected so far in the shape of surveys, drawings and documentation. A good specimen of this already exists.

2. Extension of the work to document other gardens located at various places in Pakistan.

3. Collection, collation and editing of relevant texts in the original sources and their publication in the shape of a source book.

4. This type of publication of well-documented and detailed study of Mughal Gardens would supersede all the works so far published on the subject.

5. More importantly, the study of gardens and landscape involves collection of technical data required for their proper conservation and restoration. In this connection I would particularly mention that the Department of Archaeology's PIATR, that is, the Pakistan Institute of Archaeological Training and Research at Lahore could very conveniently serve as a nucleus for organizing these programmes. May be, we might consider setting up a Centre of Studies under the aegis of the PIATR.

It is my proud privilege to thank all individuals and organizations involved in the task, including our friends and colleagues from Pakistan and the USA. I would particularly mention the faculty members from the Department of Architecture, University of Engineering and Technology-Lahore, their students and staff particularly Professor Dr. Mahmood Hussain and Prof. M. Naeem Mir, who prepared the documentation jointly with Dr. Wescoat, who has been visiting Pakistan frequently for this purpose.

The organizing of this seminar and publication of the book has also been possible with the joint efforts of the Department of Archaeology, Government of Pakistan and the Department of Architecture, University of Engineering and Technology, Lahore. For the purpose of making a good presentation of the Moghul gardens involved, which the delegates at the Mughal Gardens Symposium visited during the course of four to five days, and also viewing an exhibition held in the underground chambers of the Shish Mahal quadrangle of the Lahore Fort, by the Northern Circle of the Department of Archaeology under the guidance of Dr. M. Rafique Mughal, the officers, and staff, I have to thank all the devoted officers, and, if I may, the officers and colleagues of the Department of Architecture, University of Engineering and Technology, Lahore.

We in the Department of Archaeology have always been glad to be associated very actively and enthusiastically with the Mughal Gardens Project. We have been handling several national and international projects of a similar nature and I must say that this particular programme has been of utmost importance for us and has gone down so successfully. Indeed it would serve as a model for undertaking such exercises in the future. We appreciate the keen interest and ready response of the galaxies of specialists who came from distant places to participate in the deliberations of the Symposium. I am positively sure that their written contributions being presented in the form of this book will go a long way towards understanding the various phases of this particular style of architecture. I am particularly thankful to all those who spared their precious time to join us in this significant project.

INTRODUCTION:
THE MUGHAL GARDENS PROJECT IN LAHORE

JAMES L. WESCOAT JR.
Department of Geography,
University of Colorado, Boulder, U.S.A.

This book originated in a collaborative study of Mughal gardens in Lahore, Pakistan.[1] The study evolved over a ten year period from 1986 to 1996.[2] One of its final events was an international symposium that began in the town of Sheikhupura, Pakistan, where there is a Mughal hunting palace and tank known as the Hiran Minar (Fig. 1). Symposium participants travelled – over a period of three days – from garden to garden across the landscape of metropolitan Lahore, following a frequently travelled route of the Mughal period and presenting the papers contained in this book along the way (Fig. 2). Participants subsequently travelled northwest to the Wah Garden near Hasanabdal and to the gardens of Peshawar, in each case meeting in tents pitched in the very gardens under discussion (Fig. 3).

The resulting book draws together essays by archaeologists, art historians, architects, and others under three broad headings:

1. Interpretation – new ideas about the history and meaning of Mughal gardens based on



Fig. 1: Photograph of the Hiran Minar tank and pavilion, Sheikhupura district.

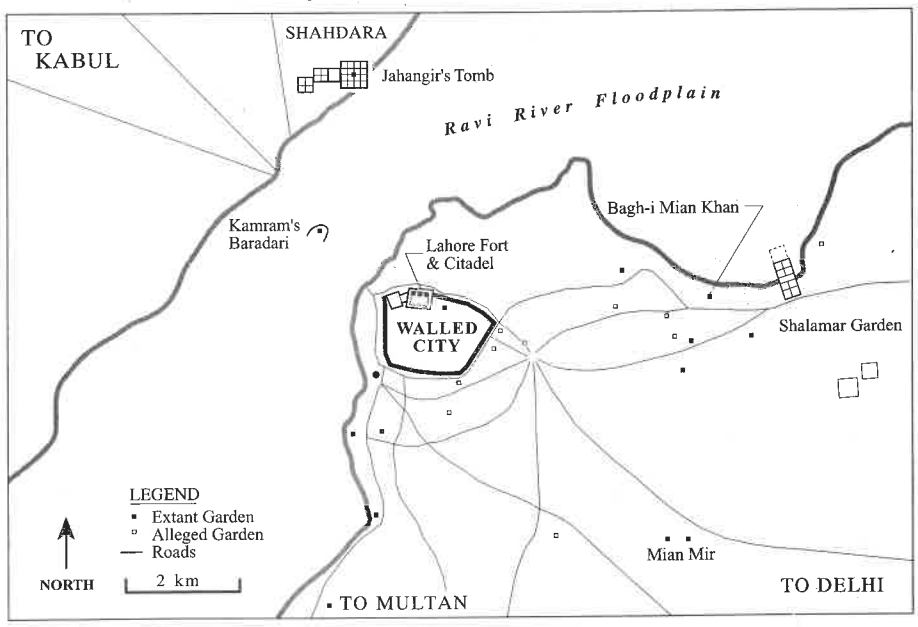


Fig. 2: Map of Mughal Gardens in Lahore.

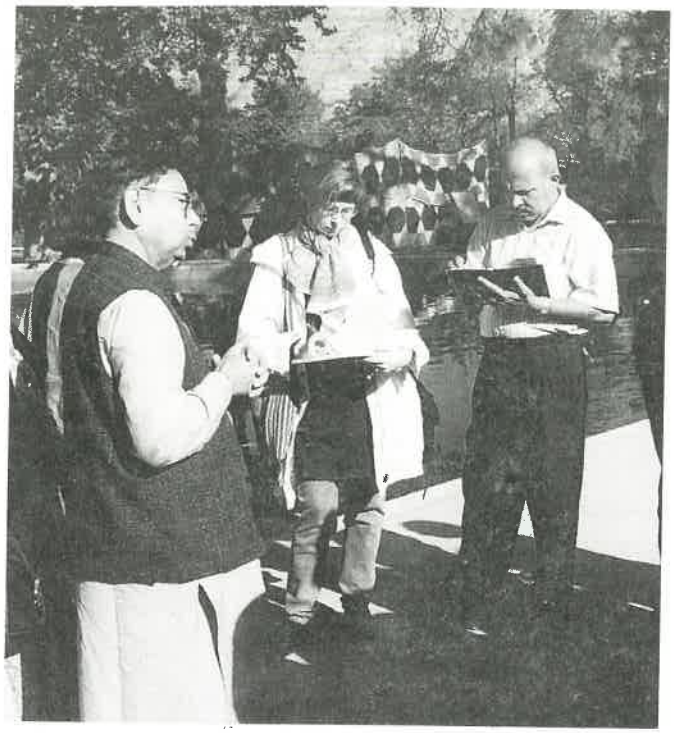


Fig. 3: Photograph of symposium participants.

new archaeological, historical, and cultural evidence.

2. Conservation – problems encountered in specific historical gardens and public policies.
3. Implications – of historic gardens for modern environmental planning and design.

Before launching into these three themes, and the essays that follow, it is important to introduce the Mughal gardens themselves and the project that focused on their history and geographic development in Lahore.

We begin the introduction with a puzzling contrast in Lahore and many other parts of South and Central Asia – How and why has such an important garden tradition suffered such neglect? After reflecting upon this paradox, we turn to the work of the Mughal Gardens Project and it attempts remedy the scholarly neglect of Mughal gardens. Although interpretation and documentation were emphasized in the Mughal Gardens Project, this book takes a broader cultural view by seeking to re-weave the connections among scholarship, heritage conservation, and design.

This introductory chapter surveys the historical challenges posed by Mughal gardens. It focuses on the relationships between interpreting Mughal gardens – which almost everyone finds interesting – and scientific documentation of them which despite its practical utility has received limited attention. It also explores the implications of conservation issues for modern environmental design (e.g., architecture, landscape architecture and urban design). By surveying these issues we set the stage for chapters on other areas, approaches, and aspects of Mughal garden studies.

The Apparent Importance of Mughal Gardens

In the field of garden history, the Mughal gardens of Lahore represent a prominent chapter of what is often called the Islamic garden tradition (Fig. 4). A significant number of gardens and garden remnants survive in Lahore. Shalamar garden, Jahangir's tomb-garden, and the Lahore Fort gardens constitute three monumental examples of gar-

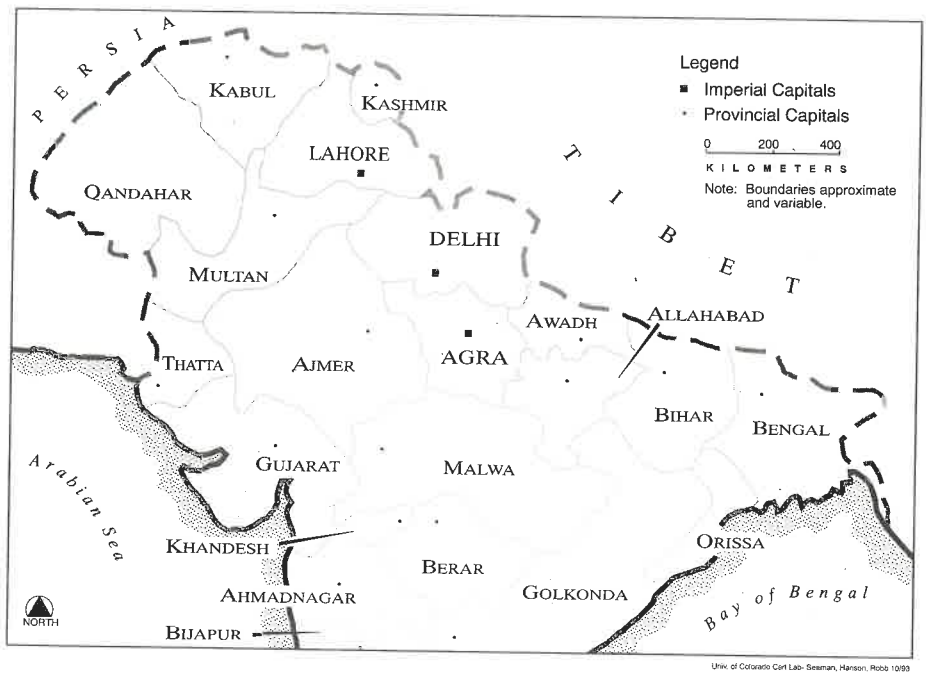


Fig. 4: Map of the Mughal Empire, c. 1590

den design in the city (Figs. 5–7). During Mughal times, they transformed the spatial and cultural development of Lahore. When Shalamar garden was built in northeastern Lahore, for example, it redirected circulation and settlement patterns in the entire eastern suburbs of the city.[3]



Fig. 5: Photograph of Jahangir's Tomb-garden.

Although gardens were constructed before and after the Mughal period, as Saifur Rehman Dar details in this volume, it was the gardens of the 17th century that had the most lasting imprint on the form and identity of Lahore. They influenced subsequent patterns of garden design, as evidenced in the Sikh Hazuri Bagh, the colonial Agri-Horticultural Society gardens, and modern parks of the past decade.[4]

Although other Mughal capitals at Delhi, Agra, and Fatehpur Sikri were also graced by gardens, they did not have the same effect on the identity of those cities.[5] Agra is best known for individual monuments such as the Taj Mahal and Fort; Fatehpur Sikri for its ceremonial palace complex; and Delhi for the planned



Fig. 6: Photograph of Lahore Fort Garden Quadrangle.

city of Shahjahanabad. Each had gardens, but only Lahore came to be known as a City of Gardens.

The Mughal gardens of Lahore were not, however, *sui generis* – they were influenced by gardens of other regions and times. A study of Shalamar garden in Lahore, for example, identified five regional influences.[6]

1. Central Asia
2. Kashmir
3. Western Punjab
4. Persia
5. Delhi Sultanate

A similar array of influences were at work in the designs of Jahangir's tomb-garden and Lahore Fort. In this volume, Catherine Asher draws fresh attention to Rajput influence in garden design, while Saifur Rehman Dar reminds us of even more deeply rooted pre-Mughal, and pre-Islamic, garden traditions in the Punjab.

It is no exaggeration to state that the Mughal gardens of Lahore have had a powerful impact on architectural history and design in many parts of the world. Almost every introductory textbook on



Fig. 7: Photograph of Shalamar Garden, Lahore.

world architecture refers to Mughal gardens as one of the pre-eminent expressions of Islamic art, culture, and values. Consider: there are two World Heritage sites in Lahore: Shalamar Garden and Lahore Fort. If we regard the Shish Mahal courtyard in Lahore Fort as a jewel-like palace-garden, as Ebba Koch suggests in this volume, then gardens represent the most internationally recognized type of heritage site in Lahore.

There are many reasons why Mughal gardens stand out among the landscape architectural traditions of the world. Perhaps the underlying reason is that they represent an extraordinary synthesis of human concerns. Gardens integrate the finest features of natural and built environments with the finest traditions of local and regional landscape de-

sign. They draw together human aspirations for worldly and spiritual order – merging the paradise-like potential of the world we live in with symbolic representations of the paradise that awaits the faithful in the world to come. Mughal gardens also synthesize the aesthetic and functional needs of society. They provide a context for poetic, artistic, and personal beauty, on the one hand; and for social functions, spatial protocol, and norms of social interaction, on the other.[7]

The importance of Mughal gardens in Lahore is thus jointly regional and global, historical and spatial, spiritual and political, natural and cultural, aesthetic and functional.

Every essay in this volume affirms the importance, beauty, and meanings of Mughal gardens. Although sometimes critical of processes of patronage, privilege, and power associated with garden design, all of the authors share a cultural curiosity about and appreciation for this world-class tradition of landscape design.

The Neglect of Mughal Gardens

Thus, it comes as a surprise, in light of their cultural importance, that Mughal gardens have received limited scholarly, practical, or public attention. There are only a handful of scholarly articles and books on Mughal gardens and little detailed scientific research on their conservation.[8] Garden conservation has been an explicit governmental concern and responsibility for more than a century, but it has lagged behind other fields of archaeological conservation (Fig. 8).

These patterns of neglect are found in other garden traditions, to be sure, but it is particularly surprising in the Mughal case in light of popular writings and interest in them. Popular books date back to Constance Villiers-Stuart's *Gardens of the Great Mughals* in 1913.[9] Travellers and local people have flocked to Mughal gardens for more than a century. For a variety of reasons, however, scholars and conservationists have made only limited contributions towards the public understanding, enjoyment, and protection of these historic sites.

Among the plausible reasons for neglect, five may be briefly considered. First, Mughal gardens have been heavily modified over time, leaving relatively little material evidence for conservation. Gardens are especially vulnerable to such lapses of care and maintenance. As plots of open land, they are also vulnerable to encroachment and development schemes, as Professors Mahmood Hussain and Yousuf Awan document in this volume.

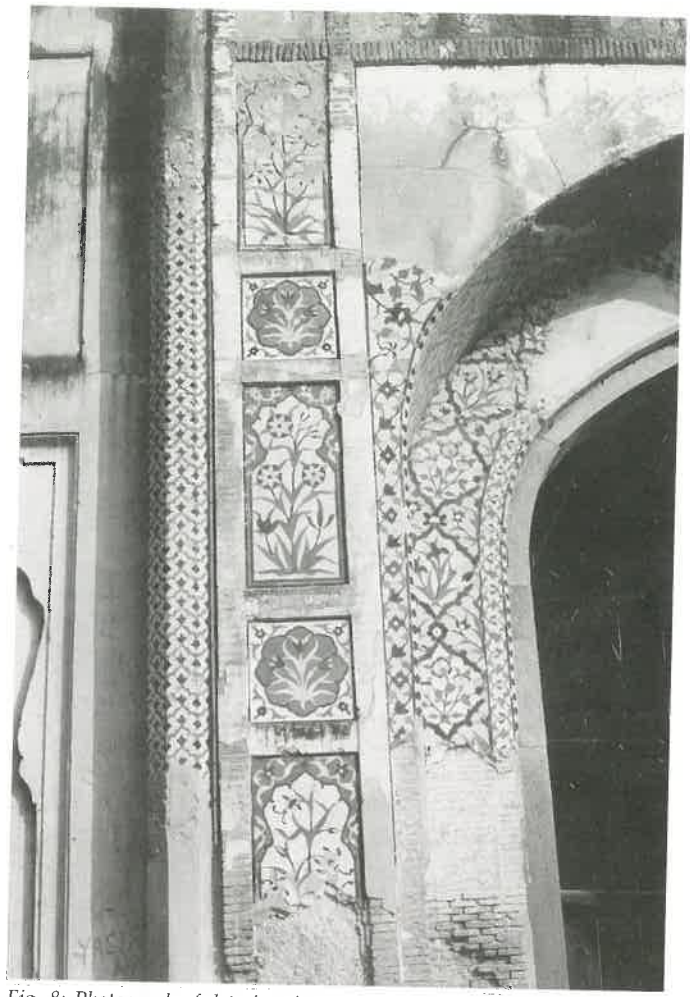


Fig. 8: Photograph of deteriorating gateway, Shalamar garden.

Second, research on Mughal gardens stands at the intersection of three very small specialized academic fields: (1) Islamic architectural history, (2) Garden history, and (3) Mughal social history. Although gardens are regarded as intriguing topics by scholars in these fields, they have not yet sparked enough interest to produce trained specialists or academic programs where Mughal or even Islamic gardens are a sustained research concern.

Third, Mughal gardens have been transformed by successive owners and rulers, as well as natural processes. Modifications begin almost immediately after construction, as Sajjad Kausar and Michael Brand document at places like Shalamar garden and Jahangir's tomb. This susceptibility to change is also true of buildings, but gardens are more subject to transformation than other art forms. As Rafique Mughal pointed out in his talk, even a famous conservationist like Sir John Marshall felt it was appropriate to redesign historic gardens with modern plantings and themes.[10]

Fourth, there is an ambivalence about the cultural

meaning of Mughal gardens. On the one hand, gardens have been interpreted as a powerful expression of Mughal and Timurid heritage. On the other hand, they have been viewed as "romantic" and "exotic" places. The general public finds both interpretations appealing, notwithstanding their ambivalence about the private luxury of Mughal rulers. But for reasons that deserve further analysis, modern scholars have shied away from both the romantic and historical aspects of gardens. One provocative hypothesis is that the low status of gardeners (*malis*) and gardens, compared with other arts and artisans, may have discouraged garden scholarship (Fig. 9). Another is that the prominent role of women in Mughal gardens and garden studies may have contributed to their neglect by modern scholars. Lisa Golombek offers a fresh interpretation of the role of women in the Timurid gardens of Central Asia in this volume.



Fig. 9: Lawn mowers in Shalamar Garden.

Finally, and most importantly, scholars and designers have tended to regard gardens as mere settings for architectural monuments, rather than as a type of environmental design in their own right. Mughal paintings indicate the ways in which gardens served as a setting or context for social life.[11] But those paintings and texts also indicate that gardens were designed places, objects of direct attention, and important representations of Mughal culture in their own right. It was this conviction that helped launch the Mughal Gardens Project in 1986.

THE MUGHAL GARDEN PROJECT

This interplay of importance and neglect is a fascinating phenomenon with implications for the cultural and physical environment of Lahore and many other places as well. In 1986, a collaborative project was initiated with the title: "Garden, City and Empire: The Historical Geography of Mughal Lahore." It sought to understand gardens, not as objects, but rather as places that fit within and transform their surroundings. It sought to understand the modern as well as the historical logic, experience, and meaning of these places (Fig. 10).[12]

FIGURE 10
CHRONOLOGY OF THE MUGHAL GARDENS PROJECT

First Steps

1984 – Initial idea suggested by Milo Beach
1985 – Initial support from Dumbarton Oaks and the Freer and Arthur M. Sackler Galleries, Washington, DC
– Fatehpur Sikri conference organized by Michael Brand and Glenn Lowry at Harvard University
1986 – Initial contacts with Sattar Sikander of the University of Engineering and Technology, Lahore; and the Pakistan Department of Archaeology

Project Formulation

1987 – Collaborative research proposal to the Smithsonian Institution for a three-year study (extended through 1995)
– Project initiation and organization in Lahore
– Punjab archives research
1988 – First documentation experiments at Kamran's Baradari

Project Implementation (1989–1993)

– Documentation at the Shahdara gardens, Begumpura, Lahore Fort, and Shalamar garden
– Lahore urban mapping
– Gujrat district survey research

Project Results and Presentations

1992 – Dumbarton Oaks Symposium
1993 – Mughal Gardens Project Symposium in Lahore
1994 – Aga Khan Conference on Islamic Gardens at MIT
1995 – Project completion
1996 – Symposium and project publications

The project began with four sets of objectives related to garden interpretation, documentation, conservation, and design. As the project unfolded, those objectives also evolved. Unanticipated findings led to the addition and modification of research tasks. At the outset, for example, interpreting (or rather reinterpreting) Mughal gardens was the initial concern of the project, just as it is the initial section of this book. The Smithsonian team wanted to focus on the historical-geography of garden at three levels or scales:

1. The Garden Site – the internal layout and design of extant gardens.
2. The City – the location and patterning of garden design within a metropolitan area.
3. The Empire – the regional and imperial contexts and symbolism of garden design.

Of these three levels or scales, primary emphasis was directed toward the urban context of gardens in Lahore. We wanted to know how gardens shaped, and were affected by, the process of urbanization. We also wanted to know how they contributed to the culture of the city, and urban life.[13]

Previous research on Mughal gardens tended to focus on the design and history of individual garden sites, to list extant sites in a particular region, and to interpret the broad sweep of Indo-Islamic garden history from Persia and Central Asia to India.[14] Investigating gardens at an urban scale involves a somewhat different set of theoretical questions and documentation techniques. About half of this book focuses on the results of the research on urban Lahore while the other half introduces additional fields of garden research and interpretation.

The historical geography of Mughal gardens encompasses a wealth of interesting topics, but how are they to be pursued? What evidence is available? How should it be collected and organized? The answers to these questions came not from historical interpretation, as we initially expected, but rather from archaeological *documentation*. Documentation involves a systematic search for physical and textual evidence. Our work concentrated, for example, on measured drawings and maps of Mughal gardens and related sites.

Interpretation and Documentation

The relations between interpretation and documentation are fascinating. For the Smithsonian team, documentation was initially viewed as a means to the end of interpretation. Documentation had greater inherent significance for the Pakistani team, for whom it was the foundation for first-hand knowledge of a site as well as conservation and analysis. Three examples illustrate how collaboration led to a modification and fruitful synthesis of these initial research perspectives.

One colleague, M. Naeem Mir, was interested in the geometry of garden design from the layout of garden sites to their smallest architectural details. His initiative led to greater emphasis on measured drawings which led to insights about the layout, design, and proportions of Mughal gardens.[15] Another colleague, Abdul Rehman, was interested in the distribution of sites and routes at the regional scale, which led to a survey experiment and a book on the historical geography of Gujrat district, Pakistan.[16] My own interests at the urban scale were furthered by detailed mapping of Mughal evidence including *mazars* (shrines) and folklore.[17]

In each case, the theoretical framework of the project evolved to address new interests and evidence.[18] These adjustments helped clarify the logical relationships between interpretation and documentation. The range of documentation techniques used to address these questions in Lahore are listed in Figure 11.

FIGURE 11
DOCUMENTARY METHODS USED

Method	Comments
Library Research	In Lahore, London, Chicago, and Washington
Archival Search	Principally in the Punjab Secretariat and India Office Library
Textual Sourcebook	Preparation of extracts, bibliographies, and chronologies of library and archival material
Analysis of Mughal Paintings and Later Prints	Search for documentary historical evidence in Western and South Asian art collections
Historic Maps	Major source of detailed urban maps in Lahore District Commissioner's and *patwari's* offices
Urban Mapping	Plotting of Mughal period sites on 1:10,000 scale map of Lahore by Survey of Pakistan.
Measured	Hand measurement, leveling

	and drafting of Architectural garden plans, drawings and building plans, with some elevations.
Electronic	Use of electronic surveying equipment for surveying overall garden dimensions and elevations.
Computer-aided plotting	Use of AutoCAD software for documentation and drafting of Shalamar.

At the site scale, we prepared detailed measured drawings of the gardens using several surveying techniques. At the urban scale we used geographical, archival, and art historical methods, including field mapping of Mughal period sites in greater Lahore. At the regional scale, we conducted detailed field surveys of the distribution of gardens in relation to medieval sites and routes in two districts of the Punjab. In each case, these documentation methods helped answer key historical and architectural questions.

It is also important to consider documentation techniques that were *not* employed, which others may wish to pursue (Fig. 12). Some types of garden documentation such as pollen analysis were deemed to have little scientific potential. Although pollen analysis would shed light on the vegetation history of the area, we surmised that soil and vegetation disturbance had been so great and the period of Mughal garden occupance so short that pollen analysis would not yield much information about original garden plantings. This may or may not be correct, but it was one of several methodological sacrifices made. A more serious limitation involved constraints on low-altitude aerial photography. Commercial satellite imagery does not have a fine enough spatial resolution for the types of urban garden history we wanted to do (i.e., it was inferior to field mapping). This judgment was based upon brief inspection of SPOT imagery obtained by the World Bank for its urban projects in Lahore.

FIGURE 12
GARDEN DOCUMENTATION METHODS THAT WERE NOT USED

Method	Comments
Excavation	Only surface survey authorized; selected excavation recommendations conveyed to the Department of Archaeology.
Pollen analysis, root casts, etc.	Massive site disturbance, replantings & relatively short period of Mughal occupance.
Unedited Persian Manuscripts	This method was used at the district survey level but not for the garden sites in Lahore. Important extension for future research.
Low-altitude Aerial Photography	Official constraints on access and use.
Satellite Imagery	Coarse resolution for the types of urban and history required.
Ethnohistorical Research	Despite massive population changes over the past 200 years, there may be *malis* and other social groups with information about garden history.
Social Survey Research	To assess the modern meaning of gardens and the relative importance of different conservation and interpretive issues for the people of Lahore. A high priority for future research.

Low altitude aerial photography has enormous value for geographic interpretation of urban gardens and their surroundings. Unfortunately, it is extremely difficult (though not impossible) to obtain access to aerial photographs of historical sites, especially in Lahore which is close to the international border. It should be noted that Government of Pakistan policies are moving toward greater access to satellite imagery for applied environmental research. This trend will hopefully be extended to archaeological analysis and aerial photography in the future.

Some documentation methods, such as archival research, yielded information on the modern history of gardens in Lahore which was useful for dating restoration works. Happily, methods selected for one set of objectives sometimes fulfilled both their original expectations and yielded some completely unanticipated findings as well. Three brief examples are illuminating. The original purpose of urban-scale mapping was simply to document the location of

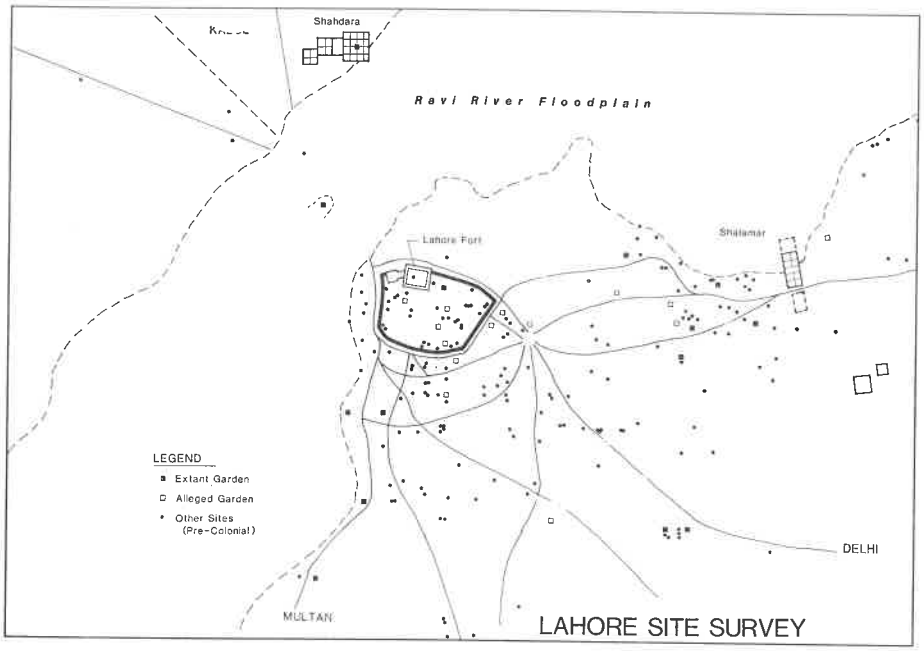


Fig. 13: Map of Mughal Period Sites in Lahore.

extant Mughal gardens and garden remnants. But because the number of surviving gardens is too small to support inferences about the broader urban distribution of gardens, the mapping was extended to include other Mughal period sites including some 200 mazars, which gave a far clearer indication of the urban historical context of garden design than anticipated (Fig. 13).

A second example. Field mapping at the urban scale shed light on popular stories about tunnels that allegedly connected gardens, the Fort, and other sites as far away as Delhi. That evidence helped us better understand the modern social significance of Mughal gardens for the people of Lahore.

Finally, measured drawings that were prepared initially for geometrical analysis yielded unanticipated fruits. They revealed how, when, and where grid systems were used to lay out the gardens (Fig. 14). They helped us date structures in the Shahdara complex that had little or no textual and epigraphic evidence.

Figure 15 summarizes the unfolding logic of these processes of garden research. It indicates the importance of garden conservation in shaping the evidence that survives both for research and public enjoyment.

Documentation and Conservation

Although Mughal gardens represent one of the most important cultural features of Lahore and other South Asian cities, there is a lack of clarity about what their conservation entails.[19] Garden conservation involves a challenging set of practical, theoretical, and cultural issues that have yet to be comprehensively addressed in South or Central Asian contexts.[20] Before the few remaining gardens are irreversibly lost or transformed, it is essential to think through the logic of conservation in a way that addresses both the historical and modern interests in Mughal gardens.

Toward that end, it is useful to review previous approaches to the conservation of Mughal gardens. Some of these approaches have their roots in the Mughal period itself while others arose in colonial and modern times. Some have local origins while

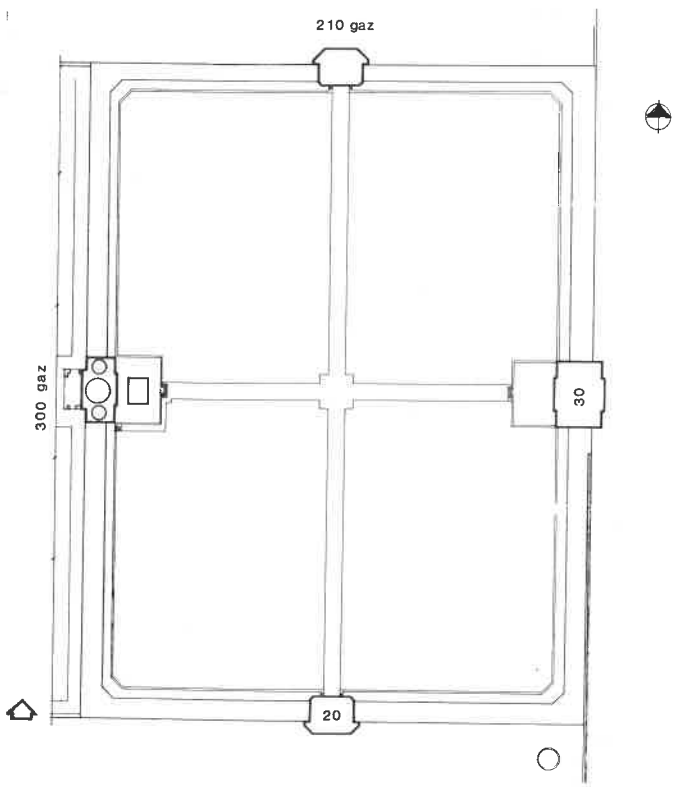


Fig. 14: Akbari Serai, with Major Dimensions Shown (In Gaz).

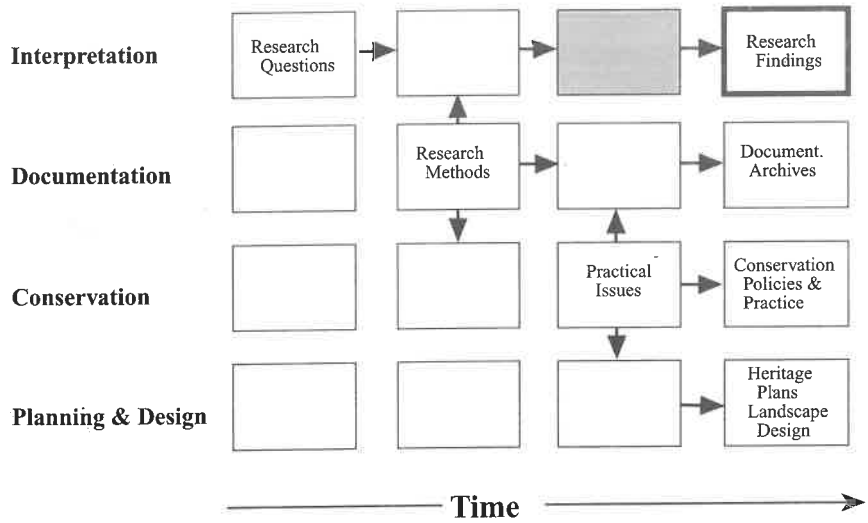


Fig. 15: Diagram of the Mughal Gardens Project: Research objectives.

others represent past or present international practice. Because the Mughal Gardens Project concentrated on urban and site scales of research, the examples given here concentrate on conservation issues at those scales, and leave related issues to subsequent chapters of the book.

At the risk of oversimplifying a rich and complex history of conservation thought and practice, we may distinguish four historical approaches: (1) the "Mughal" legacy; (2) the "Colonial" legacy; (3) an emergent Pakistani approach; and (4) international conventions. The strengths and weaknesses of each approach are briefly discussed below.

The "Mughal" Legacy. During the Mughal period, gardens were often maintained through *waqf* endowments (e.g., agricultural revenues from desig-

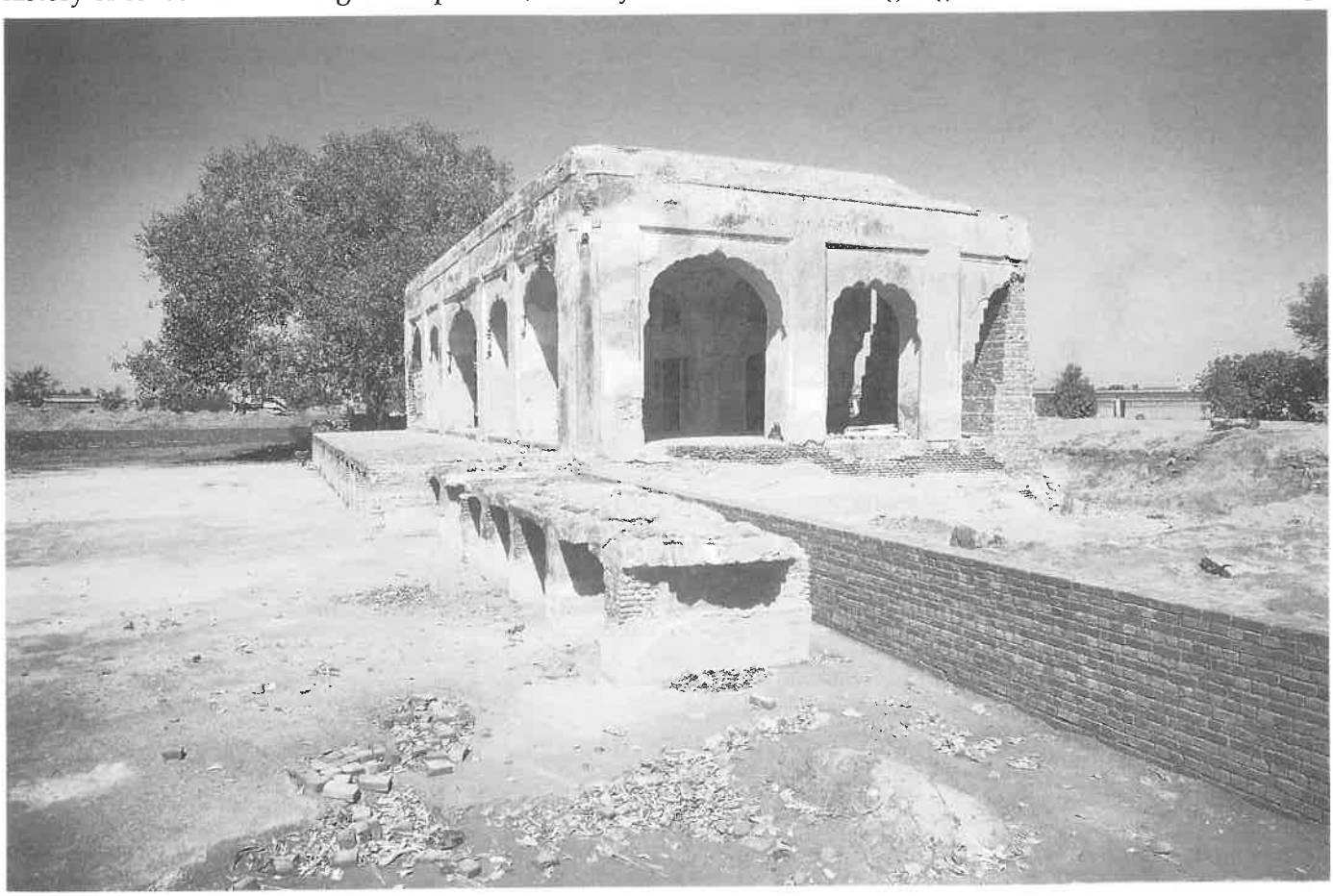


Fig. 16: Kamran's Baradari before Reconstruction, 1988.

nated villages) or personal expenditures. Although limited data is available on *waqf* endowments and personal records of garden maintenance, the formation of trusts for the conservation of historic sites is a tradition that might be extended to gardens.[21]

A second, more problematic, legacy of the Mughal period is the tendency of successive owners and rulers to reconstruct gardens for their own purposes. Kamran's baradari had 17th as well as 16th century elements; (Fig. 16) it also has 20th century elements. Jahangir's tomb-garden was a pleasure garden before it was rebuilt for funerary purposes. During the Mughal period, reconstruction was especially common in palace and pleasure gardens, and it also occurred at tomb-gardens.[22]

Reconstruction became more radical after the Mughal period as Sikh, British, and modern elites rebuilt gardens to suit their own sense of private or public needs. Recent examples include Kamran's baradari garden in Lahore, which was rebuilt without thorough documentation or interpretation. The primary disadvantages of this approach are an unnecessary loss of archaeological evidence, reduction of Mughal material culture, and the loss of historical experience at the site. This loss of historical feeling and association was the primary complaint expressed to us by members of the general public, and it deserves careful attention. The main advantage of reconstruction is the reuse or increased use of historical places for contemporary, often worthy, purposes. It should be noted, however, that history often judges yesterday's reconstruction projects harshly, even those which seemed necessary or appropriate at the time.

How might reconstructed places be conserved? One thinks here of places such as Anarkali's tomb-garden which became a residence, a church, a record room, and eventually the Punjab archives. Can its walls and layout be rediscovered? One also thinks of gardens that desperately need protection, such as the Nawankot gate and towers.

The Colonial legacy. Colonial archaeologists placed a relatively low priority on garden conservation, and they often liked to try their own hand at planting design.[23] However, they did introduce a general approach to conservation that extended to some degree to gardens. The primary elements of the colonial approach included:

1. Listing of extant monuments by Government.
2. Protective legislation for archaeological sites.
3. Creation of bureaucratic agencies for conservation.
4. Annual public sector budgeting for conservation.
5. Scientific documentation with measured drawings, photography, prints, and casts.
6. A limited amount of funding for education in traditional building crafts.

All of these worthwhile conservation activities continue up to the present day, and their advantages are well known.[24] Disadvantages include the destruction of sites which are not legally protected; heavy reliance on the state which may have inadequate financial, personnel, or political resources to carry out its responsibilities; inherent conflict between archaeological and public works agencies; and a lack of genuine public participation in the conservation process. The colonial tradition did a lot to open up gardens to the public, but it offered the public few opportunities to examine or directly contribute to conservation alternatives. Public uses remained subordinate to the political uses of gardens for state and ceremonial events.

An Emergent Pakistani Approach. One of the most exciting trends in Pakistan during the past decade or two is the sense that a new conservation approach is emerging. Because other papers in this volume focus on these trends in detail, I will briefly mention three trends that have implications for garden conservation.

First, the number and scope of non-governmental cultural heritage organizations is expanding in Lahore and elsewhere. The most notable of these is the *Anjuman Mimaran* with its annual conferences, field trips, resource center, and publications. Pakistani architects have provided intellectual as well as professional leadership in the critique of international architecture, the recovery of Islamic architectural traditions, the appreciation of all eras and cultures which contribute to Pakistan's architectural heritage, and the internationally renowned Aga Khan Program for Islamic Architecture. However, in the field of garden conservation, there are only a handful of systematic studies.

Beginning under the leadership of Ahmed Nabi Khan, the Department of Archaeology forged new linkages with the architectural community and hired professional architects, one of whom received training as a student worker on the Mughal Garden Project. This trend has continued and been implemented in large-scale conservation projects at Jahangir's Tomb and Lahore Fort under the directorship of M. Rafique Mughal.[25] The Punjab Depart-

ment of Archaeology has undertaken extensive district surveys of sites including gardens.[26] The Government of Pakistan, the Government of Punjab, the Development Authority, and the Municipality of Lahore have also displayed growing commitment to the role of public parks in urban development. Closer coordination between these governmental and public groups could yield enormous benefits.

Two trends in Pakistan have yet to be integrated with Islamic architectural heritage conservation. The first of these is the growing environmental movement in Pakistan and worldwide. Pakistan has several very effective environmental NGO's, but they have had limited involvement in the cultural aspects of environmental protection or the environmental aspects of cultural heritage protection.[27] Most notable among these organizations are the International Union for the Conservation of Nature (IUCN), SHEHRI (which has an urban environmental focus), the Urban Resource Centre, PIEDAR, and the Sustainable Development Policy Institute.

Similarly, the contributions of landscape architects and environmental planners to garden conservation are potentially very large.[28] As of 1995, there was no professional degree program in landscape architecture in Pakistan; there was only one professional environmental planning program. When it comes time to design culturally sophisticated tourism programs, or site plans around historic gardens, these environmental design professions will have a vital role to play.

International Conventions. Although garden conservation has had a relatively low profile around the world, a special committee of UNESCO'S International Commission on Monuments and Sites (ICOMOS) does focus on gardens and historic landscapes.[29] That Committee has international experience and expertise in the following fields relevant to Mughal garden conservation:

1. Protection of historical districts and landscapes.
2. Model legislation and administration for garden sites.
3. Assessment of tourism issues and problems at gardens.
4. Technical expertise on garden plantings, waterworks, grading, drainage, excavation and interpretation.

It would be interesting to formally analyze the relevance of these international conventions for national policy in Pakistan, provincial policy in the Punjab, and municipal policy in Lahore.[30]

Garden conservation in Pakistan is the product of complex historical forces and influences. Public and professional groups would be well-advised to collaborate to guide conservation opportunities in ways that advance the emergent Pakistani approach.

Conservation and the Implications for Landscape Planning and Design

The Mughal Gardens Project was conducted for academic purposes. However, the listing of sites, preparation of measured drawings and maps, and interpretation of garden history have direct and indirect relevance for conservation. Similarly, conservation has direct and indirect relevance for environmental planning and design. This final section of the introduction focuses on the practical implications of the Mughal Garden Project – introducing just two of the themes examined in Part III of this book.

Implications of Site Analysis. The measured drawings produced at major garden sites in Lahore are a valuable resource for certain types of conservation and planning. Spatial analysis of the Shahdara complex, for example, helped identify key areas for excavation that, with very little digging, could answer basic questions about the location of garden walls and gates at Nur Jahan's tomb.

The same drawings help identify areas that need protection or repair. Repair of garden elements damaged by natural hazards, such as the flood damages to walls and walks at Jahangir's tomb were facilitated by having a comprehensive set of drawings.[31] The more mundane tasks of estimating quantities and types of construction materials, and having accurate base maps for contractors are also facilitated by having a systematic set of measured drawings available in multiple copies at government offices, universities, and the sites themselves.

Implications of Geographic Analysis at the Urban Scale. As Lahore grows in all directions, the spatial fabric and integrity of its garden heritage is increasingly at risk. Mughal gardens are rapidly becoming isolated monuments within a growing city. Routes and relationships among sites are increasingly obscured. Despite legal protection of the areas surrounding protected gardens, encroachment is a continuous problem for officials and an unavoidable temptation for the urban poor. Garden fragments (e.g., of gateways, walls and corner towers) are subject to scavenging by local residents.

Geographical analysis of the Mughal gardens of Lahore facilitates two types of conservation at the

urban scale. First it helps identify the historical connections among sites. These connections could be reinforced for the public and tourists through guide maps and signage. Geographic information coupled with greater public consciousness could lead to the delineation of historic districts and corridors for conservation (to complement the present emphasis on "monuments").

Geographical analysis of the immediate surroundings of garden sites could also contribute to better planning and development around gardens – planning which harmonizes land use, transportation, recreational facilities, and living opportunities for the urban poor. For this approach to be successful, however, sensitive site planning and landscape architecture are required.[32] Perhaps the most important contribution of historical geographic analysis is to help us understand how the cultural identity of historic places might be more creatively integrated with the cultural identity of modern people and places in Lahore.

CONCLUSIONS

As noted earlier, the Mughal Gardens Project began with a set of theoretical questions and research techniques. If it had started with a different set of questions, the results would have been different. If it had started with a different set of scholars, the theoretical findings and conservation implications would have been different. If the research had started with a conservation imperative, rather than academic questions, the results would once again have been different, both in terms of documentary evidence and theoretical findings.

Therefore, the present volume seeks in part to present the results of the Mughal Gardens Project, but also to reach beyond it to include a wider range of scholars and topics. Taken in conjunction with other studies, it marks a significant advance and revival of academic interest.[33] But even these collective efforts are not comprehensive – for there are still others who are working, publishing, conserving, and drawing insights from historical gardens. It will be important to build upon their efforts and launch new ones to attain further insights and practical achievements.

Three main lessons may be drawn from the Mughal Gardens Project. First, it has illuminated relationships between interpretation, documentation, conservation, and environmental design – the logic of which deserves careful consideration by everyone involved with Mughal gardens. Second, it underscores the need for flexibility in adapting to unanticipated discoveries, diverse interests, and research constraints. Just as gardens are organic places set within a broad environmental context, so too must garden research and conservation be regarded as organic processes of inquiry subject to redirection and change as new lines of evidence, investigation, perspectives, and problems are discovered. Finally, we learned that in the Mughal world gardens were miniature landscapes of order within a complex and precarious world. There was no illusion that the world within garden walls was divorced from that outside the walls. Rather, as the Mughal Gardens Project assumed from the beginning, there are complex ongoing relationships between gardens and their geographical surroundings.

These relationships have vital lessons for contemporary society about the nature of order, power, and beauty in a precarious world. Because the world today is no less complex or precarious than it was in Mughal times, it would be a mistake to concentrate garden research, conservation, and design solely on areas within the garden walls. Just as gardens were linked with their wider surroundings, so too is garden research linked with broader issues of cultural heritage, cultural interaction, and cultural change. These three lessons set the stage for the chapters that follow.

REFERENCES

1. As Dr. Ahmad Nabi Khan notes in his preface, the parties to the research were the Smithsonian Institution and Arthur M. Sackler Gallery, Washington, DC; the Pakistan Department of Archaeology; and the University of Engineering and Technology, Lahore.
2. Some parts of this chapter were first presented at an International Symposium on Islamic Architecture in Pakistan, Central Asia, and South Asia, convened in Lahore, Pakistan, 20–26 February 1993. The idea for a travelling symposium came from Mughal history and from a conference in Rome on "Mughal Architecture: Pomp and Ceremonies," later published as an issue of *Environmental Design: Journal of the Islamic Environmental Design Research Centre* (1993). Cf. Dale F. Eickelman and James Piscatori, *Muslim Travellers: Pilgrimage, Migration, and the Religious Imagination* (Berkeley: University of California, 1990).
3. Saifur Rehman Dar, *Historical Gardens of Lahore* (Lahore: Aziz Publishers, 1982); Sajjad Kausar, Michael Brand, and James L. Wescoat Jr., *Shalamar Garden: Landscape, Form, and Meaning* (Karachi: Pakistan Department of Archaeology, 1993); and James L. Wescoat Jr., "Gardens, Urbanization, and Urbanism in Mughal Lahore: 1526–1657," in *Mughal Gardens: Sources, Representations, Places, Prospects*, ed. J. L. Wescoat Jr. and J. Wolschke-Bulmahn (Washington, DC: Dumbarton Oaks, forthcoming 1996).

4. Dar, *Historical Gardens*, op. cit.; and Ian Kerr, "The Agri-horticultural society of the Punjab, 1851-71," in *Punjab Past and Present, Essays in Honour of Dr. Ganda Singh*, ed. H. Singh and N. G. Barrier (Patiala: Punjab University, 1976).
5. Important studies of Lahore include F. S. Aijazuddin, *Lahore: Illustrated Views of the 19th Century* (Lahore: Vanguard Publishers, 1991); Muhammad Baqir, *Lahore Past and Present: Being an account of Lahore Compiled from Original Sources*, 2nd ed. (Lahore: Punjabi Adabi Academy, 1984); Ahmed Nabi Khan, "Lahore under the Rule of Babur and Humayun," *Pakistan Journal of History and Culture* 3 (1982): 74–91; idem., "Lahore: Darus Saltanat of the Moghal Empire under Akbar (1556–1605)," *Pakistan Journal of History and Culture* 2 (1984): 123–37; R.B.K. Lal, *Tarikh-i-Lahawr* (Urdu) (Lahore: Majlis-i-Taraqi-i Adab, 1987 [1884]); S. M. Latif, *Lahore: Its History, Architectural Remains and Antiquities* (Lahore: New Imperial Press, 1892); *Naqoosh* [Urdu]. 1962. Lahore number. vol. 92; Pakistan Environmental Planning and Architectural Consultants, Ltd. and Lahore Development Authority, *The Walled City of Lahore* (Lahore: LDA, 1993); James L. Wescoat Jr., "Gardens, Urbanization, and Urbanism in Mughal Lahore: 1526–1657," op cit., 1996; idem., "Towards a Map of Mughal Lahore: An Outline of Cartographic Sources from 1590–1990." *Environmental Design* (forthcoming 1996); idem., "Waterworks and Culture in Metropolitan Lahore," *Asian Art and Culture* 8 (1995): 21–36; James L. Wescoat Jr., Michael Brand, and M. Naeem Mir, "Gardens, roads and legendary tunnels: the underground memory of Mughal Lahore," *Journal of Historical Geography* 17 (1991): 1–17; and idem., "The Shahdara Gardens of Lahore: Site Documentation and Spatial Analysis," *Pakistan Archaeology* 25 (1993): 333–66. Among the wealth of recent research on other Mughal and Timurid cities, we may mention Stephen P. Blake, *Shahjahanabad: The Sovereign City in Mughal India* (Cambridge: Cambridge University Press, 1991); Michael Brand, and Glenn D. Lowry, (eds.), *Fatehpur-Sikri: A Sourcebook* (Cambridge, MA: Aga Khan Program for Islamic Architecture, 1985); Attilio Petruccioli, *Fathpur Sikri: la citta' del sole e delle acquae* (Rome: Carucci editore, 1988); Terry Allen, *A Catalogue of the Toponyms and Monuments of Timurid Herat* (Cambridge, M. A: Aga Khan Program in Islamic Architecture, 1981).
6. Kausar, Brand, and Wescoat, *Shalamar Garden*, 1991.
7. James L. Wescoat Jr., "The Islamic gardens: Issues for landscape research", *Environmental Design: Journal of the Islamic Environment Design Research Centre* (Rome) (1986); and idem., "From the Gardens of the *Qur'an* to the Gardens of Lahore," *Landscape Research* 20 (1995): 19–29.
8. A. H. Dani, "Muslim Monumental Heritage: A Case for Preservation," *Pakistan Journal of History and Culture* 3 (1982): 162–66; I.H. Nadiem, "The Hydraulics of Shalamar Garden," *Journal of the Pakistan Historical Society* XXXIV (1986): 1–13.
9. Constance Mary Villiers-Stuart, *Gardens of the Great Mughals* (London: A&C Black, 1913).
10. John Marshall, *Conservation Manual: A Handbook for the use of Archaeological officers and other Entrusted with the Care of Ancient Monuments* (Calcutta: Superintendent Government Printing, India, 1923); Archaeological Survey of India, *Annual Reports of 1902-03 and 1910-11;* James L. Wescoat Jr. and Joachim Wolschke-Bulmahn, "The Mughal Gardens of Lahore: History, Geography, and Conservation Issues," *Die Gartenkunst* 8 (1994): 19–33.
11. James L. Wescoat Jr., "Picturing an Early Mughal Garden." Asian Art 2 (1989): 59–790.
12. A broader historiographical essay on Mughal Garden history is forthcoming in James L. Wescoat Jr. and Joachim Wolschke-Bulmahn, "A Perspective of Mughal Gardens," in *Mughal Gardens: Sources, Representations, Places, Prospects* (Washington, DC: Dumbarton Oaks, forthcoming 1996).
13. See earlier work by Stephen P. Blake, "The Hierarchy of Central Places in North India During the Mughal Period of Indian History," *South Asia* 6 (1983): 1–32; and Michael Bonine, "The Morphogenesis of Iranian Cities," *Annals of the Association of American Geographers* 69 (1989): 208–24.
14. See, for example, Sylvia Crowe et al., *The Gardens of Mughal India: a history and a guide* (London: Thames and Hudson, 1972); Ebba Koch, "Jahangir and the Angels: Recently Discovered Wall Paintings under European Influence in the Fort of Lahore," in *India and the West*, ed. J. Deppert (Delhi: Manohar Publications, 1983); idem., "The Zahara Bagh (Bagh-i Jahanara) at Agra." *Environmental Design: Journal of the Islamic Environmental Design Research Centre* 2 (1986): 30–7; Elizabeth B. Moynihan, "The Lotus Garden Palace of Zahir ad-Din Muhammad Babar," *Muqarnas* 5 (1988): 134–52; idem., *Paradise as a Garden in Persia and Mughal India* (New York: George Brazillier, 1979); Subhash Parihar, "Some Extinct Mughal Gardens in the Punjab and Haryana," Islamic Culture LVIII (1984): 251–54.
15. See Naeem Mir essay, "Shalamar Garden: The Other Side of the Square," in this volume. Also Wescoat, Brand, and Mir, "The Shahdara Gardens of Lahore," op. cit.; and James L. Wescoat Jr., "The Scale(s) of Dynastic Representation: Monumental Tomb-gardens in Mughal Lahore," *ECUMENE: Journal of Environment, Culture, Meaning* 1 (1994): 324–48.
16. Abdul Rehman and James L. Wescoat Jr. *Pivot of the Punjab: The Historical Geography of Medieval Gujrat* (Lahore: Dost Associates, 1993). Cf. also Blake, "The Hierarchy of Central Places in North India," op. cit.; and Shireen Moosvi, *The Economy of the Mughal Empire, c. 1595: A Statistical Study* (Delhi: Oxford University Press, 1987).
17. Wescoat, "Gardens, Urbanization and Urbanism," op. cit.; James L. Wescoat Jr., "Mughal Gardens and Geographic Sciences, Then and Now," *Muqarnas* (forthcoming); and Wescoat, Brand, and Mir, "Gardens, roads and legendary tunnels," op. cit. Cf. Also Susan Gole, *Indian Maps and Plans, from the Earliest Times to the Advent of European Surveys* (New Delhi: Monahar, 1989); Irfan Habib, *An Atlas of the Mughal Empire* (Delhi: Oxford University Press, 1986); and Joseph Schwartzberg, "Geographical Cartography," in *History of Cartography: Volume 2, Book 1, Islamic and South Asian Cartography* (Chicago: University of Chicago Press, 1992).
18. Cf. theoretical discussions of Islamic garden history in John Dixon Hunt, ed., *Garden History: Issues, Approaches, Methods* (Washington, DC: Dumbarton Oaks, 1992); Elizabeth B. MacDougall, Richard Ettinghausen, eds., *The Islamic Garden* (Washington, DC: Dumbarton Oaks, 1976); Attilio Petruccioli, ed., *Il Giardino Islamico* (Milan: Electa, 1994); and James L. Wescoat Jr., "The Islamic Garden: Issues for Landscape Research," *Environmental Design: Journal of the Islamic Environmental Design Research Centre* (Rome) (1986).
19. See A.H. Dani, "Muslim Monumental Heritage: A Case for Preservation." Pakistan Journal of History and Culture 3 (1982): 162–66; and the chapter by Yousaf Awan in this volume. See also John Dixon Hunt, ed., *Garden History: Issues, Approaches, Methods* (Washington, DC: Dumbarton Oaks, 1992).
20. From the outset of the Mughal Gardens Project, Dr. Rafique Mughal stressed the importance of linking research questions with conservation needs, a set of linkages explored in some depth in Part II of this book. Cf. US/ICOMOS, "Charter, Three-year (1990–1992) Mission, and 1991 Work Plan for the Historic Landscapes Committee," (Washington, DC: US/ICOMOS,1991); and US/ICOMOS, "1990 Annual Report on US/ICOMOS National Specialized Committee on Historic Landscapes," (Washington, DC: US/ICOMOS, 1991).

21. R.D. McChesney, *Waqf in Central Asia: Four Hundred Years in the History of a Mughal Shrine, 1480–1889* (Princeton: Princeton University Press, 1991).
22. Nur ad-Din Muhammad Jahangir, *Tuzuk-i Jahangiri*, tr. A. Rogers, ed. by H. Beveridge (Delhi: Munshiram Manoharlal, 1968 rpt.), vol. 1, p. 152. Early in his career Aurangzeb Alamgir showed an interest in the maintenance and improvement of both Shalamar garden and the Taj Mahal.
23. John Marshall, *Conservation Manual: A Handbook for the use of Archaeological officers and others Entrusted with the Care of Ancient Monuments* (Calcutta: Superintendent Government Printing, India, 1923).
24. For example, conservation studies, past and present, at Shahdara include: Michael Brand on "Surveying Shahdara," in this volume; H.H. Cole, ed., *Tomb of Jahangir at Shahdara near Lahore* (Calcutta, 1884); M. Rafique Mughal, "Preliminary Investigations for the Conservation and Restoration of Brick Pavement at Jahangir's Tomb, Lahore," *Lahore Museum Bulletin* VIII (1990): 79ff.; and J.P. Thompson, "The Tomb of Jahangir," *Journal of the Punjab Historical Society* I (1911): 31–49. For listings see, Khan Muhammad, ed., *Classified List of Archaeological Sites and Historical Monuments Protected under the Antiquities Act 1975* (Islamabad: Ministry of Culture, Sports and Tourism, 1987). Cf. the monumental work in Delhi by the Archaeological Survey of India, *List of Muhammadan and Hindu Monuments in Delhi Zail*, 4 vols (Calcutta, 1915–22).
25. E.g., M.R. Mughal, "Preliminary Investigations," op. cit.
26. Saifur Rehman Dar, survey reports of Sheikhupura and Gujranwala districts, 1987.
27. International Union for the Conservation of Nature, *Pakistan National Conservation Strategy* (Karachi: IUCN, 1992).
28. For a recent, outstanding, model of collaborative landscape conservation and heritage planning, see the Varanasi Development Authority and Department of Landscape Architecture, University of Illinois at Urbana-Champaign, *Sarnath: Design Guidelines and Case Studies for Tourism Development* (New Delhi: Thomson Press, 1990); and Department of Landscape Architecture, University of Illinois at Urbana-Champaign, *Sarnath: A Master Plan for Tourism Development* (New Delhi: Thomson Press, 1989).
29. US/ICOMOS, historic landscape reports, op. cit.
30. Some very brief comparisons of European and Pakistani conservation policy have been made in James L. Wescoat Jr. and Joachim Wolschke-Bulmahn, "The Mughal Gardens of Lahore: History, Geography, and Conservation Issues," *Die Gartenkunst* 6 (1994) 19–33. However, the essays in part II of this book represent the most detailed studies of garden conservation policy to date.
31. M.R. Mughal, "Preliminary Investigations," op. cit.
32. For a discussion of the opportunities and needs for integrating garden heritage conservation with urban infrastructure and housing development, see James L. Wescoat Jr., "Waterworks and Culture in Metropolitan Lahore," *Asian Art and Culture* 8 (1995): 21–36.
33. In addition to the works cited above, two volumes on Mughal and Islamic gardens, to be published in 1996, reflect the range and vitality of contemporary garden scholarship in the late-20th century. See James L. Wescoat Jr. and Joachim Wolschke-Bulmahn, eds., *Mughal Gardens: Sources, Representations, Places, Prospects* (Washington, DC: Dumbarton Oaks, forthcoming 1996); and Attilio Petruccioli, ed., *Muqarnas*, special issue on Islamic Gardens (Cambridge, MA: Aga Khan Program in Islamic Architecture, forthcoming 1996).

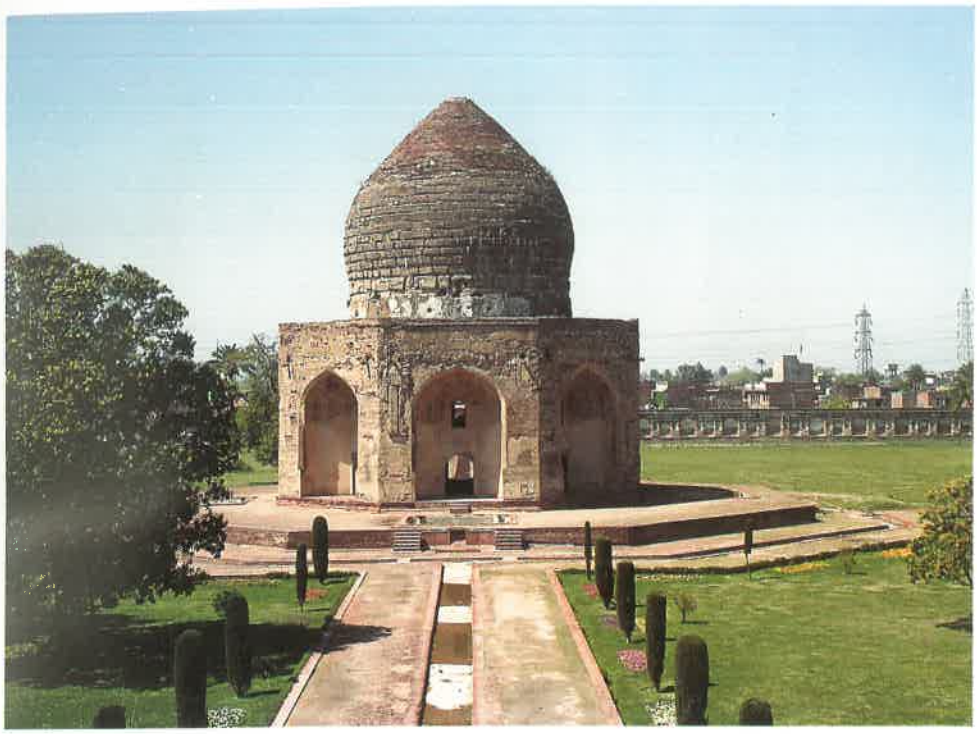
PART I:

REINTERPRETING THE MUGHAL GARDEN

The origin of Mughal gardens can be traced to Central Asia, while the climax was reached in India over a long period of time. These garden projects were initially commissioned by the Mughal emperors, nobles and elites followed suit. By the end of eighteenth century many gardens had been built in the suburbs of all major cities and small towns throughout Central Asia and Mughal India.

This section begins with a series of photographs showing the rich heritage of Mughal gardens built at imperial and sub-imperial scale. Though the basic concepts in these gardens remained the same, significant innovations responded to the local cultural, geographical and environmental contexts in which they were built.

The essays which follow reassess our basic ideas about the gardens built during the Mughal period. The new interpretations are regional (Punjab, Peshawar, and the Deccan); cultural (the role of women and Rajput nobles); and physical (based on new excavations and new perspectives on gardens and sites). Lisa Golombek explores the role of women in the early Timurid gardens of Central Asia and Iran. Saifur Rehman Dar convincingly shows that Mughal gardens in the Punjab have ancient roots and modern manifestations. Ebba Koch argues that Mughal gardens had close relations with urban palace architecture. Catherine Asher and Shahid Rajput offer two new perspectives on the beautiful Wah garden near Hasan Abdal. Further to the north, Abdur Rehman surveys the Mughal gardens of Peshawar. And to the south, Ali Akbar Hussain describes the neglected, but exquisitely poetic, gardens of the Deccan.



(I): Tomb of Asaf Khan in Garden Setting.



(II): Haran Minar - Gateway, Tank and Central Pavilion.



(III): Baradari of Bagh-i-Kirpa Ram at Kunjah.



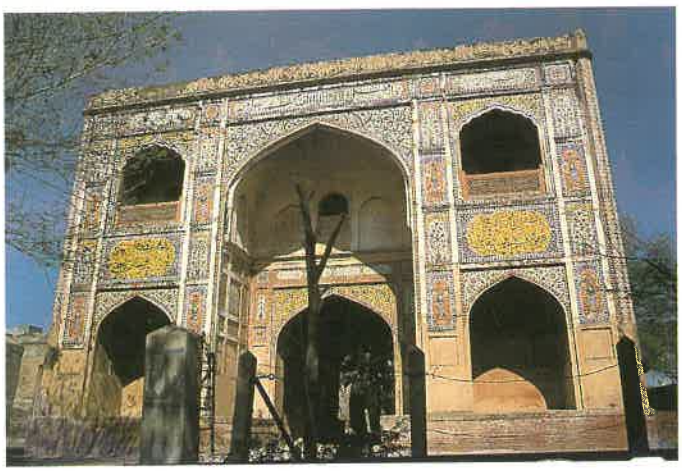
(IV): Garden of Hasanabdal - Main Tank and Baradaris before Conservation.



(V): Garden of Hasanabdal - View from Neighboring Hills.



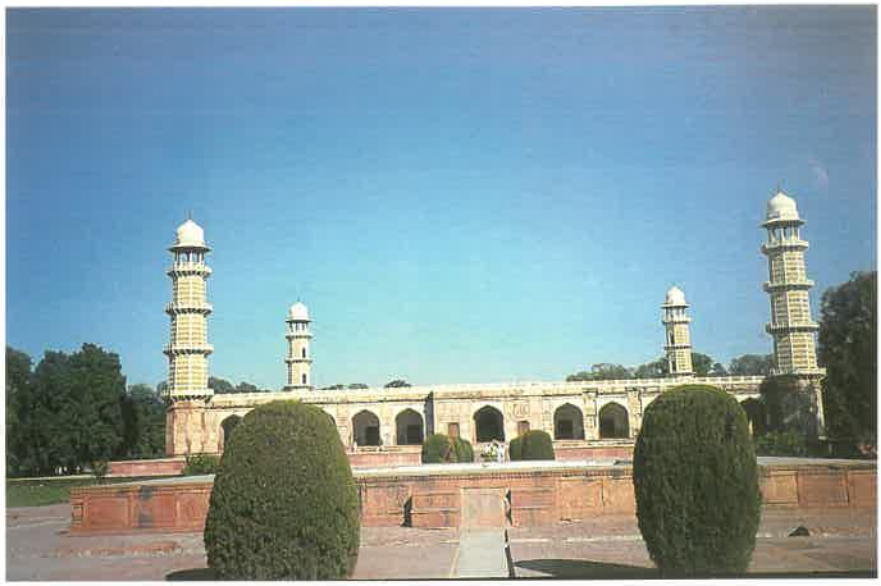
(VIII): Garden of Bahram at Attock.



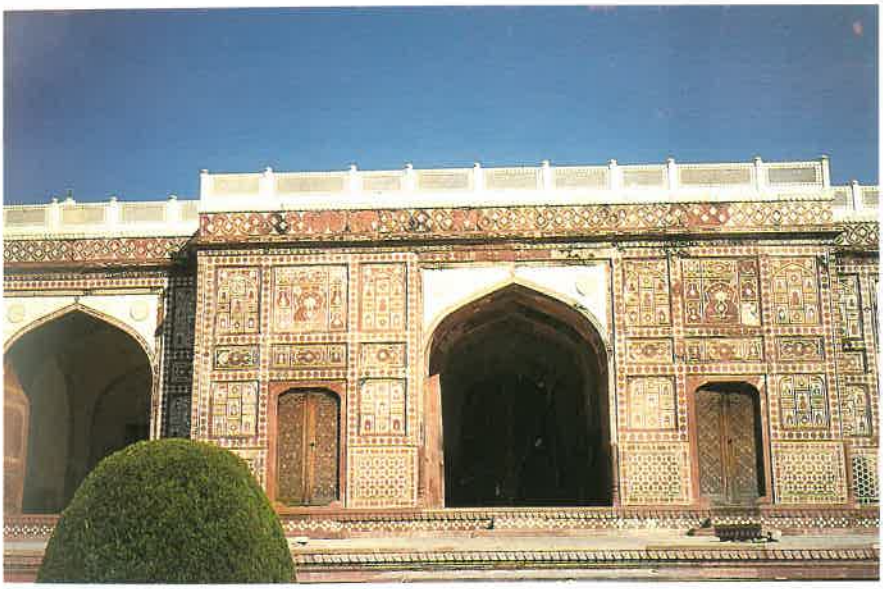
(VI): Ghulabi Bagh Gateway.



(VII): Gateway of Jahangir's Tomb.



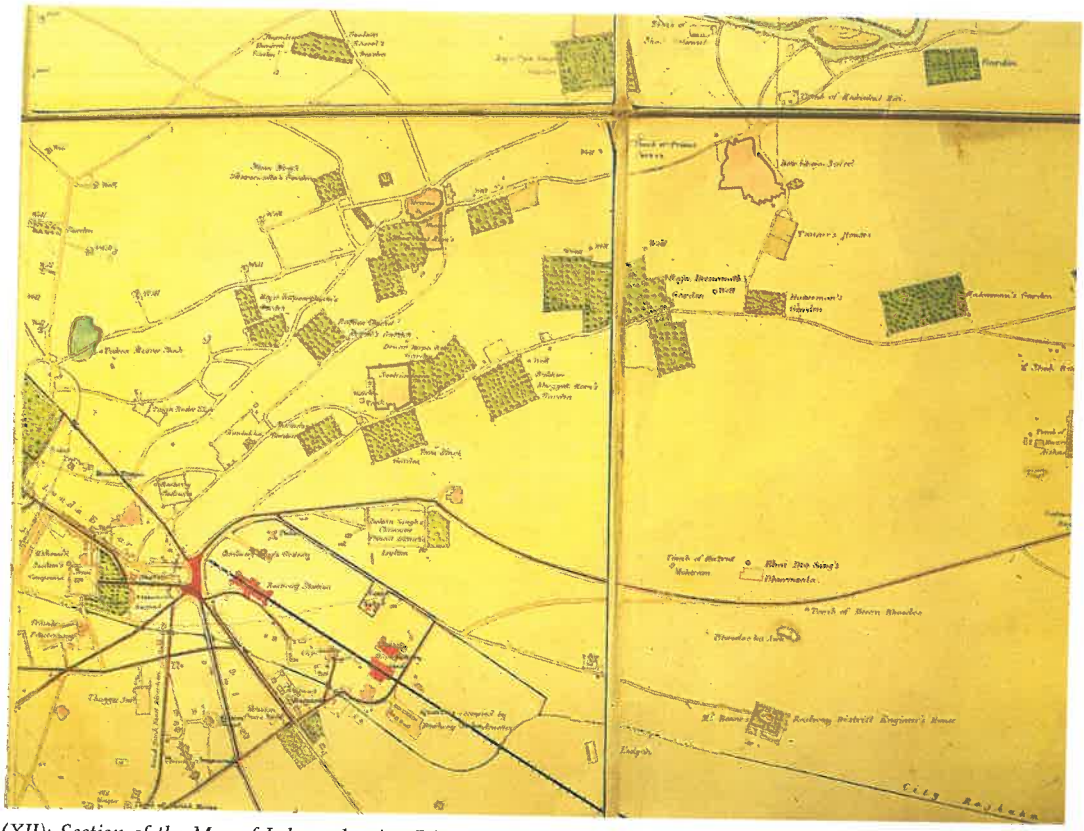
(IX): Jahangir's Tomb in Garden Setting.



(X): Jahangir's Tomb, Detail of Front Facade.



(XI): Noor Jahan's Tomb.



(XII): Section of the Map of Lahore showing Distribution of Gardens along G. T. Road.



(XIII): A Surviving Gateway of Akbar Period Garden at Baghanwali.



(XV): Shalamar Garden. Central Tank and Baradaris.



(XIV): Baradari of Sankat Rai at Pasrur once located in a large garden.



(XVI): A General View of Garden of Behram at Attock.

TIMUR'S GARDENS: THE FEMININE PERSPECTIVE

LISA GOLOMBEK,
Royal Ontario Museum, Canada

The Timurid gardens of the late fourteenth and the fifteenth century have attracted the attention of Mughal specialists probably because of the widely-held belief that it served as a model for the great Mughal gardens of sixteenth- and seventeenth-century in Lahore, Agra and Delhi. For this reason, most studies of the Timurid garden have concentrated on morphological questions.[1] More recently attention has turned to the social context of these gardens and their possible meanings, and it is this aspect which is addressed here.[2]

If we are to understand the meaning of the garden for Timur, we must look at the history of Timur's garden-building activity. Maps reconstructing Timurid Samarqand (Fig. 1) show a "necklace" of gardens ringing Samarqand, as many as nine, supplemented by others along the route between the capital and Shahrisabz, Timur's "home-town" and second capital. By eliminating from consideration those which he did not found or use we reduce the total from nine to seven. Each of these gardens has a history, which can be pieced together from the scattered references in the *Zafar-nameh* and the *Babur-nameh*.[3] The following list does not include gardens outside the environs of Samarqand.

Garden Histories

Bagh-i Bihisht (west of the city): We cannot be sure which garden Timur built first, but the earliest noted is the Bagh-i Bihisht. It was founded in the name of his new bride, Tuman Agha, in 1378[4] and was visited by Timur in 1399 and 1404.[5]

Bagh-i Shimal (presumably somewhere north of the city), where in 1397 he built a palace for Miranshah's daughter, Bikisi Sultan. A festival was held to open it and to officially invest Shah Rukh with the government of Khurasan. Shortly thereafter, Bikisi Sultan was wed to Iskandar-Sultan, Timur's grandson. Timur visited it in 1399 and in 1404.[6]

Bagh-i Buland (The Exalted Garden), where Miranshah's wife visited him in 1397. It was visited by Timur in 1399 and in 1404.[7]

Bagh-i Chanar (The Plane-Tree Garden), where his chief wife Saray Malik Khanum was staying in 1399 and 1404.[8]

Naqsh-i Jahan (Image of the World): Masson's dating (1370s) and location of this garden is cited by Pugachenkova.[9] Timur visited the garden in 1399.[10]

Bagh-i Dilgusha: In 1396 Timur decided to take a new wife, Tukal Khanum, and built in her name the splendid Bagh-i Dilgusha[11] on the south edge of the meadow of Kan-i Gil where the royal camp often stayed and where many of the major ceremonies took place. It was joined to the Firuzeh Gate by a poplar-lined street, suitable for processions. Thus, although Timur built it on the occasion of his marriage to Tukal Khanum, daughter of Khizr Khvajeh Khan Chaghatay in 800/1397, this was, no doubt, to supersede all other residential gardens in Samarqand. It was visited by Timur in 1399 and in 1404.[12]

Bagh-i Naw: This was the last garden built by Timur upon his return from campaigns in 1404. The description of an unnamed garden in the *Zafar-nameh* matches that of Clavijo which he calls the "New Garden".[13] It was to be even grander than the Bagh-i Dilgusha.

Most of the references to gardens in the *Zafar-nameh* are found in two accounts: his return from the Hindustan campaign in 1399 and his return from the Anatolian campaigns in 1404.[14] On both occasions Timur moved frequently from one garden to another, on his way back to Samarqand. On the first occasion he spent 15 days in Kesh, where he visited the tombs of his spiritual leader and his father. He left on Tuesday and camped by the river; on Wednes-

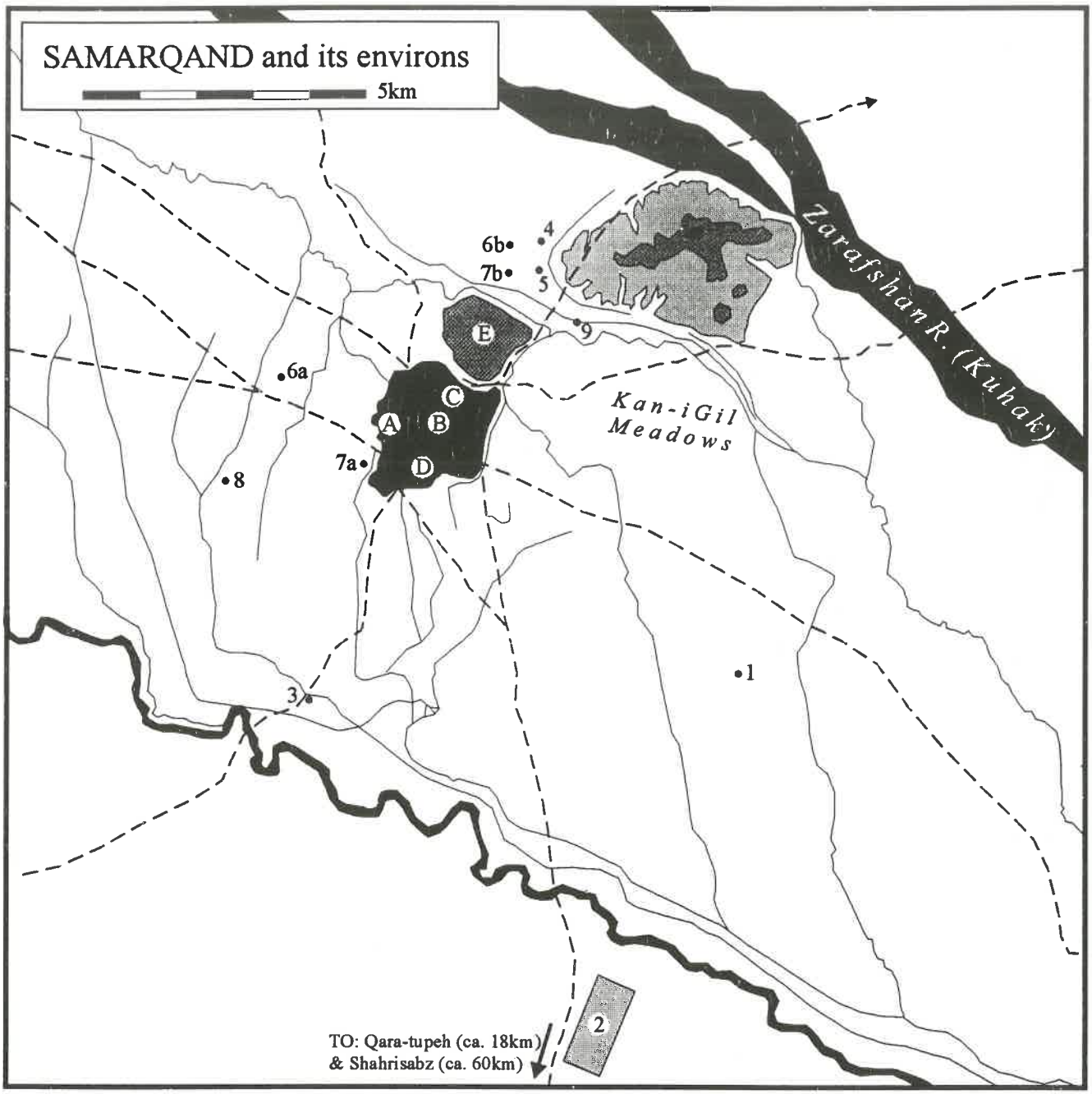


Fig. 1: Samarqand and Environs (sites mentioned in article, based on Pugachenkova, 1981): A) Citadel; B) Registan; C) Mosque of Timur ("Bibi Khanum"); D) Gur-i Amir; E) Afrasiyab (pre-Mongol townsite).
Gardens: 1) Dilgusha; 2) Dawlatabad; 3) Chanar; 4) Buland; 5) Maydan/Chini-khaneh; 6) Shimal (a: according to Pugachenkova; b: according to Golombek); 7) Naw (a: according to Pugachenkova; b: according to Golombek); 8) Bihisht; 9) Naqsh-i Jahan.

day he camped at Chanar-ribat; on Thursday he stayed at Qutluq Yurt; on Friday, at Takht-i Qaracheh (a garden); on Saturday, in the Bagh-i Qaratupa in the Kushk-i Jahan-numa; and on Sunday, in the garden he had built at Dawlatabad.[15] Finally, he reached the outskirts of Samarqand. He spent Monday night at the Bagh-i Dilgusha, held a great feast for all his wives, princes, and retainers, and entered Samarqand the next day. This garden had been constructed two years earlier for his new wife Tukal Khanum. Wednesday seems to have been a full day, beginning with a visit to the shrine of Qusam b. Abbas and the khanaqah of his wife Tuman Agha near the complex north of the city. Next he visited three gardens: the Bagh-i Chanar and Naqsh-i Jahan, and the Bagh-i Bihisht, from which he dispatched the elephants (brought back from the Hindustan campaign) to the Bagh-i Buland. We are not told where he resided for the next three weeks until he orders the construction of the Great Mosque. During that time Timur held court near the mosque, alternating between the Madrasah of Saray Malik Khanum, his chief wife, and the khanaqah of Tuman Agha, the next in seniority.[16]

The second mention of the garden circuit occurs upon Timur's return from Anatolia in 1404. From the Bagh-i Qaratupa near Shahrisabz he moved to the Bagh-i Chanar. Disappointed not to find his wives there, for they were slow in returning with the baggage train, he sent orders that they hurry home. When they arrived, Saray Malik Khanum went to the Bagh-i Chanar, and Tuman Agha went to the Bagh-i Bihisht. Timur chose to go first to the latter to recover from an illness. Then he moved to the Bagh-i Shimal for several days, then to the Bagh-i Buland, and entered Samarqand. After ordering the construction of a mausoleum for his late grandson (the Gur-i Amir) and inspecting progress on the mosque, Timur moved to the Bagh-i Chanar and then to the Bagh-i Dilgusha for a few days.

The Garden as Encampment

To explain this constant shifting of residence from garden to garden and the apparent proliferation of these gardens, some art historians have looked to Timur's semi-nomadic habits.[17] The garden is seen as providing both a practical solution to the problem of "housing" as well as a "theater" in which certain ideological conventions may be played out. Scholars have drawn attention to the fact that Timur was always on the move, often in the company of his army and his household.[18] This style of waging battle was derived from Mongol practice and supported by semi-nomadism. The royal camp, or *ordu*, was established in the campaign area, and the army moved back and forth to it. When Timur would return to Samarqand, the army would encamp in the meadows on the east or at an appropriate site near pasturage, depending on the season. In most cases they pitched tents or built "winter houses". Observing these facts, Monike Gronke came to the conclusion that the multiplicity of gardens, in which Timur pitched his tent while visiting Samarqand, were little more than gentrified camping grounds, and that Timur, as a rule, held court in his Royal Camp.[19] Under the Mongols, not only had the camp served a practical purpose. It was the preferred site for important ceremonies and festivals, and because such was the practice, it gained the force of tradition. So, under the Timurids investments, weddings, and other ceremonies took place in the out-of-doors. Bernard O'Kane recently focused on the great wedding festival held in the meadows of Kan-i Gil within a city of splendid tents and enclosures.[20]

The impact of the semi-nomadic roots of the Mongols and Timurids on material culture was underlined by Peter Andrews' studies of the tents of Timur.[21] Art historians came to recognize the tent both as part of the Timurid landscape and as a class of artwork, known primarily from the exquisitely ornamented examples in manuscript illustrations. In this capacity the tent served also as a signifier. In Mongol tradition the tent had stood for the abode of the Khan. Under the Timurids the tent retained its ability to symbolize the presence of its absent owner. As a corollary, the enemy's tent was considered a war trophy. Tents were given as gifts along with Arabian horses, fine garments woven with gold thread, and other gold and bejewelled objects.[22] In addition to the prestige which the tent held by reason of its importance to the semi-nomadic lifestyle, its significance was compounded through its association with the Mongols. Timur carried forward many Mongol traditions as a means of identifying with his Mongol ancestor, Chinghiz Khan, and thereby achieving legitimacy in the eyes of his supporters.[23] Thus, the tent continued to have many of the meanings it had acquired as a result of its centrality in the life the semi-nomadic military organization, but it was all the more significant because of its Mongol associations.

The utilitarian and symbolic significance of the tent, for which there is ample evidence, has led scholars to extend these explanations to the garden itself: "He [Timur] resided mostly in different gardens..., an extraordinary testament to his ability to recreate a nomadic environment in the microcosm of a city and its surroundings."[24] Under the Mongols royal gardens, such as that of Ujan, built in 1302 by Ghazan Khan, included tents or tent-like pavilions, that of the Khan being known as the Golden pavilion (*khargah*).[25] The chronicles mention tents pitched in Timur's gardens, and exquisite tents are often shown within formal gardens in Timurid paintings. The garden is thus seen as a means of facilitating the semi-nomadic lifestyle and legitimizing Timurid rule (through perpetuation of Mongol ceremonial practices). Thomas Lentz made the tantalizing suggestion that the later Timurids viewed their gardens "as something akin to dynastic sanctuaries, repositories of the Timurids' own myths and practices that underlined the dual nature of their history."[26] While this meaning of the garden may yet prove to be true of the later Timurids, I do not see it as an active principle in Timur's time.

Pre-Mongol Gardens in Iran

No one could deny the fact that Timur spent a great deal of his life on the road in tents and that tents held a special meaning for Timurid society. What must be challenged, however, is the necessity of linking this lifestyle to the building of gardens. Gardens are an artifice of a settled population. Consider the garden-building activities of pre-Mongol princes. The Bavandid ruler of Mazanderan (Husam al-Dawlah Ardashir, 1172–1206) built some fifty-two garden-estates, the most elaborate of which, known as "Dawlatabad," had two pleasure gardens and a nearby residence. One garden contained a pavilion with a pool and served as an aviary and granary. The other featured an artificial fish-stocked lake with a pavilion on an island in the center, reached by a drawbridge. In half of the garden all kinds of trees and flowers were planted, while the other was devoted to a menagerie.[27] The Ispahbad's garden-building impulses grew not from any semi-nomadic affiliation but, at least in part, from pre-Islamic notions of the garden served as *ersatz*-cosmos, the prerogative of kings. Pre-Islamic traditions survived in this less accessible area longer than anywhere else in Iran. That the Ispahbad sought identification with ancient Iranian ideals of kingship is further suggested by his interest in the *Shah-nameh*.[28]

Could Timur's semi-nomadic lifestyle have had an impact on the function of the traditional Persian garden? To respond we need a better idea of the uses of gardens before the Mongol period. Very little attention has been paid to this evidence, both textual and archaeological. Pinder-Wilson alluded to the gardens of the Seljuqs in and surrounding Isfahan, as described by al-Mafarrukhi.[29] We don't know how the Seljuq princes used these gardens but, like Timur's gardens, they surrounded the city and were quite extensive (1000 *jaribs*). Each had one or two structures (called variously, *qasr, kushk, takiyah-gah*) and pools, fed by channels of running water. We can imagine that, like Timur, the Seljuq princes moved about among them, savouring the different features which they individually presented. Thus, the creation of a suburban ring of gardens does not seem to relate to semi-nomadic patterns.

Nothing remains of the Seljuq garden-palaces, but for the Ghaznavids both the textual and archaeological evidence give a sense of the importance of such estates within urban settings as well as along essential routes. Mas'ud I (1030–1040) founded numerous gardens (*bagh*) in or near the major towns: Balkh, Herat, Bust, Nishapur, and Ghazni. His travels sound much like Timur's as he continually surveyed his domains.[30] While Mas'ud's roots may have been semi-nomadic, his lifestyle might better be compared with that of the profligate Umayyad prince, al-Walid II.[31] As a young man, Mas'ud built a pleasure pavilion in a garden outside Herat and had it painted "from floor to ceiling" with images from the *Kama Sutra*![32] As for the use of gardens as encampments, this was not a new phenomenon in the Mongol period. The Ghaznavids entertained their military retinue in the royal gardens.[33] Large armies required large spaces when not on campaign, and the most practical form of housing for them was the tent or temporary structure (*vithaq*, in Baihaqi[34]). Sultan Mahmud himself, when informed of his son's scandalous garden pavilion in Herat, rose from his midday rest and went to a tent (*khargah*) to find a trustworthy officer to investigate.[35]

Even the physical form of the Ghaznavid garden is not far removed from Timur's suburban estates. The Ghaznavid sultans maintained several elaborate garden estates, two groups of which have been excavated. The complex at Lashkari Bazaar is particularly noteworthy as it contains a walled enclosure, probably square before its expansion toward the river, with a cruciform pavilion in the center.[36] To the north may have been another type of garden. The texts speak of orchards, floral plots, fowl, game, and zoological curiosities. Animals were rounded up and hunted in the park.[37]

The Ghaznavids were not the only garden-builders concerned with creating a chain of resort-like lodgings along their frequently-travelled routes. The Bavandid Ispahbad's fifty-two garden-estates were dispersed throughout his domains, each one comprising a palace, a garden, and a maydan.[38]

In light of the pre-Mongol tradition of princely gardens in Iran, as exemplified in the gardens of the Seljuqs, Ghaznavids, and Bavandids, the quantity of gardens built by Timur does not appear extraordinary, nor does his use of them for encampments. Timur's movements must be put into context and differentiated. In one category are those grand moves required by military actions and general surveillance, comparable to the Ghaznavids' peregrinations between Balkh, Herat, and Ghazni or the Ispahabad's sojourns through his territories. The smaller moves in and about the gardens of Samarqand reflect the princely tradition of escaping to a pleasurable and airy site outside the city, as practised in pre-Mongol Iran.

The Feminine Perspective

There is, however, an element in Timur's use of the gardens surrounding the city, the "smaller" movements, which has not been noted (and which may be peculiar to Timur). Our review of the sources suggests that Timur built the gardens on the occasion of marriages, mostly his, but in one case that of his grandson, so that each wife would have her own garden.[39] Two were built for new brides, the Bagh-i Bihisht and Bagh-i Dilgusha. Since the chief wife, Saray Malik Khanum, is recorded as meeting Timur at the Bagh-i Chanar, we may propose that it was her garden. Thus, in 1399 three of Timur's living wives–Saray Malik Khanum, Tuman Agha, and Tukal Khanum–seem to have had personal gardens, in addition to the palatial quarters they enjoyed within the town. No garden is associated with Chulpan Agha, who is mentioned in events of the year 1391 and was seen by Clavijo in 1403, but perhaps the Naqsh-i Jahan or Bagh-i Buland, which are not otherwise associated, belonged to her. Maybe the last garden (Bagh-i Naw) have been built on the occasion of a marriage, perhaps to Munduz Agha or Jawhar Agha, who are mentioned by Clavijo? Timur also built a palace in a garden (the Bagh-i Shimal) for Bikisi Sultan, the daughter of his son Miranshah, who was about to marry Timur's grandson Iskandar b. Umar Shaykh.[40] Concerning the concubines, these are rarely mentioned as being involved in events. It is unlikely that real property, in the form of a garden, should be bestowed on them.

The history of each garden is closely linked to the history of the woman associated with it. Because the information about these women is dispersed in the chronicles, it would be useful to review it here.[41] Timur's married life passed through four phases. His first marriages were to Turmish Agha, who is mentioned as early as c. 757/1356 as mother of Jahangir and, later, Jahanshah (c. 768/1366-67); and to Oljay Tarkhan, daughter of Amir Musala b. Qazaghan, who died in 767/1365. Oljay Tarkhan produced a daughter, Sultan Bakht Begim, who seems to have inherited her mother's high status in Timur's court. Perhaps even before his official marriages, Timur acquired two concubines: Tolun Agha, who gave birth to Umar Shaykh in 752/1351, and Mengli, who bore Miranshah in 768/1367.

A second "wave" of marriages resulted from the defeat of Amir Husayn in 771/1370 and the taking over of his harem. Timur was about thirty-four years old. He kept four of the free-born women for himself, some of the concubines, and gave others to his supporters. Saray Malik Khanum became the chief wife and was Timur's mainstay for many years. The others are not heard from again. It is curious that Saray Malik, who followed Timur on many of his campaigns, did not bear him a living child. Perhaps the arduous journeys on horseback did not offer the best conditions for gestation. The same is true of the other wives who travelled the campaign trail, such as Tuman Agha. Timur's four marriages brought the number of living wives to five. At the same time the number of concubines was increased to include the future mother of Shah Rukh (b. 1377), Toghay Tarkhan. About four years after the plundering of Amir Husayn's harem, Timur married Dilshad Agha Dughlat[42]; and within another four, the forty-two year-old Timur wed twelve-year old Tuman Agha. This addition could have brought the number of wives to seven, but by 785/1383 was reduced to, at most, six as a result of the death of Dilshad Agha Dughlat.[43] Since none of the four women taken from Amir Husayn's harem are mentioned again except Saray Malik Khanum, they may have died soon after. The number of wives could well have been kept to the sanctioned (by Islam) four.

A third phase begins with Chulpan Malik Agha, daughter of Hajji Beg Jatah, around 791/1389, when she is first mentioned in the chronicles.[44] Two concubines (Nigar Agha and Durr Sultan Agha) are named as being in the company of Saray Malik in 795/1393.[45] The concubine inherited from Amir Husayn, Dilshad Agha, accompanied Chulpan Malik Agha in 796/1394.[46]

Despite the size of his harem and his failing health, Timur, at the age of approximately sixty, saw fit to make another set of alliances, constituting a fourth phase. The chief object was Tukal Khanum, wed with great ceremony in 1396, the woman for whom the Bagh-i Dilgusha was built. Munduz Agha and Jawhar Agha, both mentioned by Clavijo, seem to have joined the harem at this late stage.

During this late period, the chief wives were still powerful forces, Saray Malik and Tuman Agha. However, they were clearly aging, and Timur felt a need to rejuvenate his harem. Tuman Agha was already thirty, and Saray Malik must have been at least fifty. Clavijo himself considered a woman of forty to be aged, as he remarks in observing Miranshah's estranged wife who was "now some forty years of age; she was fair of complexion and fat."[47] There is no indication that the first group of

wives were still living or played a significant role at the time of Timur's death. The chief wives normally travelled together, along with some of Timur's children and grandchildren by other wives, but had their own retinues.

Let us now attempt a "biography" of one of Timur's gardens, the Bagh-i Bihisht, relating it to the life of its proprietor, Tuman Agha. The *Zafar-nameh* locates this garden on the west side of Samarqand and says that Timur built it in 1378 out of affection for or sense of obligation to his young wife Tuman Agha, twelve years of age, whom he had just married.[48] Timur seems to have left her shortly thereafter for his winter quarters in Zanjir-saray. At this time it was still Dilshad Agha Dughlat, wed in 1374, who travelled with him on his campaigns. In 1383 she fell ill, returned to Samarqand from Khurasan, and died shortly thereafter. Later that year when his wives, including Saray Malik Khanum, came to greet the Persian bride-to-be of Pir Muhammad b. Jahangir in Khurasan, Timur retained Tuman Agha in his camp and sent the others home.[49] As a young woman of seventeen she must now have caught his fancy. Timur was about forty-eight years of age. In 790/1388 on the death of Suyurghitmish Khan, Timur arranged for the installation of his son at a ceremony held in this garden, within spacious, luxurious tents. Seizing the occasion, Timur also held three weddings for son Shah Rukh and two grandsons, brothers Muhammad Sultan and Pir Muhammad.[50] While the garden was associated with Tuman Agha, Timur used it freely for his own purposes. Perhaps this was also an indication of her rising status. She was now twenty-two.

However, in 793/1391 it was (recently married?) Chulpan Malik Agha, daughter of Hajji Beg Jatah, whom Timur retained in camp, sending the others back from Tashkent to Samarqand.[51] The garden of Tuman Agha does not receive notice again until Timur returns from India in the spring of 1399, when it is just one of numerous sites visited by Timur. He had sent the elephants there and now ordered them moved to the Bagh-i Buland, from whence they were paraded across the city (from west to northeast).[52] Tuman Agha was no longer the primary target of Timur's affections. She was thirty-three.

The last mention of the garden falls in the context of Timur's return to Samarqand in 1404, discussed above. Timur had sent messengers to his wives, who were at that time abroad, to return as fast as possible to Samarqand. He arrived at the Bagh-i Chanar while the others were still coming from Firuzkuh. As soon as they reached Samarqand, Tuman Agha went to the Bagh-i Bihisht and Saray Malik Khanum, to the Bagh-i Chanar. Timur then went about inspecting the work at his mosque and ordering the construction of major building in a garden south of the Bagh-i Shimal.

During this year Clavijo visited Samarqand and reports the addition of several "new" women to the harem. Tuman Agha was thirty-eight and Timur, at death's door, was around sixty-eight. We have suggested that the Bagh-i Naw was intended for one of these new brides.

Timur's garden-building efforts appear to be closely linked with marital alliances. Gardens were built at the onset of the marriage, and, as the woman aged, so did Timur's interest in her garden wane! Of particular interest is a comment by the author of the *Zafar-nameh,* in relation to Timur's building of the Bagh-i Dilgusha for Tukel Khanum in 1397: "Since, the efforts of the padishah were for the purpose of rendering agreeable the veil of majesty to the young virgin/bride, because respecting her is required by the lofty Sunna and custom," he dedicated it to Tukal Khanum.[53] A similar statement was made on the occasion of the founding of the Bagh-i Bihisht. It is of interest that, as O'Kane has pointed out, Timur never built a large palace (*saray/zananah*) within the city, or even in one of the gardens, to house the harem and its multitude of attendants, as did the Mughals and Ottomans. This phenomenon is probably due to the high esteem enjoyed by Timur's wives, well-connected in their own right, unlike the slaves appropriated to the Ottoman harem. It was through his marriages that Timur won the right to call himself "son-in-law" (*gurgan*) of the Mongol Khan.[54]

Why does the *Zafar-nameh* enumerate Timur's garden visits in such detail? The answer may lie in the discretion exercised by the chronicler. Instead of telling us outright that Timur spent time with each of his wives and concubines, the author discloses this fact in the recording of Timur's movements. These movements have more to do with the harem hierarchy than with nomadism. Although Timur could use the gardens as his needs arose, the garden-estate in his time became a gendered site. So when Timur went to the Bagh-i Bihisht, he was actually going to spend time with Tuman Agha. When the text tells us he stayed at the Bagh-i Chanar, it was Saray Malik Khanum whose comfort he sought. When he builds a new garden, it is likely that a royal wedding is in the offing.

NOTES:

1. Because no Timurid garden survives, investigations have relied heavily on textual and pictorial sources. These were identified already in the seminal studies of G.A. Pugachenkova ("Sadovo-parkovoe iskusstvo Srednei Azii v epokhu Timura i Timuridov", *Trudy Sredneaziatskogo Gosudarstvennogo Universiteta* 23, Tashkent, 1951:143–168) and Donald Wilber (*Persian Gardens and Garden Pavilions*, Tokyo, 1962), although the sources were not always thoroughly or systematically utilized. Two garden sites in the Samarqand region have been excavated but poorly published (Dawlatabad: M. Masson, "O mestonakhozhdenii sada Timura Dawlatabad," *Izvestiia sredneaziatskogo Komiteta*, vol. 3, Tashkent, 43–49, 1928; "Baghcheh" of Ulugh Beg at Samarqand: Pugachenkova, *ibid.*, p. 154) while drawings and photographs of remains in Khvarazm and Herat suggest formal gardens that have never been properly studied (see study on the *chahar-bagh* by Maria Subtelny, comparing these with the model proposed in the late Timurid agricultural manual, *Irshad al-Zira`ah*, by Qasim b. Yusuf, in "Mirak-i Sayyid Ghiyas and the Timurid Tradition of Landscape Architecture," *Studia Iranica*, 24 (1995): 19–60; Subtelny's interpretation improves on those of Pugachenkova, *ibid.*, and Ralph Pinder-Wilson, "The Persian Garden: *Bagh* and *Chahar Bagh*," in E.B. Macdougall and R. Ettinghausen, *The Islamic Garden*, Dumbarton Oaks Colloquium on the History of Landscape Architecture, IV, Washington, D. C., 1976: 69–85).
2. The morphological question is addressed in an expanded version of this essay in the forthcoming volume of *Muqarnas* ("The Gardens of Timur: New Perspectives").
3. All references to the *Zafar-nameh* (composed around 1425 for Ibrahim-Sultan, a grandson of Timur) are to the Tehran editior. (Sharaf al-Din Ali Yazdi, *Zafar-nameh*, ed. Muhammad Abbasi., Tehran, 1336 H. S.). Passages cited were checked in the Russian edition, but no substantial differences were noted (facs. ed. A. Urunbaev, Tashkent, 1972). Zahir al-Din Babur (r. 1526-30), founder of the Mughal dynasty and a descendant of Timur, was well-acquainted with late Timurid Samarqand and describes its gardens, but only three (Naqsh-i Jahan, Chanar, Dilgusha, see below) are specifically located (*The Babur-nama in English*, trans., A.S. Beveridge, London, 1922, vol. 2, p. 78).
4. *Zafar-nameh*, I: 215.
5. For 1399 see *Zafar-nameh*, II:142-3; for 1404 see, *ibid.*, II:419-420.
6. *Zafar-nameh*, I: 571-2; II: 142-3, 419-20.
7. *Zafar-nameh*, I: 580; II: 143, 420.
8. *Zafar-nameh*, II: 142-3, 419-20.
9. Pugachenkova, 1951: 147; Babur, I: 78.
10. *Zafar-nameh*, II: 142-3.
11. *Zafar-nameh*, II: 13-14; Ruy Gonzalez de Clavijo, *Narrative of the Spanish Embassy to the Court of Timur at Samarkand in the years 1403–1406*, trans. Guy Le Strange (London, 1928), p. 218.
12. *Zafar-nameh*, II: 142-3, 419-20.
13. *Zafar-nameh*, II: 422; Clavijo, p. 230.
14. See note 5, above.
15. On the identification of this site, see note 1, above.
16. *Zafar-nameh*, II: 145.
17. Monika Gronke, "The Persian Court between Palace and Tent: from Timur to `Abbas I," in L. Golombek and M. Subtelny, eds., *Timurid Art and Culture: Iran and Central Asia in the Fifteenth Century*, supp. to *Muqarnas*, vol. 6 (1992): 18–22; Bernard O'Kane, "From Tents to Pavilions: Royal Mobility and Persian Palace Design," *Ars Orientalis: Pre-Modern Islamic Palaces*, guest ed. Gulru Necipoglu, vol. 23 (1993): 249-68; Thomas W. Lentz, "The Other World: Memory and Ideology in the Timurid Garden," Papers of the Symposium on Mughal Gardens (May 1992), Dumbarton Oaks, Washington, D. C., *forthcoming*.
18. For example, Beatrice F. Manz, *The Rise and Rule of Tamerlane* (Cambridge, Mass., 1986).
19. Gronke, 1992.
20. O'Kane, 1993.
21. *The Felt Tent in Middle Asia: The Nomadic Tradition and Its Interaction with Princely Tentage*, Ph.D. diss., School of Oriental and African Studies, University of London, 1980; and "The Tents of Timur: an Examination of Reports on the Quriltay at Samarqand, 1404," in P. Denwood, ed., *Arts of the Eurasian Steppelands* (London, 1978): 143–81.
22. Full discussion of tent-symbolism in O'Kane, 1993.
23. Timur stressed his connections with the Mongols in many ways, such as the retention of Mongol law (*yasa*), or in public demonstrations, such as the emblazoning of his genealogy on the portal of his mosque (L. Golombek, "Tamerlane, Scourge of God," *Asian Art*, spring, 1989: 30-61).
24. *Ibid.*: 253.
25. Pinder-Wilson, 1976: 76-77.
26. Lentz, *op. cit.*, forthcoming.
27. Ibn Isfandiyar (Baha' al-Din Muhammad b. Hasan), *Tarikh-i Tabaristan*, ed. Abbas Iqbal (Tehran, 1941): 122-123; this passage was kindly brought to my attention by K. Allin Luther many years ago at the University of Michigan.
28. Just preceding the passage which describes the Dawlatabad gardens, Ibn Isfandiyar describes the routine of the Ispahbad, commenting that he relaxed at the end of the day to readings from the *Shah-nameh* (*Tarikh-i Tabaristan*, II:121).
29. Pinder-Wilson (1976): 75-76; Mufaddal b. Sa'd b. al-Husayn, *K. Mahasin Isfahan* (460–480/1067-87), ed. E. G. Browne, *Journal of the Royal Asiatic Society*, Oct. 1901: 54–58.
30. See, for example, Abu'l-Fadl Baihaqi, *Istoriia Mas'uda*, trans. S. K.Arends (Moscow, 1969), p. 378: In 422/1031 Mas'ud went from Kabul to Parvan, where he spent five days hunting before moving on to Chaukan to drink wine and then Valvalij for two days; when he reached Balkh, he went to the Kushk-i Dar-i Abdullah and then to the Bagh-i Buzurg nearby, where he carried out some construction.
31. Robert Hamilton, *Walid and His Friends* (Oxford Studies in Islamic Art, VI), Oxford, 1988.
32. Baihaqi, p. 191.
33. Baihaqi, p. 117 (Herat); p. 381: Mas'ud transferred to the Kushk-i Dar-i Abdullah, which adjoined the Bagh-i Buzurg of Balkh, "because it was more comfortable and had two *saray*s. Officers and troops (*martabadar*, *ghulam*) may stay there and perform rites of mourning and celebration. For these reasons, let's return immediately to the garden!"
34. Arends gives both definitions in the glossary, p. 957.
35. Baihaqi, p. 192.
36. U. Scerrato, "Summary Report on the Italian Archaeological Mission in Afghanistan: II) The Two First Excavation Campaigns at Ghazni, 1957-8," *East and West*, n.s., vol. 10, nos. 1-2 (March-June 1959), pp. 23–55; D. Schlumberger, *Lashkari Bazar: une résidence royale ghaznevide et ghoride*, Mémoires de la Délégation Archéologique Française en Afghanistan, vol. 18, 1978; this pavilion, raised on a platform, has been dated to the Ghaznavid period by the excavators, but in plan has the appearance of a Timurid pavilion (see Golombek and Wilber, 1988, pl. 65, 69, 70, 108, 133).
37. Baihaqi, p. 617.
38. Ibn Isfandiyar, II: 122.
39. Although the chronicles list as many as 18 wives and 26 concubines, no more than four or five of the wives seem to have been living at the same time (see note 59, below).
40. *Zafar-nameh*, II: 13.

41. Khvandamir (*Habib al-Siyar*, ed.. Sa'id Nafisi, Tehran, S. 1317, vol. III: 541-2) lists twenty-four wives and twenty-two concubines, with some variations preserved in the *Mu'izz al-Ansab* (see Wheeler Thackston, p. 107); few of these names appear in the chronicles.
42. In the fall of 776 (*Zafar-nameh*, I:191).
43. Another Dilshad Agha, mentioned in Khvandamir's list of concubines, must be intended in the *Zafar-nameh's* reference to her journey accompanying Chulpan Malik Agha (I: 472), as Dilshad Agha Dughlat died over ten years earlier (see below).
44. *Zafar-nameh*, I: 357.
45. *Zafar-nameh*, I: 418.
46. *Zafar-nameh*, I: 472.
47. Clavijo: 244.
48. Vol. I: 215.
49. *Zafar-nameh* I: 278.
50. *Zafar-nameh*, I: 330-1.
51. *Zafar-nameh*, I: 357.
52. *Zafar-nameh*, II: 143.
53. *Zafar-nameh* II: 15.
54. Oljay Tarkan Agha was the grand-daughter of Amir Qazaghan, powerful chief of the Qara'unas clan, and sister to Amir Husayn. Saray Malik Khanum was the daughter of the late Chaghatayid Khan Qazan and, thus, the lynch-pin in Timur's claim to legitimacy. Dilshad Agha represented the powerful Dughlat tribe of Moghulistan. The influential Amir Musa Taychiut fathered Tuman Agha. Chulpan Malik Agha, daughter of Hajji Beg Jatah, and Tukel Khanum, daughter of Khizr Khvajeh Ughlan Khan, were princesses in their own right (on Timur's marital alliances, see B. Manz, p. 78). Saray Malik Khanum and Tuman Agha financed major construction projects (Lisa Golombek and Donald Wilber, *The Timurid Architecture of Iran and Turan* (Princeton, 1988), cat. nos. 27; 21, 87).

WHITHER THE HISTORICAL GARDENS OF PUNJAB? GARDEN TRADITIONS OF PUNJAB

SAIFUR REHMAN DAR
Lahore Museum

INTRODUCTION

This brief paper is presented with the hope that it will dispell the generally held notion that Punjab has no garden tradition of its own, and that whatever garden-culture flourished here appertains, and is confined, to the Mughal period. As a matter of fact, Punjab has a rich garden tradition going as far back as the 2nd century B.C., if not beyond, and it still continues. The present study, rudimentary as it is, is based partly on study of contemporary literature and partly on my own recent exploratory work done in the Pakistan-side of the Punjab. My knowledge about gardens in Indian Punjab is scanty and confined to printed information.[1] At present this is the main limitation of this paper. With no archaeological remains of vanquished ancient gardens to support us, we will be dealing here more with the history and general location of sites, even only names of gardens, rather than the gardens themselves. Another problem which we encounter in such a study is the tendency in which old structures of gardens continue but their owners and hence their names change. The reverse is also true: the old names continue but structures change radically. This creates difficulty in identifying an old garden or its site.

Antiquity and History of Garden Traditions in Punjab

In the absence of any archaeological discovery of ancient gardens,[2] our only source about them is literary evidence, meagre and oblique as it is. The earliest such reference is found in the *Arthashastra* by Kautiliya, a genius from Taxila and a teacher of Chandragupta Maurya who ruled over a large part of the subcontinent during the last decade of the 4th and first decade of the 3rd centuries B.C. Being the earliest guidebook for the rulers, it hardly omits any subject. As regards horticulture, he talks about flowers, fruit-enclosures, and pasturelands in the country and how these should be grown and maintained.[3] In his times, it was the duty of the Superintendent of Pasture lands to establish wells, water works, springs, flower and fruit-enclosures, and pasturelands in waterless regions, as well as to keep them free from robbers and dacoits. However, there is no specific reference to a planned garden or park during his period. That this omission is unintentional is proved from the fact that almost contemporary Buddhist literature dealing with the pre-natal stories and historical events of Gautama Buddha is full of references to proper gardens, groves, and pleasuances (royal parks) associated with various events of the great man.[4] To mention a few I may give here the names of Bamboo-Grove or *Veluvana* Park, *Ambavana* or Mango-Grove, *Jatiya* Grove, *Chittalata* Grove, *Anjanavana* Grove, *Ketakavana*, Palm Grove, *Kundadhanavana*, *Mahavana* or Great Grove, Tapoda Park, Ghosita Park,[5] *Padmasanda* Grove, Lumbini Garden, city garden, *Penance* Grove, etc.[6]

Among these early gardens, the most frequently mentioned is the Jetavana Garden, also called Jetavana Park,[7] which was purchased by a lady for Buddha by paying as many coins as the entire ground of the garden could cover.[8] In this garden/park there was a stepped tank inside and a gateway to control entry,[9] suggesting thereby that it was a walled garden. Even if we accept that the literature referred to above was compiled much later than the life-time of Buddha, it reveals that in early centuries on both sides of the beginning of the Christian era, there were well planned gardens and parks, both inside as well as outside city-limits.[10] As in the case of Jetavana Garden, these were probably walled gardens fixed with gateways; within these gardens were mansions and pavilions as well as pools of water with steps leading down to the tank as mentioned in one of the

Maccha Jatakas.[11] There were also fixed stone seats under trees and moveable screens for keeping off heat and sun.[12] In the cities were regular flowershops, and flowers were brought to these shops and into the palaces from groves and gardens in huge flower-baskets.[13] A grove without flowers was considered to be like a beautiful woman without courtesy.[14] For the maintenance and upkeep of gardens there were professional gardeners[15] and among their gardening implements were water-skins and wooden watering pots.[16] Some of these pleasure resorts have been specifically mentioned as parks such as *Subhagavana* Park[17], *Veluvana* (Bamboo) Park[18], *Jetavana* Park[19] *Tapoda* Park,[20] etc. Names like *Ambavana*, i.e. Mango Grove, or Palm Grove, *Veluvana*, i.e. Bamboo Grove, etc., suggest that perhaps some of the groves and gardens were reserved for, or specialized in, growing specific fruits or trees.[21]

These are the traits of gardens which once flourished in eastern India during early Buddhist period. Were there similar establishments during the same period in Punjab? We are not sure. The Jataka stories are full of references to Taxila in the Punjab as the most revered, respected, and largest educational center in the whole of South Asia.[22] But there is no mention of any garden there. However, both the Greek writers[23] and Chinese pilgrims[24] have clearly praised its congenial climate, fertile lands, plenty of fruits, and good pastures. But still, if there is any doubt about gardens in Taxila, we are sure that Sagala, probably modern Sialkot, the capital of Menander, certainly had its own gardens. According to *The Questions of King Milinda* – a 2nd century treatise, this Yonaka (Greek) city was laid out by wise architects and was situated in a "delightful country well watered and hilly, abounding in parks and gardens and groves and lakes and tanks, a paradise of rivers and mountains and woods."[25] The author also advises the architects of his time that all new cities must have "regular lines of open shops, well provided with parks and gardens and lakes and lotus ponds, and wells...."[26]

From the 11th century till the first quarter of the 16th century, Punjab was ruled by almost seven different dynasties headed by the Sultans of Delhi. During this period we have only a few casual references to gardens in Punjab. The earliest reference in Islamic literature to fruit gardens in Punjab is found in 372 A.H./982 A.D. in the *Hudud ul alam*, wherein Lahore has been mentioned as a town (*Shehr*) of infidels with numerous districts, markets, idol temples, and fruit-gardens.[27] A little later, Masud Sa'ad Salman Lahori (d. 1121 A.D.) in one of his beautiful Persian couplets describes Lahore as a "Marghazar" – a piece of land fully covered with green grass, probably an illusion to its parks and gardens.[28] But, Lahore has remained Marghazar-i-Punjab ever since then. On reliable literary evidence, we know that during the Ghaznavid period, there was a garden named *Bagh Sada Hara* known to the Iranians.[29] Whether Sadhahara is Shahdara near Lahore or Sodhara near Wazirabad, does not matter much. Both are in Punjab. Punjab was ravaged again and again during these five hundred years (1021–1526 A.D.) by conquerors and invaders. People either had no desire and will, or no resources and time, to build gardens for their leisure. Alternatively, if some gardens were built, they have vanished or were built-over during the Mughal period.

We owe it to the late Munshi Muhammad Din Fauq, who traced out references to at least five gardens in the city of Lahore alone – all belonging to the category of mausoleum-gardens – and all now vanished.[30] What did the pre-Mughal gardens look like? Babur informs us that these gardens were without running water and enclosures or wells, and their buildings were not beautiful.[31] In Punjab, in 925 A.H./1519 A.D., he founded his own garden the *Bagh-i-Safa*, at Kallar Kahar in the Salt Range - the first Mughal garden planted in the subcontinent. It was on the side of a huge rain water reservoir covering an area of about 3 miles, closeby was a marghazar, a running brook and a water spring at the foothill.[32]

The author of 'The Buddhacarita' has compared the Padmasanda Grove in Kapalvastu (Nepal) with the lovely grove of Nandana which had pavilions, tanks, and heavenly mansions.[33] Nandana in the Buddhacarita context may mean a heavenly mansion, but it is interesting to note that we have a place in the Salt Range of Punjab which is known since ancient times as Nandana. Today, it is famous for a lofty fort, encompassing an ancient Hindu temple and probably the base of a stupa.[34] It was an important hunting ground both of Akbar[35] and Jahangir.[36] On account of good soil and water, Akbar ordered in 1581 the making at Nandana of a garden which was accomplished excellently in a short time. It may be a mere coincidence that Nandana in Punjab is still locally called Baghanwala, i.e. the place of gardens. Standing on top of the Nandana hill, surrounded on three sides with still higher mountains, and with the verdure of a green deep valley on the

fourth side and the vast river Jhelum stretching far beyond in the east, Nandana in the Salt Range still gives the illusion of a heavenly mansion. A gateway to an old walled garden still stands at the foothill of Nandana Fort.

GARDENS OF LAHORE

During the Mughal period (1526–1799) Punjab got a time of peace and prosperity, and Lahore, for the first time in history, became the hub around which the political and cultural life of Punjab revolved. It became one of the three leading cities of the subcontinent. All Mughal emperors – particularly Akbar, Jahangir and Shah Jahan – and some Mughal queens, princes and princesses like Kamran and Dara Shikoh, Nur Jahan and Zebun Nisa had a special liking for this city. It was during this period that Lahore became famous as a city of gardens. From Kamran Mirza, Babur's son, to Aurangzeb Alamgir, the last great Mughal emperor, the rulers and their courtiers contributed towards the development and beautification of this city. Their role in building gardens and encouraging others in this direction is too well known to be discussed here.[37] Shalamar garden and the garden of Jahangir's mausoleum, (Fig. 1) to mention only two out of so many, have become legendary for their expanse and beauty. Suffice it here to say that the Mughals' love for gardens was somewhat hereditary. Wherever they lived or stayed, they dug canals, cut jungles, and built gardens wherein they planted imported fruit trees, flowers, and vegetables. But their gardens were not mere patches of green lands and groves of trees. Instead they had predominantly an architectural setting and decor which was out-and-out Iranian and Turanian in background, brought in here from Central Asia.[38] Naulakha Bagh, Bagh Kamran, Bagh Khawaja Dost Munshi - the most charming spot in Lahore as described by Abu'l Fazal,[39] and Bagh Khawaja Ghazi were of Humayun's period. Bagh Dil-Afroze, Bagh Khan-i-Azam, Sarai and Bagh Dahkada of Khan-i-Khanan,[40] Bagh Andjan, Bagh Raju, Bagh Malik Ali Kotwal, Bagh Mirza Nizamud Din Ahmad and Bagh Zain Khan Kokaltash were of Akbar's period. Bagh Mirza Momin Ishaq Baz, Bagh Shamsud Din, Bagh Dilkusha[41] (separate from the Bagh built around Jahangir's mausoleum), Bagh Anarkali and two gardens at Fatehgarh (Fig. 2a, b, c and 3) were of Jahangir's and Shah Jahan's period. Faiz Bagh, Bagh Bilawal Shah, Shalamar Bagh, Nakhla Wazir Khan, Chauburji Bagh, Bagh and Maqbara Asaf Khan, Bagh and Maqbara Nur Jahan, Perwaiz Bagh, Mushki Mahal, Bagh Abul Hasan, Bagh and Mausoleum of Ali Mardan Khan, and others were of Shah Jahan's period; and Gulabi Bagh, Bagh-i-Mahabat Khan of Aurangzeb's period, and so on and so forth. These are just a few names out of the total which once bedecked different parts of Lahore.

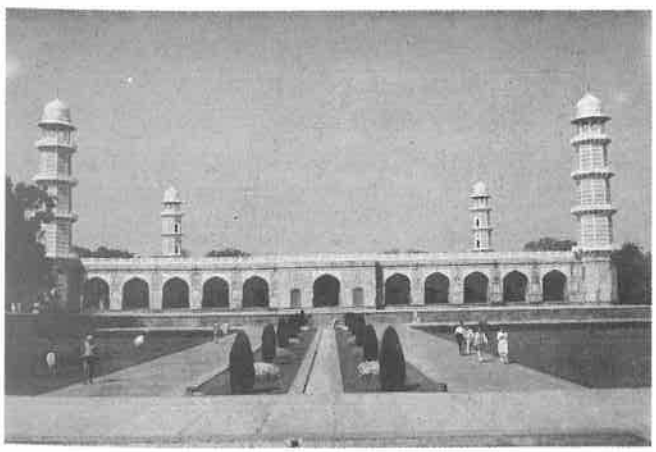


Fig. 1: Jahangir tomb garden.

GARDENS IN NORTHERN PUNJAB

But Lahore was not the only city which received the attention of royalty and courtiers who vied with one another in planning gardens and building structures therein. There are numerous cities, towns, and their suburbs where gardens were planted from the times of Babur and Humayun down to 1947 and even later. Here we briefly describe gardens in towns of the northern area of Punjab.

Sodhra

We have mentioned above that probably the Bagh 'Sada Hara' mentioned in a couplet of poet Haqoori, as quoted by Mulla Asadi Tusi (died 432 A.H./1040 A.D.) in Lughat-i-Pars was probably in Lahore. M. Abdullah Chughtai, on the other hand, opines that Bagh *Sada Hara* in Haqoori's couplet actually stands for Sodhra - an ancient city - on the left bank of river Chenab.[42] In the *Tarikh-i-Bahqui*, there is a mention of the Bagh *Sad Hazara*.[43] Does this garden also stand for Bagh *Sada Hara* or Sodhra? We are not sure. Anyhow, if Sada Hara was not Sodhra and there was no garden at Sodhra from the times of Ghaznavids or of other rulers prior to the Mughals, there was definitely a garden in Sodhra named as Ibrahimabad – Sodhra by Ali Mardan Khan after the name of his son. Here, he built several *havelis* and a garden on the pattern of Shalamar Garden, at a cost of six lacs of rupees. He also dug a canal from the River Tawi and brought it to Sodhra to irrigate this

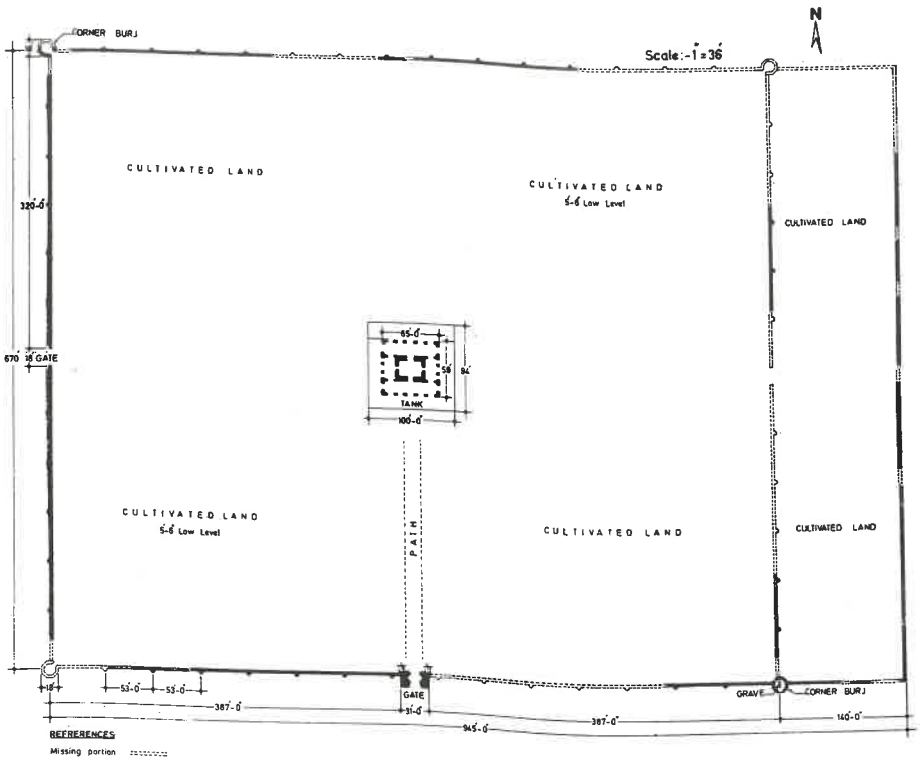


Fig. 2a: Plan of Mughal Garden at Fatehgarh, Lahore.

garden and reserved the revenue of two hundred villages for the purpose of populating Sodhra and its garden in a fine way.[44] Ibrahim Khan, son of Ali Mardan Khan died and was buried at Sodhra. A Mughal period *baradari*-like-*haveli* is believed to mark the center of this garden of Ali Mardan Khan.

Attock

A tomb and garden of one Bairem Khan or Bairem Beg are reported to be existing about one mile east of Attock.[45] The garden of Bairem Khan may be identified with the Bahram Baradari (Fig. 4) near Begum-ki-Sarai at Attock. But there is no tomb of Bahram Khan in this locality except the one of the saint Yahya Madani and an anonymous tomb called Kanjri Kotha, House of a prostitute, both of the period of Aurangzeb Alamgir.[47] The Baradari of Behram Khan has been identified, though not very convincingly, as Baradari of Behram Khan, son of Khushal Khan Khattak, and dated in the period of Aurangzeb (1650–1707).[48]

Gardens at Hasanabdal and Wah

At a distance of one *kos* east of Hasanabdal, Man Singh, Akbar's brother-in-law, built a pavilion in the center of a basin close to an *A'abshar*.[49] This tank is distinct from the tank which Khawafi Khan built close to the tomb of the Humam brothers. It was this spot where later on there developed a terraced garden under the orders of some Mughal emperor. Who? Opinions differ. Did Man Singh build this garden during the reign of Akbar? Certainly not. There is no mention of a garden or even a pavilion at Hasanabdal by Abu'l Fazl in his *Akbar Nama*.[50] Jahangir visited Hasanabdal several times and mentions the existence of a beautiful *A'abshar* or cascade about one *kos* east of Hasanabdal where in the middle of a water basin Man Singh, his maternal uncle, built

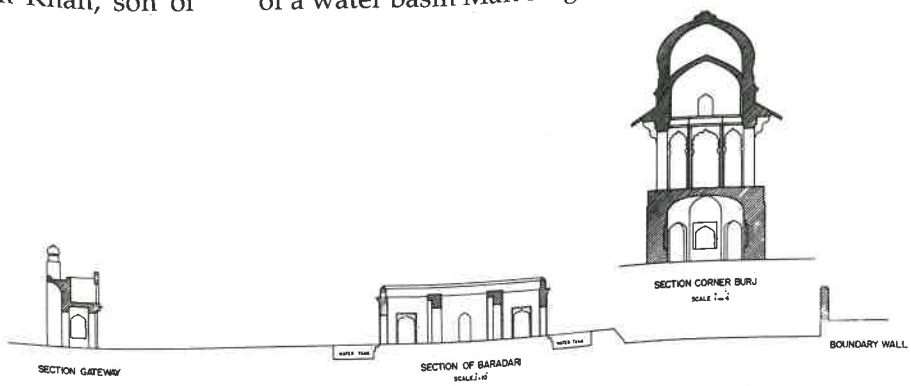


Fig. 2b: Section of Mughal garden at Fatehgarh, Lahore.



Fig. 2c: General View of Mughal Garden at Fatehgarh.



Fig. 4: General view of Behram Baradari at Attock.

a pavilion.[51] But he makes no mention of any garden built by himself or his predecessor – Akbar. The site of this cascade is certainly the Wah Gardens of today, where in the midst of a huge water-tank there is a platform which might have originally carried the pavilion of Man Singh, now vanished. The cascade has also vanished under a thick wall or mound, but the tank is still fed from a natural fountain. During the reign of Shah Jahan, we meet frequent references to a garden at Hasanabdal.[52] We are told that on May 27, 1646, Shah Jahan alighted at the place (*Daulat Khana*) of Hasanabdal. Here by the side of a tank, attractive royal buildings have been prepared which were liked by the emperor.[53] It is logical to presume that Shah Jahan ordered these constructions during some of his previous visits. But still, the prior existence of a *pucca* tank, with a pavilion in the center and possibly some other buildings or layout of a terraced garden[54] going as far back as the times of Akbar on this very spot cannot be ruled out. As it stands today, the Wah Garden is spread east-west on at least two terraces, as at present, with a Faroudgah or resting house at the extreme east, a huge tank, a pavilion and a *hammam* on the present second terrace, a *Char bagh*, a running canal and *abshar* on the lower terrace, a walled enclosure, and the main entrance on the extreme west (Fig. 5a, b, c).[55] Several of its important features have been brought to light only recently by the labour and researches of M. A. Halim of the Department of Archaeology and Museums.

In Hasanabdal proper, there is the small tomb-garden of Lala Rukh about which we have so many legends, but no confirmed historical account.[56] (Fig. 6a, b) It is a small square garden, enclosed by four walls with four low corner *burjs*, a single gate, a centrally placed high pedestal with a grave on it, and *charbagh* around it. It is perhaps the smallest, or one of the two smallest historical gardens in the country – the other one is a Sikh period *Khana bagh* in the *haveli* Teja Singh adjacent to *haveli* Khushhal Singh in Chuna Mandi, Lahore, and it is still extant.

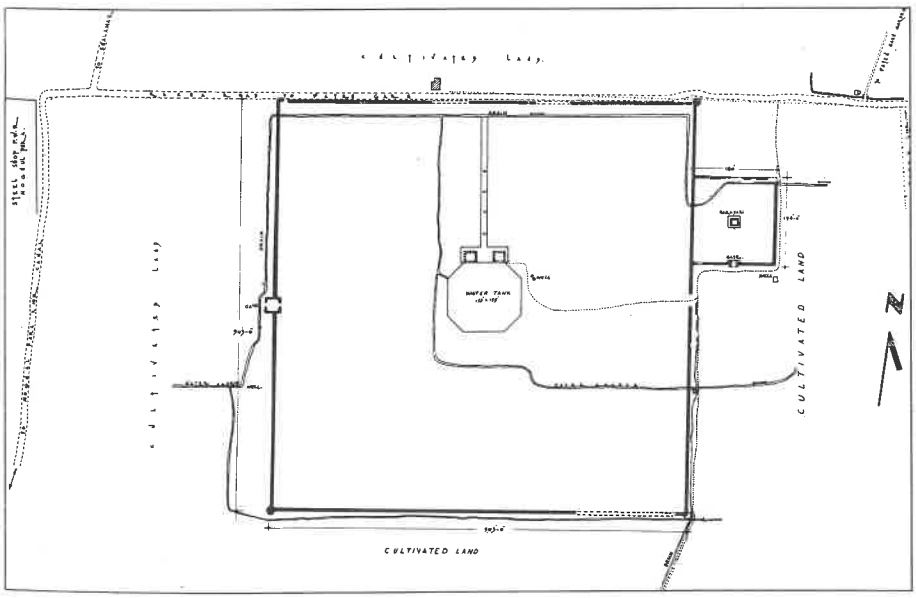


Fig. 3: Plan of Mughal garden near Fatehgarh attributed to Dara Shikoh.



Fig. 5a: View of Wah garden near Hasanabdal.



Fig. 5c: View of western gateway from lowest terrace.

Close to Lala Rukh's garden is a medium size water reservoir full of large size *Rahu* fish sacred to Baba Wali Qandhari. It was built during Akbar's period by Khawaja Shams ud Din Muhammad Khwafi close to the joint tomb of the Humam brothers.[57]

Was this the basin having fish with gold-rings which William Finch attributed to Akbar or fish with pearls in their noses as Jahangir himself reported in 1607 A.D? Or, was this basin of fish the building of Man Singh on the site of the present day Wah Gardens? We are not sure. I would identify the basin of fish with the former cases rather than the latter for the reason that the present tradition of no-harm to fish in the basin may go back to the idea of no-harm to Jahangir's fish with pearls in their noses. In any case, water from this Khawafi Khan's reservoir used to feed some gardens, as we are informed by Jahangir.[58] Where in Hasanabdal were these gardens? We have no idea today. A search may help us in determining their locations.



Fig. 5b: View of middle terrace from western gateway.

Jandiala Sher Khan

There is some structural and archaeological evidence to show that the Akbar period *baoli* at Jandiala Sher Khan was actually a part of a bigger complex, probably a *sarai*, with a mosque.[59] In front of this dilapidated mosque are the remains of an extinct garden. Its water channel, a sunken tank and square plots can still be seen, though they have never been referred to by any scholar uptil now (Fig. 7).

Rohtas

There was also a small garden on the roadside close to Rohtas Fort which Jahangir inspected on his

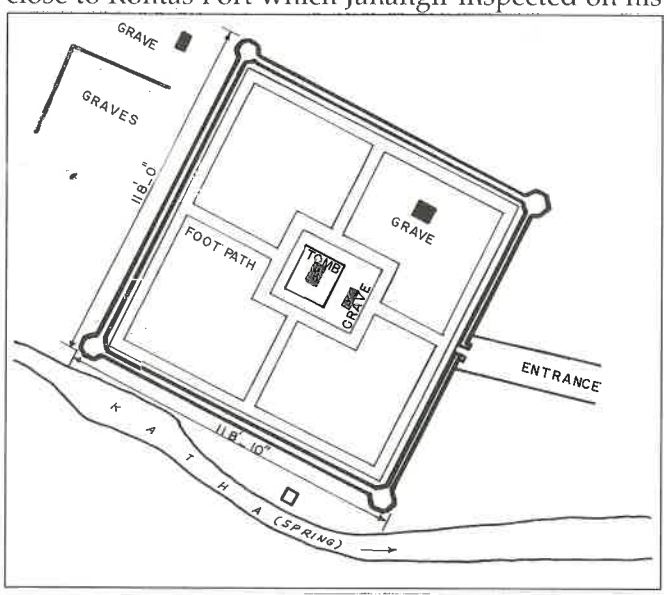


Fig. 6a: Plan of Lala Rukh Tomb at Hasanabdal.



Fig. 6b: General view of Lala Rukh tomb at Hasanabdal.

way to Kashmir in 1029 A.H./1620 A.D.[60] He enjoyed its flower blossoms. I venture to identify this garden with the Pakka Bagh, remains of which can still be seen on the left bank of Kahan River opposite Rohtas Fort and very close to the Jahangir period Sarai Jhandu - also called Sarai Sultan.[61] It now preserves only a part of its enclosure wall and one of the four corner bastions. Probably it is the same Jahangir period building shown quite close to Rohtas Fort on a 1862 map in the India Office Library, London.[62]

Kallar Kahar

Babur's Bagh-i-Safa or Garden of Purity at Kaldeh Kahar (Kallar Kahar) in Chakwal district on an old route from Kabul to Lahore, through the Salt Range, was built by Babur in February 1519 A.H./925 A.D. Unfortunately, today only a huge block of a flat-surfaced stone called Takht-e-Baburi remains intact. But otherwise, the picturesque setting of a mountain top fully covered by fruit trees, its silence broken by running brooks and dancing peacocks and a vast lake spreading far below provides an exquisite setting for a Mughal garden. How could Babur have missed such a site? Was it a typical Mughal garden with walled enclosures, paved pathways, and well laid out courts? Or, was it a garden laid out by nature as it is even today? There is great need for making a surface search for the remains of this garden, to determine its original layout. Leyden and Erskine writing in 1921 but quoting Murray in 1883 inform us: "This is Kala Kahar a place in the Jhelum District twelve miles from Malot. The lake still exists, as well as Babur's garden, and the platform cut out of the solid rock, on which he sat to admire the view."[63]



Fig. 7: Partial view of Mosque-garden at Jandiala Sher Khan.

Hunting Grounds and Gardens

Jahangir's period not only saw some exquisite gardens constructed at Lahore, but he also had, to his credit, a beautiful garden laid out at Jahangirabad – now called the Hiran Minar. It was his favourite hunting ground and frequent halting place on the way to Kashmir and Kabul. Jahangir himself tells us how in 1607 A.D. he ordered the construction of a royal residence, tank, and minaret.[64] As it stands today, the site of Hiran Minar comprises a huge square pucca water tank originally fed through an elaborate arrangement of irrigation canals brought from some distance and cleansed through a filtering tank. In the center of the main tank is an octagonal pavilion approached through a cause-way with a gateway, behind which stands the 100 foot high minaret. The garden on two sides of the tank is a modern one, but there must have been in ancient times an original garden on the site.

But Jahangirabad (Hiran Minar) was not the only hunting ground of Jahangir. Nandana,[65] Girjakh,[66] Hasanabdal,[70] Rohtas,[71] Arzine near Kabul,[72] and some places near Lahore were also favourite hunting places of Jahangir. Kano Wahn in the vicinity of Lahore was a favourite hunting place of Shah Jahan.[73] Whether or not Jahangir built some permanent structures at these places and gave them some semblance of a garden, we are not sure. Butai Shah in his *Tarikh-i-Punjab* (Persian) mentions the existence of some buildings of Akbar's period at Kano Wahn (see f.n. 73). At Chandwala (Jandiala – there are several localities with the names of Jandiala in Punjab) he certainly mentions having erected a tower,[74] probably in the fashion of Hiran Minar at Jahangirabad – the present day Sheikhupura. Where was this Chandwala or Jandiala? Was there a tank, pavilion or a garden around or near this tower? We are not sure. Probably all these buildings were there. We still have to discover the site of Chandwala, its minaret, and surrounding structures, if there were any.

Ghakhar Chief of Rawalpindi, built here a garden and named it Bagh Muqarrab Khan.[83] Besides this, Ranjit Singh (1799–1839 A.D.) also built here several gardens including a baradari in the garden of Muqarrab Khan in 1835 where the Maharaja himself laid the foundation stone and wherein he resided frequently. Lala Kanhya Lal was the supervisor whereas Sardar Gulab Singh was the over-all incharge of this work.[84] Today, we have no idea as to where in the city this garden was located.

Kunjah

In the town of Kunjah, district Gujrat, there still stands up to a considerable height the remains of a monumental gateway (Fig. 10a), central *baradari* (Fig. 10b) and a few other remains of Bagh Kirpa Ram.[85] It was a walled garden. The original construction appears to belong to the Mughal period but it became well known during the Sikh period.

Wazirabad

Wazirabad, the city founded by Hakim Ilmud Din alias Wazir Khan during the reign of Shah Jahan, is another site with potential for garden studies.[86] Wazir

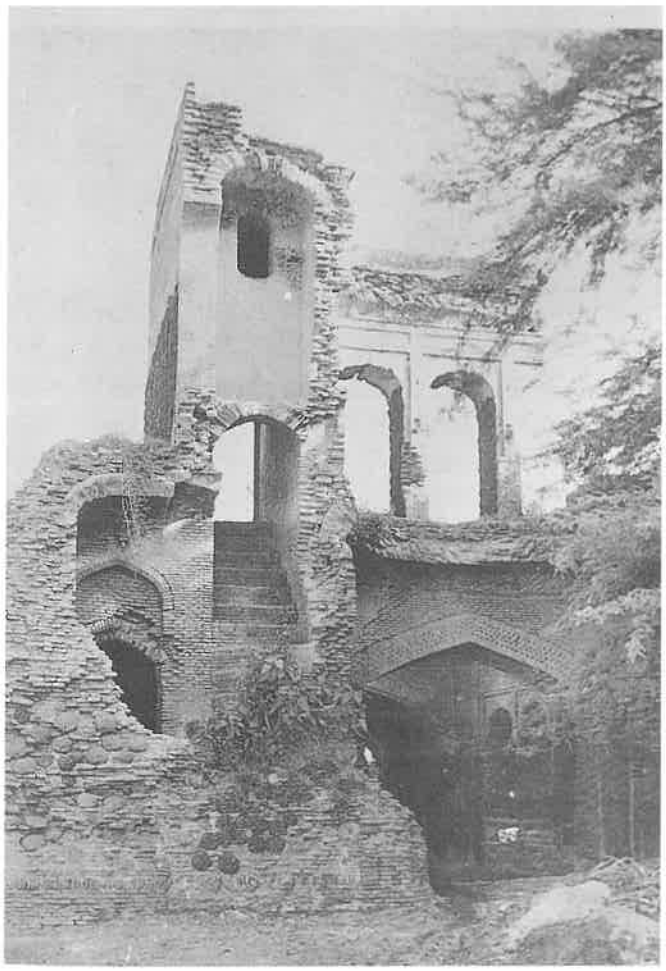


Fig. 10a: Gateway to Bagh Diwan Kirpa Ram at Kunjah.

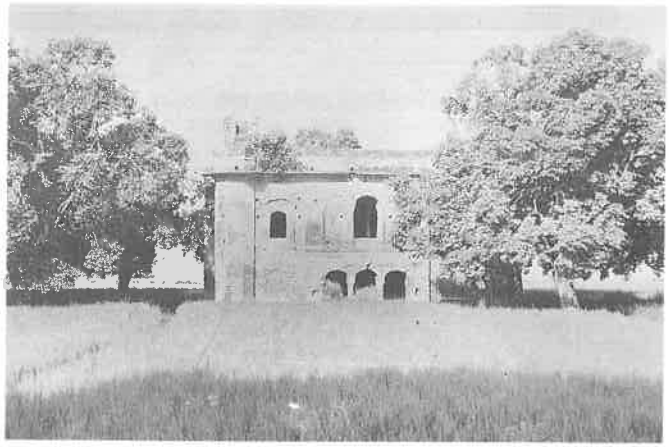


Fig. 10b: Central baradari of Bagh Diwan Kirpa Ram at Kunjah.

Khan built here a Faroodgah or Rest House – probably like the one at Wah Gardens. Only some traces of it were visible till recently in the north-eastern corner of Samman Burj. An erroneous local tradition asserts it to be the palace of Nur Jahan. Besides, in 1987, close to the famous Shish Mahal of Diwan Hikmat Rai, a courtier of Ranjit Singh, I discovered the remains of a terraced garden with a hanging-well (*hawai kunwan*) and cascades on the side of Palkhu Nala. Was Diwan Hikmat Rai the builder of this terraced garden or did he build his palace of Mirrors because a terraced garden was already there? We are not sure. Probably the former was the case. If so, it proves that the Sikhs carried forward the Mughal tradition of terraced gardens through the 19th and 20th centuries. The last recorded terraced garden was built in Lahore in 1890 by Rai Pandat Khabar Dhan in what it is today Mohalla Nonarian near Samanabad.[87] We also have here in Wazirabad the residence of the Italian General Avitabile called Samman Burj on the Palkhu Nala. It was built in 1834 within a walled-garden with a Samman Burj in the north-west corner of the garden.[88] Its main gate opening on the main bazar of the city is still intact. On the bank of the same *nala* there were more gardens with pavilions. One such garden was built at great cost by Thakur Das; another built by Mohan Singh was near the *caravan sarai*. Today both of these have vanished.

Gujranwala City Gardens

With the decline of Mughal power, the zeal for planting gardens also waned for some time. However, with the rise of Sikh power, despite its chaotic rule and brief existence, Punjab's interest in gardens once again revived. Besides the surviving Mughal gardens, various Sikh nobles had their own gardens

planted in the city of Lahore. I have listed a brief description of at least 24 of them in my book on Lahore Gardens.[89] One has briefly to glance over the map of Lahore on display in the Punjab Archives to see how numerous were the Sikh gardens of 19th century Lahore. But Lahore was not the only beneficiary of their attention. Several other cities and towns also got their gardens during this brief rule. Some Sikh gardens at Gujrat and Wazirabad have been discussed above. The best known and the earliest Sikh garden, however, is the Sheranwala Bagh in Gujranwala.[90] It was originally named Bagh Mahan Singh, after the name of its founder, the father of Maharaja Ranjit Singh. The original area is still well marked by an enclosure wall, but its layout has been lost and grossly encroached upon. The most outstanding feature of this garden was its double storey *baradari* tucked away near the western wall. It had the most exquisite and elaborate fresco paintings I have ever seen in a *baradari*. It once housed the municipal library and a small museum – both now gone. Fortunately, a plan of this building was prepared before it was damaged in 1993 (Fig. 11a, b, c & d). Today, it is in ruins – half demolished, half still standing – a protected monument notwithstanding.

At Gujranwala again is another very well preserved Sikh period Baradari located within the premises of a mission school for girls on the D.C. Road



Fig. 11a: Baradari of Mahan Singh in Bagh Sheranwala (Photo 1987).

closer to the railway line just opposite Regent Cinema. As rare elements of baradari architecture, the Gujranwala *baradari* has a basement and a Sawan Bhadun or Chini-Khana as part of its garden complex (Fig. 12). The four corner *burjs* of the paved pathway are still preserved.

In the heart of the city, close to old Sabzi Mandi and behind the famous *haveli* marking the birth place of Maharaja Ranjit Singh, there was during the Sikh period a small garden called Hazuri Bagh. The garden site has now given way to a heavy concentration of houses, but the memory of the garden continues. Besides, on the Kacha Eminabad Road opposite the Government High School there was the

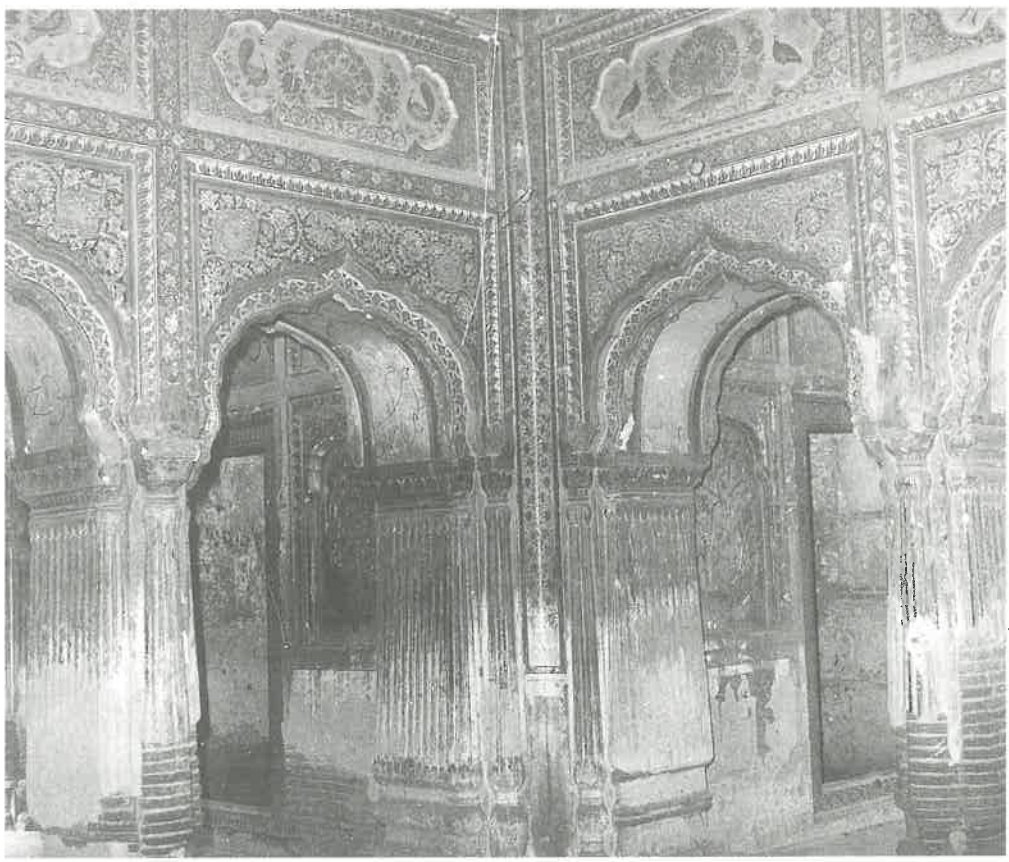


Fig. 11b: Interior of Baradari Mahan Singh decorated with fresco painting.

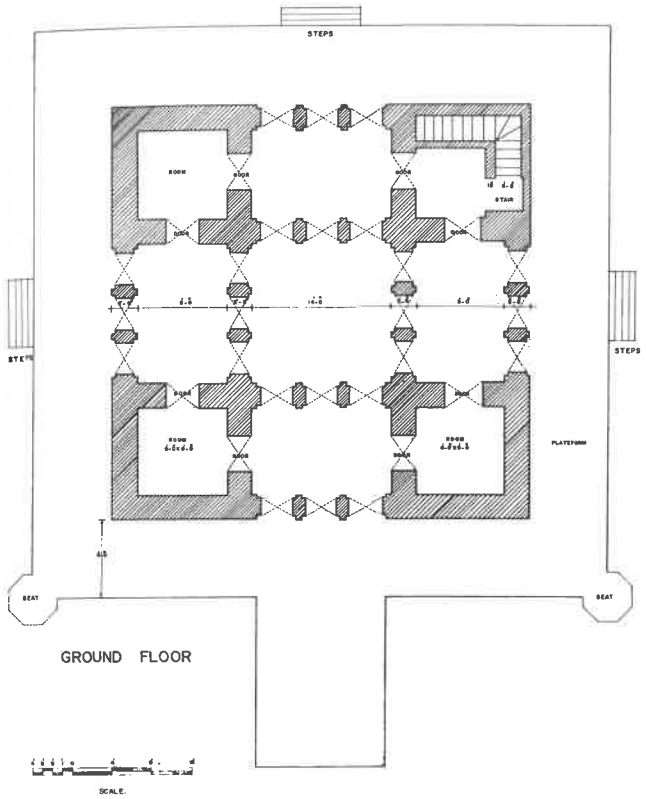


Fig. 11c: Ground floor plan of Baradari of Mahan Singh in Sheranwala bagh Gujranwala.

famous Bagh Kanhya Lal. This garden flourished a little later than 1947. There was another fine garden, called Bagh Mahr Wazir Khan, on the Noshehra Road in the southern outskirts of the city. Though a private garden, it was open to public who used to

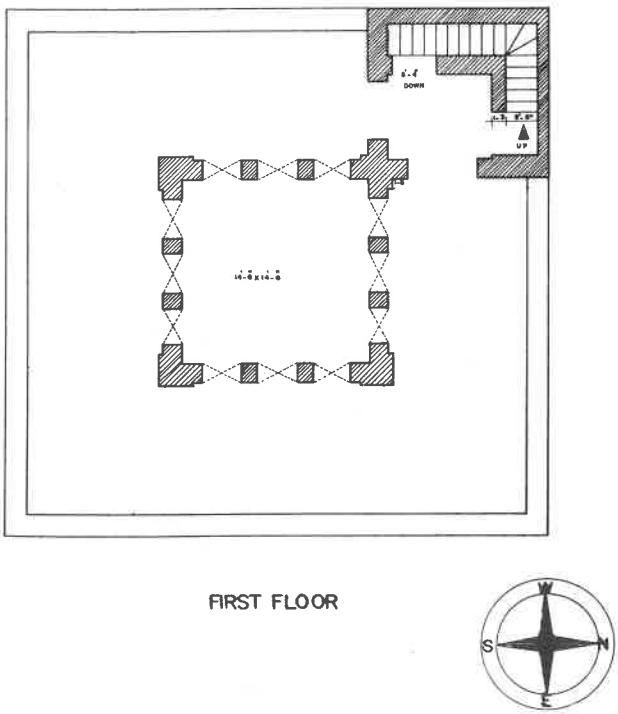


Fig. 11d: First floor plan of Baradari of Mahan Singh in Sheranwala bagh Gujranwala.

throng in it early in the mornings throughout the year. This garden too has vanished under pressure from urban developers. To complete the garden tradition of Gujranwala one can not fail to mention the beautiful Company Bagh with its beautiful Labhu Ram Club building built by the British Government in the northern outskirts of the city in the posh area of the Civil Lines. This too has now vanished giving place to the ugly monster called Stadium. The loss of so many historical gardens has recently been amply rewarded by the building of a beautiful modern garden called Gulshan Park – imitating the name, plan and decor of the much larger predecessor Gulshan-i-Iqbal Park in Lahore.

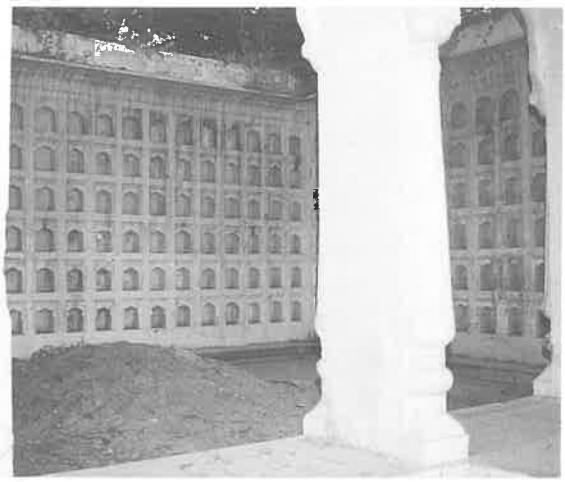


Fig. 12: Chini Khana in the garden of Hari Singh Nalva.

Alipur Chattha, Bucha Chattha, and Rasulnagar

Alipur Chattha was founded by Pir Muhammad Chattha in the early years of the 18th century and named after his father Ali Muhammad. It was renamed Akalgarh when Mahan Singh conquered it from the Chatthas. Besides some historical buildings, there is a cluster of gardens and *baradaris*.[91] Remains of at least four large gardens are still there but are gravely endangered. One of them is the walled garden called Bagh Ram Das. It has a huge water tank and a Hindu Temple – the latter of the 19th century. As already mentioned above, I am tempted to identify it as the Bagh Ram Das where Jahangir stayed for some time in 1607 during his hunting expedition between Lahore and Nandana.[92] Alipur Chattha is almost midway between Lahore and Nandana, falls on the route which Jahangir used to follow from Lahore to Kashmir (i.e., Sheikhupura-Hafizabad-Qadirabad-Gujrat), and is favourably situated close to the River Chenab.

Beside Bagh Ram Das is the impressive Bagh

Diwan Rai Chand now called Bagh Rao Alam Sher. It is a well preserved Mughal style walled garden with a monumental gateway, a decorative *pacca* brick-on-edge *khayaban* (walkway) and a huge *baradari* in the center. This is perhaps the most beautiful garden that has survived outside Lahore. Its single-storey central *baradari* is the only example I know that has been decorated extensively with fresco painting both internally and externally (Fig. 8). The magnificent pavilion is endangered to extinction because the owner in 1987, when I last visited it, was tempted to extract the huge deodar wooden beams hidden in its construction.[93] East of Bagh Ram Das is another un-named walled garden. Similarly, just on the main road, close to the Railway crossing, are the remains of another walled garden called Bagh Srasti Diwan. It was still in pretty good shape in 1987 when I visited it last.

Near Alipur Chattha is a small village called Bucha Chattha. Here once stood a Mughal garden. Today, only part of its central *hauz* with fountains is visible.[94] It may be mentioned that Alipur Chattha has played an important role in the history of Punjab during later Mughal and early Sikh period.

Close to Alipur Chattha is Rasulnagar, also founded by Chatthas in the early years of the 18th century. Situated on the left bank of Chenab River, Rasulnagar was a well frequented ferry point on a direct road from Lahore to Peshawar via Sheikhupura. Outside the town and on the bank of the river still stands a Summer House Pavilion built and used by Ranjit Singh during 1830–1837. It was originally surrounded by a luxurious orchard and a garden of which only vestiges remain.[95] Close by are a few graves and a low obelisk erected in memory of Lt. Colonel William Havelock and a few other un-named British soldiers who lost their lives during the famous Battle of Ramnagar (another name of Rasulnagar) in 1848. The *baradari* is in a bad state of preservation.

Pasrur

Near Government High School for Boys at Pasrur – the *Parsurur* (A place full of joy) of the Mughals – we have a beautiful well-preserved *baradari* (33.9 feet by 33.9 feet) built during the reign of Aurangzeb Alamgir by one Diwan Lala Sankat Rai alias Takiar Dhausa (Fig. 13). Originally there was a garden around it.[96] Today no other structure exists there. Probably, this garden was irrigated by a canal which Prince Dara Shikoh had earlier ordered to be dug from Deq Nala to Pasrur to irrigate the huge walled octagonal tank (*talab*) which his great-grandfather Akbar had built for this city.[97] This idea gets confirmation from the fact that at the time of building the *baradari* and garden at Pasrur, Diwan Sankat Rai also got the octagonal tank repaired, presumably also at the time of diverting the canal to the garden.

GARDENS OF SOUTHERN PUNJAB

All of the gardens referred to so far are, or were, located in northern Punjab, a region naturally more favourable for the development of gardens. Southern Punjab, on the other hand, was less fortunate in the past in this respect. Before the introduction of canal irrigation, the scarcity of water, combined with



Fig. 13: Central Pavilion of Bagh Sankat Rai.

a hot and dry climate had been a deterrent for development of gardens in the area. Due to the introduction of irrigation canals and tube-wells, the maiden lands are turning into huge patches of fruit and flower gardens giving an entirely new look to the landscape of the region.

But the past history of the region is not totally devoid of gardening activities. With some labour we come across references to some gardens in Kasur, Satgarha, Multan, Shujabad, Bahawalpur and Dera Nawab Sahib. The earliest ones included a garden in Punjab planted by Mir Chakar Khan Rind (d. 1565), the great Baluch leader who added a ring of gardens around his newly capital at Satgarha as a part of its town planning.[98]

Kasur

About 35 kilometers south of Lahore is Kasur - a city of Pathans. There might have been several gardens attached with the residences of rich people of which there were many around the town. I mention here one such garden which once flourished as a *Khana Bagh* of the Mubarak Haveli built in 1865 by Sardar Muhammad Zulfiqar Khan outside Kot Fateh Din Khan. The *Baghicha* was spread over an area of 10 kanals while the attached palace covered a space of two kanals. A canal was brought to the palace and garden for irrigation purposes. There were water-tanks (*hauz*) in the Paien Bagh. In 1901, a guest house named Hashmat Mahal was built in one corner of the garden. There was also a small mosque and a spacious room attached to it near water-tanks. Amidst these buildings was also the *Bughghi Khana* or Carriage Room. On three sides of the garden were low enclosure walls.[99]

Hunting Pavilion At Muhammadipur

In another direction from Lahore, still towards the south, we have recently discovered a beautiful pavilion or *baradari* near Muhammadipur and Mandai Kai Narain in Kasur District.[100] The famous Changa Manga forest is quite close to it. This pavilion, with its beautiful fresco painting under the eaves, stands in the middle of a walled enclosure having four corner *burjs*. It may date to the Akbar-Jahangir period (Fig. 14, a,b). In some later period two additional structures were added on one side. It is locally called Dera and is located on the left bank of the old bed of River Beas. With no big town nearby, this *baradari* could have been used only as a hunting place. There appears originally to have been a small garden inside the walled enclosure. More work is needed to identify this hunting site near Lahore and clear the garden within its enclosure-walls.



Fig. 14a: General view of baradari on the bank of old river Beas near Muhammadipur.

Multan

Multan has always been the biggest city in southern Punjab. But as compared with its antiquity and importance, the garden tradition in this city hardly goes back 300 years. During this period we read and hear about eight gardens which flourished in this city from time to time. Only a few of them had traditional structures within their enclosures.[101] The earliest gardens referred to are: Bagh Ram Jass Wala and Bagh Qasia Wala – both planted about 300 years back, which had mainly mango trees for shade and fruit. We are not sure whether or not these two gardens had a proper layout, a walled enclosure, or other necessary structures.

The most renowned of all the historical gardens of Multan, and still a popular public garden outside Daulat Darwaza is Bagh Aam Khas. Prince Murad Bakhsh, son of Shah Jahan, is believed to have constructed it. Inside were courts and residences of princes. Nawab Muzaffar Khan repaired it during the last days of his rule. Being his favourite place,



Fig. 14b: General view of baradari on the bank of old river Beas near Muhammadipur.

Diwan Sawan Mal had his court here and added some residences for himself and his security guards. A large part of it continues to function as a public garden even today. To the south of it, there was the Bagh Zabardast Khan which, as late as 1902, contained a swimming bath.[102]

Saddozai Pathans arrived in Multan in the 17th century and were allowed to settle outside the walled city in different groups. Their earliest settlement called *Kirri* lies on the road between Haram Gate and the cantonment.[103] Here Shakir Khan Saddozai built the Bagh Shish Mahal. Later on another Saddozai Abid Khan built a mango garden called Bagh Abid Khan near the present day airport. But the best of the Saddozai gardens is the one called Bagh Langhai Khan situated outside Bohar Gate and close to Kirri Afghanan. It still exists though much smaller than its original size. Some two hundred years ago one Langhai Khan Afghan built it. Later on it was purchased by Zahid Khan, Governor of Multan, and still later was repaired by Nawab Muzaffar Khan.

There used to be another garden near the Railway Station named *Bagh Begi* in an illusion to the Begum (wife) of Prince Muhammad Muizud Din Shah. It was repaired by Nawab Sarfraz Khan. West of the Railway Station, prince Murad Bakhsh is said to have built a remarkable house-garden named Hazuri Bagh.[104] Elphinstone and Burnes, the travelers, halted in the buildings of this garden. It was also the place where the ill-fated Agnew and Anderson were to stay in 1848. For many years, the main building was used for the Commissioner's residence.

And the last garden, the Company Bagh, was planned by the British Government within the limits of Multan cantonment. It used to be the most beautiful and important garden of this city.

Shujabad

Further south of Multan is the fortified town of Shujabad founded in 1750 by Nawab Muhammad Shuja Khan. The Traveler Masson,[105] who passed Shujabad on his way from Sindh to Lahore in 1827 noted near this town several gardens, particularly the one bearing the name of Muzaffar Khan. E.D. Maclagan locates another old garden, a few miles south of Shujabad, known as the Mubarik Bagh.[106] It was in this garden that the residents of Shujabad received Nawab Muzaffar Khan when he returned to this city after performing Haj.

Bahawalpur

Further south is the city of Bahawalpur and the town of Dera Nawab Sahib – the two major cities that owe their existence to the Nawabs of Bahawalpur state. In Bahawalpur, their capital, they had their beautiful palaces named Nur Mahal and Gulzar Mahal. Both were surrounded with capacious gardens. Attached to the official residence of the Nawab at Dera Nawab Sahib, they had built a new Shalamar Bagh.[107]

Still further south are the limits of Sindh with a climate akin to Southern Punjab. Here at least at one site – Rohri – on the bank of the Indus and close to the fort of Bhakkar on an island, we read about a delightful *chahar bagh* going back as early as the times of Humayun. It is attributed to have been built by Mirza Shah Hussain Samander. Humayun stayed here for some time during his flight from Punjab to Sindh before leaving for Iran in 1540.[108] Similarly, in the vicinity of Bhakkar we read about another garden named *Bagh Ayina* or the Garden of Mirrors at or close to the village named Jun. Humayun stayed here for sometime during his flight from Umerkot to Bhakkar in 949 A.H/1542 A.D.[109]

BRITISH PERIOD GARDENS

The Punjab tradition of gardening was kept alive throughout the British rule. Unfortunately, the majority of our scholars are still not willing to regard British period gardens as historical monuments. It is time we change this attitude. The best recipient of British period gardens was once again the city of Lahore.[110] We had here the five mile long Circular Garden which Lady Harriet Dufferin, wife of Lord Dufferin, the governor-general of India, praised very warmly and touchingly in 1885. Then there is the Bagh-i-Jinnah – originally the Lawrence Garden constructed in 1862 and the huge Minto Park, the former Parade Ground, now renamed as Iqbal Park. Here was played the first Polo match in Lahore in the early 1850's. The Rattigan family built a Soldier's Garden before 1856 behind Data Darbar. And so in 1890 Rai Pandat Khabar Dhan built Ram Bagh popularly known as New Shala Bagh as already mentioned.

Outside Lahore, the British Government established several Company Baghs in certain cities. Two Company Baghs, one each in Gujranwala and Multan, have already been mentioned. Inside Dera Nawab Sahib, one of the Nawabs of Bahawalpur built a garden and named it Bagh Shalamar.[111] Probably

it was also a terraced garden. The famous Sethi family of Peshawar originally hailed from the historic city of Bhera in Punjab.[112] They migrated to Peshawar some 200 years back and controlled much of the trade between Central Asia and Peshawar. Besides being men of wealth, Sethis were men of fine taste as well. In Peshawar they built beautiful houses in Mohalla Sethian. But they never forgot their ancestral land – Punjab. In the 19th century they built a huge garden next to Mona House Farm, near Remont Depot in Sargodha district and named it Rehmani Bagh. Till recently, they had been visiting it every year. They also built a similar garden at Tashkurgan (China) in the 19th century and named it Peshawari Bagh.

The beautiful gardens around the Archaeological Museum at Taxila are also part of the Punjab tradition in garden building. As it stands today, it is a mixture of European-cum-Mughal style of garden with a D-shaped garden on the front and a terraced *char-bagh* on the back side.

CONCLUSIONS

After Independence there developed a general apathy towards our cultural heritage. As regards historical gardens, this apathy still continues. The worst examples are to be found in Lahore - proudly called the city of gardens. During the last 48 years we have lost a number of historical gardens. Among them are the terraced New Shalamar Bagh, the Shalamar-like garden called Mushki Mahal, the famous Angoori Bagh, Mehtab Bagh and Inayat Bagh, the coveted Circular Bagh, and the Gulshan Park Bagh attributed to Dara Shikoh. If no remedial action is taken quickly, a still worst thing is going to happen to the Fatehgarh Bagh - the only genuine Mughal garden which still survives in Lahore besides Shalamar and the garden at Jahangir's Tomb – which now is facing the same dilemma.

Paradoxically, the Government is spending huge funds on establishing new gardens and parks in the city. During last few years a number of prestigious treeless gardens and parks of modern designs have come up nicely. These are the Race Course Park, Model Town Park, Ittefaq Park, Nasir Bagh, Canal Bagh Park, Minar-i-Pakistan Park, Gulshan-i-Iqbal Park, Jallu Park, and the still developing Lahore Park. Gulshan Park in Gujranwala, Ayub National Park in Rawalpindi, Shakar Perrian at Islamabad, Baburi Park at Khushab, Shams Sabzwari Park in Multan, Abbasi Park in Bahawalpur and numerous others - are all welcome additions. But one wonders at what cost these new gardens and parks are being developed and maintained. A nation which cannot preserve its old cultural heritage, is not likely to be fit to preserve its present heritage. This is the lesson we have yet to learn.

FOOTNOTES

1. For a summary account of historical gardens in East Punjab (India) - namely Aam Khas Bagh at Sirhind, a Mughal garden at Pinjore near Chandigarh, Babur's Kabuli Bagh at Panipat, Bagh Irm-e-Kausar (or Jal Mahal Bagh) at Narnol, Akbar Bagh at Kalanaur, a terraced garden at Batala, and three gardens one each at Hissar, Nakodar and Mehm see: Subash Parihar, *Mughal Monuments in the Punjab and Haryana* (Delhi: 1985) pp 10–13, 5 and 52.
2. Sri Lankan archaeologists are more fortunate in this respect as they have discovered and excavated ancient water-gardens at Sigriya that can be dated as far back as the 5th century A.D. For details see Prof. Senake Bandranayake, "Sri Lanka's Contribution to Asian Garden History," 1993 (typed copy supplied by the author).
3. The *Kautiliya Arthashastra*, English translation by R. P. Kangle, printed alongwith Urdu translation by Shan-ul-Haq Haqqi and an Urdu foreword (*Maqadama*) by Muhammad Ismail Zabeeh (Karachi; 1991), Sections 52-53, p. 106 (English).
4. See for example various sections of: the *Buddharma Pandarika or The Lotus of the True Law*, trans. by H. Kern, in the *Sacred Books of the East* (henceforth *SBE*) series, vol. XXI, London: 1884, (Reprint. Delhi: 1980); *The Gatakamala or Garland of Birth Stories*, trans. by J.S. Speyer, *SBE* series, (London: 1895); *Dialogue of the Buddha*, trans. by Rhys Davids, 2 vols. (London: 1899); *The Buddhacarita or Acts of the Buddha*, trans, by E. H. Johnston, 2 parts, 1936 (Rep. Delhi: 1972); the *Jataka or Stories of the Buddha's Former Births*, edited by E. B. Cowell and trans. by Robert Chalmer, vol. I & II, (London: 1957), ed. Forecaux, in Annales du Musee Guimet, tome sexieme, (Paris: 1884).
5. All mentioned *et passim* in E. B. Cowell's *Jataka*, loc.cit.
6. *Buddhacarita*, op.cit., iii. 63, i, 6; iv, 1; etc.
7. Jetavana was at Savathi, about forty-five leagues from Rajagarha in Kosala Kingdom. See E.B. Cowell, *Jataka* I, 1, 9, 38, 172, 183, 314 *et passim*. Here later on grew up the Jatavana Vihara.
8. A Foucher, *L'art greco-bouddhique du gandhara*, tome premier, (Paris: 1905) 475, fig. 240.
9. E. B. Cowell, I, 183.
10. *Buddhacarita*, iv, 1.
11. E. B. Cowell, I, *Jataka* No. 75, I, 183.
12. *Ibid.*, II, 90, (Asadisa Jataka).
13. E.B. Cowell, I, 152-53 (Andabhuta Jataka). Also see Harald Ingholt, *Gandharan Art in Pakistan*. (New York: 1958), 50, no. 7 (Dipankara Jataka).
14. "Courtesy is the balm of women; courtesy is the best ornament; beauty without courtesy is like a grove without flowers" (*Buddhacarita*, iv. 70)
15. E. B. Cowell, I, 45, 118, 135. A gardener named Sanjaya is mentioned in Vatamiga Jataka, p. 45.
16. *Ibid.*, I, 119.
17. *Ibid.*, II, 180.
18. *Ibid.*, II, 67.
19. E. B. Cowell, I, 45, 118, 135. A gardner named Sanjaya is mentioned in Vatamiga Jataka, II, 51, 52, 165.
20. *Ibid.*, II, 39.
21. *Ibid*, I, 14, 32 *et passim* (Mango Grove), 231 (Palm Grove), and

35, 44, 57, 67, 174 *et passim* (Bamboo Grove). During the 16th-18th centuries, the Mughals did have this tradition of planting specialised gardens such as: Angoori Bagh (Grape Garden), Badami Bagh (Almond Garden), Anarkali (Garden of Buds of Pomegranates), Nakhla Wazir Khan (Wazir Khan's Date-grove) and Gulabi Bagh (Rose Garden) - all in Lahore. See for details: Saifur Rehman Dar, *Some Ancient Gardens of Lahore.* (Lahore: 1977), 2nd ed. 1989, 7. Idem., *Historical Gardens of Lahore,* (Lahore: 1982), pp. 7, 10.

22. There are at least three dozen *jatakas* wherein Takkasila or Takshasila (Taxila) appears as a city famous for its education in varied subjects and for its celebrated teachers and learned *Brahmans* worthy of imparting teaching to kings and princes. See for example: E.B. Cowell, I, 71, 126, 137, 148, 173, 203, 217, 237, 240, 243, 260, 285, 317, & 321 and II, 2, 27, 32, 36, 47, 50, 59, 60, 68, 96, 121, 141, 189, 193, 195, 196, 218, 221, 224.
23. Plutarch, VII. lix and Strabo, XVI. 1, 17, 28 for example.
24. "The kingdom of Ta-ch'a-shi-lo (Takshasila) is about 2000 *li* in circuit, and the capital is about 10 *li* in circuit.... The land is renowned for its fertility, and produces rich harvests. It is very full of streams and fountains. Flowers and fruits are abundant. The climate is agreeably temperate." Samuel Beal, *Si-Yu-ki: Buddhist Records of the Western World.* Two volumes in One. (London n.d)., I, pp. 136-37.
25. T. W. Rhys Davids, *The Questions of King Milinda,* in SBE series, (Oxford: 1980), I, p. 24. Ahmed Nabi Khan *"Sialkot: An Ancient City of Pakistan,"* Punjabi Adabi Academy, (Lahore: 1964), p. 5 wrongly attributed this statement to Rhys Davids, instead of Nagasena, the revered teacher of King Milinda, i.e. Menander.
26. *Ibid.*, vol. II, 208-209.
27. V. Minorsky, *Hududul Alam,* (Reprint Karachi: 1980, 89) 146-47, p. 44, and *Naqoosh,* Lahore Number, 1962, 23-24.
28. The actual couplet reads:

    لاہوری : تو مرغزار بودی و من شہر مرغزار

    باس چگونہ بودی و بے من چگونہ

    O, Lahore! You are like a garden and I am a lion in it. There was a time when you were with them. Now how do you feel without me? See M. Baqir, *Lahore: Past and Present.* (Lahore Rep. 1981). p.
29. The *couplet* often quoted in this respect reads:

    اے سروی کشمیر ہوئے باغ سدا ہرا

    ہرگز و می نیابی دیک لدز نگدزی

    For further references see: Dr. Muhammad Abdulla Chughatai, "Sodhra: Maghrabi Pakistan ki ek Tarikhi Basti," (Urdu) Risala IQBAL, Lahore, October, 1964; reprinted by Kitab Khana Nauras, Lahore: 1964, 10. For a different meaning of Bagh Sadahara, see Sodhra in this chapter and f.n 44.
30. Munshi Mohammad Din Fauq, "Ma'asr-i-Lahore – Baghat-o-Mazarat", edited by Abdullah Malik, in *Naqoosh,* Lahore Number, 1962, 143. Also see Dr. Saifur Rehman Dar, *Historical Gardens of Lahore* (Lahore: 1982) pp. 2–6: *Ibid., Some Ancient Gardens of Lahore.* (Lahore: 1977, Second edition 1989), pp. 2–5.
31. *Tuzuk-i-Baburi,* Urdu translated by Rashid Akhtar Nadavi, (Lahore: Sang-i-Meel Publications, 1965, Second Ed. 1866, pp. 199-200). Also see J. Leyden and W. Erskine, *Memoirs of Zahir-ud-Din Muhammad Babur,* op.cit. II, pp. 206, 207, 242.
32. Kalda Kahar, Kaldah-Kahar or Kala Kahar, as variously read is actually Kallar Kahar in district Chakwal today. Annette S. Beveridge, *Babur-Nama* (Lahore Reprint. Sang-i-Meel Publications, 1987), p. 381; John. Leyden and William Erskine, *Memoirs of Zahir-ud-Din Muhammad Babur,* (London: 1921) II, 95, 105 and 108; and H.G. Raverty, *Notes on Afghanistan and Baluchistan,* 1878 (Reprint Quetta: 1976), p. 51. Leyden & Erskine (p. 95, n.1) write: "The lake still exists, as well as Babur's garden, and the platform cut out of the solid rock, on which he sat to admire the view." The rock called *Takht-i-Baburi* still exists but the garden around it has vanished.
33. *Buddhacarita,* pt. II, 43. Nandana is the garden of Indra. According to the translator of *Buddhacarita, Vimanavat* also applies perhaps to Nandana with its heavenly mansions. In the story of Kshantivadin, the garden of Muni Kshantivadin is said to have been embellished with Nandana-like splendour. In the story of Sutasoma, the grace of one of the parks in the suburbs of King's city, the King is said to be roaming in one of the pleasure-gardens and imagining himself as one enjoying the fruit of his merit in Nandana. See Arya Sura, *Gatakamala,* trans. by J. S. Speyer, in *SBE* series (London: 1985), I, pp. 25–55 and 293.
34. Nandana was the last capital of Hindu Shahiyas conquered by Mahmud of Ghazna. Here al-Beruni made some of his important calculations about the centre of the Earth. See Abdul Rehman, *The Last Two Dynasties of the Shahis,* (Islamabad: 1979), pp. 159–161. Also see Muhammad Wali Ullah Khan, "Nandana (Lit. Abode of Delight) Fory and Pass, *"Journal of Research Society of Pakistan,* vil. X, No. 3, 1973, pp 1–3; and ESSAAR, "Nandana - The Garden of Indra", *Pakistan Times,* Lahore, April, 11, 1989.
35. H. Beveridge, *The Akbar Nama* of Abu'l Fazl, 1921. (rep. Lahore: n.d). III, p. 513.
36. Alexander Rogers (trans) & Henry Beveridge (ed.)., *Tuzuk-i-Jahangiri,* 1901, (Rep. Lahore. 1974), I, p. 129. The emperor Jahangir was of the opinion that the red deer of Nandana and Girjakh are not found anywhere else in whole of the subcontinent.
37. For the numerous gardens which flourished during the Mughal period in the city of Lahore, one can pick-up any standard book on Lahore. For publications specifically devoted to the gardens of Lahore, see Saifur Rehman Dar, *Historical Gardens of Lahore.* Lahore: 1982; *Ibid., Some Ancient Gardens of Lahore.* Second Ed. (Lahore: 1989), *Ibid.,* "Six Rare but un-recorded Monuments of Lahore", in *Proceedings of the International Symposium on Islamic Architecture in Central and South Asia* held in Lahore on February, 1993 (in press); Munshi Muhammad Din Fauq, *Baghat-o-Mazarat-i-Lahore* in *Naqoosh,* Lahore Number (Lahore: 1962), pp. 43 ff., See Sajjad Kausar, Michael Brand and James L. Wescoat Jr., *Shalamar Garden, Landscape, Form and Planning* (Karachi: 1992); and James L. Wescoat Jr., Michael Brand and M. Naeem Mir, "The Shahdara Gardens of Lahore: Site Documentation and Spatial Analysis," *Pakistan Archaeology,* Karachi, Number 25, 1990, 333–366; and B. Brentjes, "The Mausoleum of Jahangir and its Central Asia Roots," *Pakistan Archaeology,* Number 24, 1989, pp. 288–286.
38. It is unfortunate that today in the whole of Central Asia, from Turkmenistan to Kazakstan, not a single historical garden is preserved. The only semblance of a terraced garden is at Kassan near Namangan, in the Farghana Valley (Uzbekistan) not far from Aksi-kent, the birth place of Babur.
39. Abul Fazl, *Akbarnama,* op.cit., vol I, 355-56.
40. Dr. Muhammad Abdullah Chughatai, Islami Fun-e-Taamir per Irani aur Turani Asrat (Urdu) (Lahore: 1973) p. 10.
41. It is a generally misunderstood notion, probably created by S. M. Latif, *Lahore: Its History, Architectural Remains and Antiquities* (Lahore: 1892, Rep. Lahore, 1981) p. 250, that Jahangir's mausoleum occupies the site of the former Dilkusha Garden owned by Queen Nur Jahan. The original garden at this place was called Bagh-i-Dilamiz. The mistake was repeated uncritically by the author of this article in his book, *Historical Gardens of Lahore.* op.cit., p. 15. There was definitely a garden

during Jahangir's period by the name of Bagh Dilkusha, but where? We are not sure. In a 19th century map of the city of Lahore, now on display in the Punjab Record Office, a certain Bagh Dilkusha is shown located much south of and separate from the tomb of Jahangir. It was probably this Dilkusha Bagh which was granted to Rai Kishan Chand by the British Administration in 1847. (See typed copy of: Michael Brand, "The Shahdara Gardens of Lahore," op.cit., p. 15). There is an area still known as Dilkusha Bagh situated to the south of the Baradari road that once connected Kamran's Baradari with the road to Sheikhupura.

42. Dr. M. A. Chughtai, "Sodhra," op.cit., 10.
43. Tarikh-e-Bahqui, p. 500, of M. A. Chughtai, "Sodhra," op.cit., 10.
44. Dr. M. A. Chughtai, 'Sodhra', op.cit., 12-13.
45. H. C. Verma, *Medieval Routes to India: A Study of Trade and Military Routes.* (Lahore: Book Traders n.d.), p. 68, n. 53 writing in 1977 informs us that the Tomb of Bairam Khan is still conspicuous. He refers to H. G. Raverty, *Notes on Afghanistan and Balochistan* (op.cit., 32); and Elliot and Dowson, *History of India as told by its own Historians,* VI, 312, n. 2. I am not aware of any garden and tomb of Bairam Khan in the vicinity of Attock.
46. Inayatur Rehman, "Bahram ki Baradari near Attock", *Ancient Pakistan,* Peshawar University, vol VII, 1991, pp. 164–177.
47. Major Henry George Raverty, *Notes on Afghanistan and Baluchistan,* First Ed. 1878, 2nd Ed. (Quetta, 1976), p. 33.
48. Inayatur Rehman, loc.cit.
49. *Tuzuk-i-Jahangiri,* I, 99, 100, & II, 123, 231.
50. *Akbar Nama, I,* 397, and f.n. 3.
51. *Tuzuk-i-Jahangiri,* op.cit. I, 99 and II, 123, 231.
52. Muhammad Saleh Kamboh, *Aml-e-Saleh* or *Shah Jahan Nama,* Urdu translated by Dr. Nazir Hasan Zaidi, (Lahore: 1974) II, pp. 395, 426.
53. *Ibid.,* II, 395.
54. It is wrong to presume that Jahangir or Shah Jahan were the originators of the concept of terraced gardens. We have literary evidence that Babur, the first Mughal emperor, planted terraces on a four-fold plan in gardens in Kabul. Some earlier gardens had also terraces and four-quarters (see Elizabeth B. Moynihan, "But what a happiness to have known Babur," Paper presented in the Symposium on Mughal Gardens, held in Washington D. C., U.S.A. during May, 1992 typed copy), 19.
55. For a provisional detailed study of this garden see Bahadur Khan, "Mughal Garden Wah" *Journal of Central Asia,* Vol. XI, No.2, December, 1988, 147–159, and the chapters by Shahid Rajput and Catherine Asher in this volume.
56. Khan Wali Ullah Khan, "Lala Rukh (Tulip Faced)," *Oriental College Magazine,* February and May 1958, Special Number vol. 34., part II & III, 1–11.
57. *Tuzuk-i-Jahangiri,* I, 99-100.
58. *Ibid.,* I, 100.
59. Dr. Saifur Rehman Dar, "Jandiala Sher Khan Baoli", *The Nation,* Lahore, 22nd October 1986.
60. *Tuzuk-i-Jahangiri,* II, 122.
61. This garden and the sarai close by are located on the old road from Rohtas Fort to Khojki, Domeli to Sar Jalal across Tarakki Hills, and onward to Dhamyak, Pakka Sarai, Rewat, etc. I have discovered a huge *baoli* at Khojki; and a pre-Mughal period mosque, a huge *pucca* tank and the ruins of an ancient *sarai* at Sar Jalal.
62. Abdul Rehman and James L. Wescoat Jr., *Pivot of the Punjab: The Historical Geography of Medieval Gujrat* (Lahore: Dost Associates Publishers, 1993), Fig. 5.2.
63. *Murray's Handbook of the Punjab* (London: 1883), as quoted by John Leyden and William Erskine, *Memoirs of Zahir-ud-Din Muhammad Babur,*" op.cit. II, 95., f.n.1.
64. *Tuzuk-i-Jahangiri,* I, 90-91, f.n. & II, 182.
65. *Tuzuk-i-Jahangiri,* I, 81, 83, 129. In 1607 Jahangir writes: "On Sunday the 10th Rajab I left the city to hunt in Girjakh and Nandana, and took up my quarters in the garden of Ram Das, where I remained four days (*Tuzuk-i-Jahangiri,* I, 81, also *ibid.,* p. 83).
66. *Tuzuk-i-Jahangiri,* I, 81, 83, 129.
67. *Ibid.,* I, 83, 130.
68. *Ibid.,* I, 129.
69. *Ibid.*
70. *Ibid.*
71. *Ibid.*
72. *Ibid.*
73. During Shah Jahan's period there was a hunting ground at Mauza Kano Wahn on the way from Lahore to Agra with stops at Bagh Faiz Bakhsh (Shalamar) and Sarai Shamsud Din. See Muhammad Saleh Kamboh. *Aml-i-Saleh or Shah Jahan Nama,* Urdu trans. by Dr. Nazir Hasan Zaidi, (Lahore: 1974), II, pp. 287, 297, 313 & III, pp. 479 and 487. Shah Jahan visited it in November, 1611; in January and November, 1642; and November and December 1647. For the location of Kano Wahn on the Beas see *Tarikh-e-Punjab* (Urdu) by Ghulam Moheyuddin (Bota Shah), *Oriental College Magazine,* Vol. 48 No. 3-4 Shumara 190-191, September 7, 1972.
74. In 1607 A.D. Jahangir writes: "At Chand Walah, where a minaret had been erected, I had wounded in the belly a black antelope," I, 83, 130.
75. *Tuzuk-i-Jahangiri,* I, 81–83. The Chandwala in the text here is definitely different from Chandala that certainly lay between Sheikhupura and Hafizabad (see *ibid.,* I, 91; the latter can be identified as Jandiala Sher Khan of today).
76. *Ibid.,* I, p. 447, note (p. 81, n.1).
77. *Tuzuk-i-Jahangiri,* I, 252.
78. From Babur down to British period Eminabad constantly appears to be an important station between Lahore and Gujrat. According to Abu'l Fazl, Akbar made following stops between Lahore and Gujrat in 997 A.H./1589: Lahore-Sheikhupura-Jora-Aminabad-Sitaram-Talwandi (Talwandi Rahwali)? - Sudhira (Sodhra) (*Akbar Nama,* III, 818). Chahar Gulshan mentions the following important stations: Lahore,- Shahdara - Fazilabad - Pul Shah Dawla - Aminabad - Hakimabadpur - Cheema Ghakhar - Wazirabad - Gujrat (H. Q. Verma, *Medieval Routes to India,* op.cit. p. 64). De Laet's journey had the following stations on the same route: Lahore – Kacha Sarai [modern Sarai Sheikhan] – Aminabad - Chima Ghakhar - Gujrat. (J. De Laet, trans. by J. S. Hoyland and annotated by S. N. Banerjee entitled: *The Empire of the Great Mogal,* [Bombay: 1928], as quoted by H. C. Verma, op.cit, p. 67). Tavernier mentions only one station between Wazirabad and Lahore and that is Eminabad. See J. P. Tavernier, *Travels in India 1640–67.* Trans. by V. Ball, (London: 1889) and H.C. Verma, op.cit. 68.
79. Abul Fazl, *Akbar Nama,* III, 818 & 870.
80. *Tuzuk-i-Jahangiri,* I, 247 (Amanabad, near Lahore), II, 83, 84.
81. Muhammad Saleh Kamboh, *Shah Jahan Nama,* op.cit. II, 355, III 607, 667.
82. Saifur Rehman Dar, Survey Report, Vol. II, District Gujranwala, 1987
83. Abdul Rehman and James Wescoat, *Pivot of the Punjab, The Historical Geography of Medieval Gujrat.* (Lahore; Dost Associates Publishers, 1993), p. 82.
84. *Ibid.*
85. *Ibid.,* 73, Fig. 3.4 and 3.5.

86. For a brief account of monuments in Wazirabad see unpublished report: Saifur Rehman Dar, "Survey of Punjab, Distt. Gujranwala, vol. II", 1987.
87. For a brief reference to this see: Saifur Rehman Dar, *Historical Gardens of Lahore*, (Lahore: 1982), p. 45. This was originally named the Ram Bagh, but on account of its terraces, people preferred to call it New Shahla Bagh. At each terrace of this garden, human and animal sculptures were displayed, beside the singing cascades. It was open to the public. It was in pretty good shape till 1947 but since then has vanished completely.
88. Saifur Rehman Dar, unpublished "Report on Punjab Survey, I, p". 155.
89. Saifur Rehman Dar, *Historical Gardens of Lahore*, (Lahore: 1982), pp. 29–45. Idem., *Some Ancient Gardens of Lahore*: 2nd Ed. (Lahore: 1989), pp. 22–24.
90. Saifur Rehman Dar, "Punjab Survey, vol. II, Distt. Gujranwala," 1987, Bagh Mahan Singh, pp 37–55. Also see Salman Rashid, *Gujranwala: The Glory that was* (Lahore: Sang-i-Meel Publications, 1992), frontispiece, pp. 26-27.
91. Dar, "Survey Report, II, Gujranwala", pp. 174–181. Salman Rashid, op.cit., pp.87–89.
92. *Tuzuk-i-Jahangiri*, I, 447, note (p. 81 n.1).
93. A photograph of it published in 1992 by Salman Rashid (op.cit., 89 Fig. 10) shows it now cut into two pieces.
94. Saifur Rehman Dar, "Punjab Report vol. II", 1987, Bucha Chattha, p. 173.
95. *Ibid.*, p. 189. Also Salman Rashid, op.cit., 94.
96. Dr. Sayed Sultan Mahmood Hussain, *Tarikh-i-Pasrur* (Urdu) (Lahore: Sang-e-Meel Publications, 1980), p. 157.
97. *Ibid.*
98. Saifur Rehman Dar, "Balochistan's Living Mysteries: Forts, Tombs, Settlements." *The Pakistan Banker*, July–December, 1993, 122.
99. Dr. Manzoor Mumtaz, "Mubarak Mahal, Kasur" (Urdu) *Urdu Digest*, Lahore, March, 1992, 245–256.
100. This has not been reported by any body before. I have also failed to find a reference to it in any published literatures except a very brief oblique reference to it in the district Gazetteer Lahore.
101. Ikramul Haq, *Arz-i-Multan, Sho'ba Nashr-o-Isha-at Al-Ikram*, (Lahore: 1972), pp.176–178.
102. E. D. Maclagan. *Gazetteer of the Multan District* (Lahore: 1992), p. 351. *Ibid.*, reprinted as *Extracts of the District and State Gazetteers of the Punjab* (Pakistan), (Lahore: Research Society of Pakistan, 1977) vol. I, 152.
103. *Ibid.*, p. 354.
104. The author of *Arz-i-Multan* (op.cit., 178) instead, credits Muzafar Khan for having constructed this garden and Murad Bakhsh for Bagh Aam Khas (op.cit., 177).
105. Charles Masson, *Travels*, I, p 394; ed. E.D. Maclagan, p. 366.
106. E. D. Maclagan, op.cit., p. 159, f.n.
107. Siddiq Tahir, *Wadi-e-Hakrra aur us kai a'asar* (Urdu), (Bahawalpur: 1982), p. 175.
108. Gulbadan Begum, *Humayun Nama*, trans. by Annette S. Beveridge, 1st Pakistani edition (Lahore: 1974), p. 148, f.n.3.
109. *Ibid.*, 158, (Persian text at page 59).
110. Saifur Rehman Dar, *Historical Gardens of Lahore*, op. cit., 44–49, and *Ibid., Some Ancient Gardens of Lahore*, op.cit. 24-25.
111. Siddique Tahir, loc.cit.
112. Rubina Qizilbash, "Decorative Wood-works of Mohalla Sethian," M. A. Thesis, Fine Arts Department, Peshawar University, 1990-1991, pp. 30-31.

THE CHAR BAGH CONQUERS THE CITADEL: AN OUTLINE OF THE DEVELOPMENT OF THE MUGHAL PALACE GARDEN

EBBA KOCH
Institute for the History of Art,
University of Vienna, Austria

New discoveries and approaches are changing our idea of the Mughal garden. James Wescoat has shown recently that the earliest Mughal gardens of Babur were - in an urban context – laid out in deliberate opposition to the citadel-palaces or forts, built by pre-Mughal rulers. Gardens were the new centers of royal power. Similar thoughts have been expressed by Catherine Asher.

If we accept these findings then it will be of interest to address the issue of how this opposition between garden and palace was eventually resolved in the great synthesis of Shah Jahan's fortress palaces. Here the combination of palace and garden became the metaphor par excellence for paradise here on earth as the dwelling of the Grand Moghul. How then did the garden get into the palace?

First of all we have to state that at Agra, where the story of the Mughal garden began in 1526, the relation between fort and garden was not entirely antagonistic. True, the new gardens laid out by Babur and his followers were on the other side of the river Jamna opposite the fort of the Lodis which had been taken over by Babur (Fig. 1). But even before Babur built his new Chahar Bagh on the east bank of the river he had ordered the construction of elaborate waterworks to provide water for a garden inside the fort.

However, we learn nothing more about this garden or any other palace garden of the early Mughal period. In an urban context the main attention seems to have been indeed centered on river front gardens and not on gardens in the fortress-palaces. The river front garden scheme was also adopted to a certain extent in the new residential quarters of the Mughals at Lahore, and later, under Akbar (1556–1605), at Delhi. More weight, however, was given to the development of Mughal Agra as a river bank city because in 1558 Akbar had moved the imperial headquarters from Delhi to Agra and it had become again the main capital of the Mughal empire. Abu'l Fazl tells us that "on either side [of the river] the servants of the court erected pleasant homes and made charming gardens..." From the description of Abu'l Fazl it becomes evident that Akbar's Agra already appeared very much like an early eighteenth century map in the Jaipur Palace Museum (Fig. 1). Residential Mughal Agra consisted of a band of gardens lining both sides of the river Jamna. Akbar's fort which he constructed from 1564 onwards was positioned in this urban scheme like a garden. However we are still not informed about gardens within the palace. Akbar's author Qandahari – who is the one who tells us most about Akbar's constructions – praises the fortress palace not in garden metaphors but in architectural terms; he draws attention to its marvellous features of red stone and points out that even the surface of its ground was paved. This is borne out by the architectural evidence. The two complexes of the Agra palace which can be dated to Akbar's

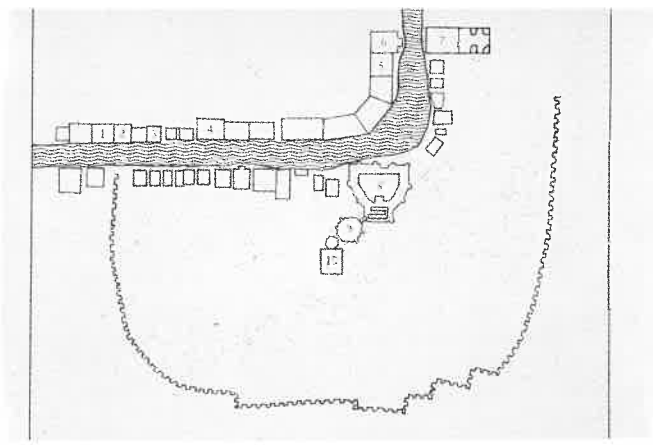


Fig. 1: Line drawing of map of Agra, early 18th century. Jaipur, Maharaja Sawai Man Singh II Museum, Cat. No. 126. 1. Ram Bagh (Bagh-i Nur Afshan), 2 Zahara Bagh (Bagh-i Jahanara), 3 Chini ka Rauza (Tomb of Afzal Khan), 4 Tomb of I'timad al-Daula, 5 Chahar Bagh (Bagh-i Hasht Bihisht), 6 Mahtab Bagh, 7 Taj Mahal, 8 Red Fort, 9 Octagonal bazaar (not preserved), 10 Jami' Masjid. (After Ebba Koch, Mughal Architecture, Munich, 1991, fig. 3).

period, the *zanana* courtyards named today Akbari Mahal and Jahangiri Mahal, are not built around gardens but around paved courtyards.

Qandahari refers in similar architectural terms to the palace of Fatehpur Sikri, built between 1571 and 1585. True, he compares it favourably to paradise, however, not to paradise as a garden but to the architectural aspects of paradise. Clearly the palace was not even metaphorically conceived as a garden. This emphasis on architecture in the conception of the palace determines also the shape of the two gardens of Fatehpur Sikri's palace which date – at least in their basic design – from Akbar's period. Both – the garden behind (west of) the Diwan-i 'Amm (Fig. 2) and the *zanana* garden, known as "Miriam's



Fig. 2: Fatehpur Sikri, view from the Anup Tala'o towards north, with the garden of the Diwan-i 'Amm being partly visible behind the "Turkish Sultana's House," the pavilion on the right side; 1570s. (Photo E. Koch 1978).

Garden" (Fig. 3) – are integrated into the architecture of the palace to such a degree that they have received hardly any attention in the literature on Mughal gardens, despite their significance as the first preserved Mughal palace gardens.

In Jahangir's period (rul. 1605–27), palace gardens are not a prominent theme of Mughal garden architecture either. The only palace garden mentioned by the emperor himself in his autobiography, the *Tuzuk*, is the garden laid out by his father Akbar in the citadel of the Hari Parbat at Srinagar. Jahangir refers to it as *baghcha-i daulat khana* and took care to renovate it – as a remembrance of his father – when he came to Srinagar in 1620. By renaming it Nur Afza (Light Increaser), a name which contained the element Nur (Light) which also formed part of his own name (Nur al-Din, Light of Religion), he connected it to his own patronage. There is reason to believe that the garden was situated in the topmost enclosure of the citadel. Within the enclosure still stands a ruined pavilion with traces of figural paintings which could be the building decorated with murals, described by Jahangir as part of his renovation scheme (Fig. 4). The garden seems to have acquired a dynastic significance for the Mughals; it was also a favourite of Shah Jahan. His authors list it as the



Fig. 4: Srinagar, Hari Parbat, topmost enclosure, view from ruined pavilion into garden. (Photo E. Koch, 1986).

first of the imperial gardens of Kashmir. When the emperor arrived at Srinagar in April 1640 and was disappointed because a thunderstorm had taken off the blossoms of the almond trees he had expected to see, he was compensated by one of the iris bushes (*bota-i-susani*) in the *baghcha-i daulat khana* on which he counted two hundred and twelve flowers and buds.

No more is known about Jahangiri gardens within palaces. The gardens mentioned otherwise in the context of palaces were situated below them, on the outside. William Finch, who saw the Lahore fort in 1610, mentions a garden below a *bangla* (pavilion with curved-up roof) – probably that of Jahangir's Quadrangle – between the fort and the river. The palace of the Agra fort also had a garden below the *jharoka* (Fig. 5) from where, according to Finch, Jahangir took the boat to another garden on the



Fig. 3: Fatehpur Sikri, "Miriam's Garden," 1570s. (Photo E. Koch, 1993).

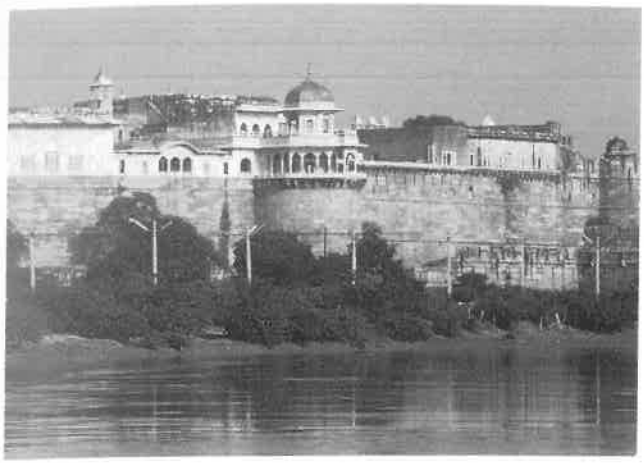


Fig. 5: Agra fort, Khass Mahal, seen from outside across the river (Photo E. Koch 1985).

opposite bank of the river. This seems to indicate that the garden still had not made its way into the great urban fortress palace; the garden serving the palace was still outside of it on the river front. None of these river front gardens of Jahangir is preserved.

At Agra survive, however, two gardens of his period, founded in close connection with imperial patronage. This is the Ram Bagh built, or rebuilt, by Jahangir's wife Nur Jahan as Bagh-i Nur Afshan in 1621, and the Zahara Bagh (Bagh-i Jahanara), laid out by Mumtaz Mahal probably in the late 1620s and refashioned later by her daughter Jahanara (Fig. 1). Both gardens conform to a scheme which, eventually, became typical of the river front garden of Agra and which, and this is important in our context, was to be very influential for the future development of the Mughal palace garden. In this garden plan the main buildings were not placed in the centre of the garden as in the classical Mughal *char bagh*, but were arranged on terraces lining the river bank. The river front buildings were framed by the corner towers of the enclosure wall of the garden. On the landward side of the terrace was a *char bagh*. This shift towards the river front provided the main garden pavilions with the climatic advantages of the running water and presented a carefully composed front to those who saw it from a boat or across the river. From the inside the buildings presented an equally satisfying backdrop for the garden.

In Shah Jahan's reign (rul. 1628–58) we notice two important trends. First, the river front garden obtained its canonical form as a perfectly symmetrical composition. Second, it became the main garden pattern of the period. The actual form of the component parts could, however, be changed without disturbing the organization. At Agra, the pattern was used not only for residential gardens but also, in a monumental version, in the funerary garden of the Taj Mahal.

I have discussed this type of garden in such detail because it is in this particular form that the garden now makes its entry into the palace. The Taj complex and the fort were placed in the overall scheme of the river bank city-like gardens; consequently they adopted the predominant garden form of this urban scheme. In other words, the form of the funerary garden of the Taj and of the palace garden was dictated by their urban context.

The scheme appears in a perfectly symmetrical form in the so called Anguri Bagh of the Agra fort



Fig. 6: Agra fort, Anguri Bagh and Khass Mahal consisting of Shah Jahan's sleeping pavilion (Khwabgah) flanked on both sides by pavilions with curved up roofs, on the left the Bangla-i Darshan and on the right the Bangla-i Jahanara, completed 1637; seen from inside (Photo E. Koch 1979).



Fig. 8: Lahore fort, Jahangir's Quadrangle, Khwabgah and bangla, seen from inside (Photo E. Koch 1993).

which was rebuilt as the main *zanana* complex and only palace garden by Shah Jahan in the early 1630s (Figs. 5, 6). As in the Taj garden, there stands a group of three buildings on the river side terrace, today it is known as the Khass Mahal. The Khwabgah or sleeping pavilion of the emperor in the center is flanked on the left side (when seen from inside) by the Bangla-i Darshan, where the emperor appeared at sunrise before his subjects. On the right side is its counter image, the *bangla* of his daughter Jahanara. The Bangla-i Jahanara had no ceremonial function and seems to have been put up solely to balance the composition, to conform to *qarina* (counter image), the architectural ideal of the period. The group of buildings on the terrace is combined with a lower canonical four part *char bagh* with a marble pool in the crossing of its pathways.

We find a similar concept in Jahangir's Quadrangle in the Lahore fort (Figs. 7, 8, 9). The Mughal sources tell us nothing about the garden in it. It could have been added to the *zanana* court in Shah Jahan's period because no palace garden is mentioned in Jahangir's time, and we know that Shah Jahan reconstructed the Khwabgah in the centre of its river front terrace in 1634. The *bangla* certainly dates from Jahangir's period and – as evident from nineteenth century drawings and paintings- had its counter image on the other side of the Khwabgah like that of Agra. All in all, the Lahore complex shows the same disposition as the Anguri Bagh at Agra (cf. Figs. 5, 6 and 8, 9). Also, both the Anguri Bagh and Lahore fort garden were *zanana* gardens. That of Agra boasted the Bangla-i Darshan, one of the most important ceremonial buildings of the palace; the ceremonial function of the *banglas* of the Lahore fort is not as clear.

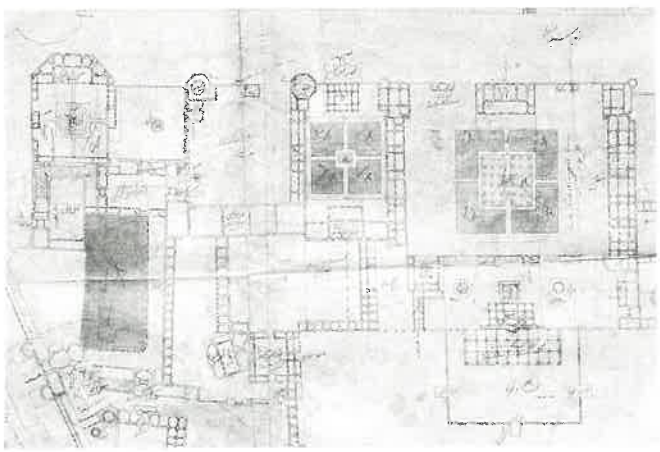


Fig. 7: Map of the Lahore fort dated 1894, detail showing from left to right along the river front the Shah Burj (Shish Mahal), two paved courtyards, the garden of the Diwan-i Khass, and Jahangir's Quadrangle, Lahore, Lahore Fort Museum.

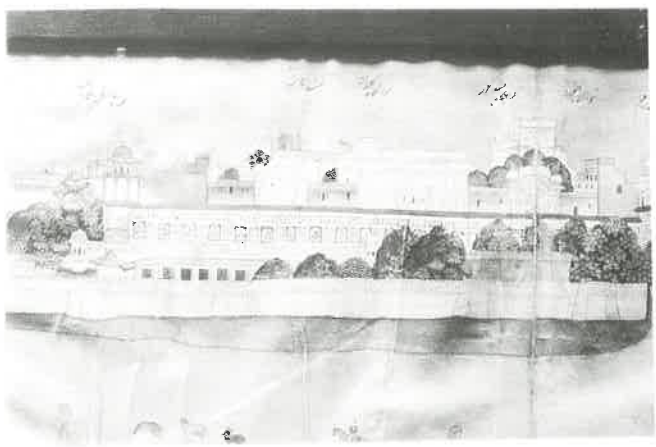


Fig. 9: View of the river front buildings of Jahangir's Quadrangle from outside, detail of a painting of the Lahore fort, nineteenth century, Lahore, Lahore Museum.

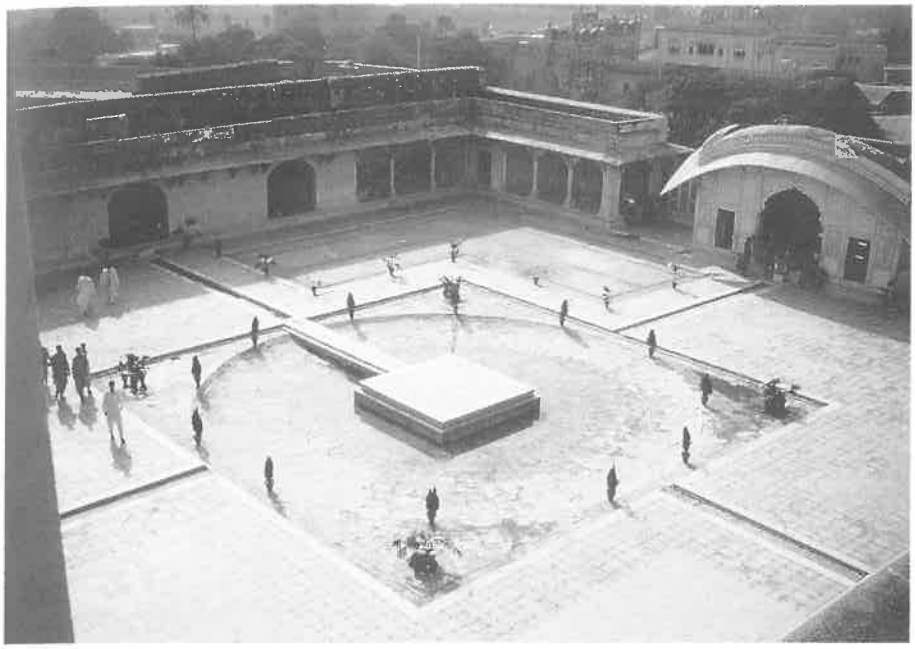


Fig. 10: Lahore fort, Shah Burj ("Shish Mahal"), 1631-32, view from the roof of the river front building into the courtyard (Photo E. Koch, 1993).

The garden in Jahangir's Quadrangle is not the only garden of the Lahore fort, that of the Diwan-i Khass conforms to the same pattern, but we do not know when it was built (Fig. 8). The complex of the Shah Burj rebuilt by Shah Jahan in 1631-32, shows a more architecturalized version of the same scheme (Figs. 7, 10). Here the tripartite group of the river side buildings is condensed and integrated into a polygonal block, and instead of four garden plots it has a paved courtyard divided by channels into four parts. The concept combines the paved *zanana* courtyards of Akbar's period with the river front garden pattern. The garden clearly began to make its impact on the palace.

The ideas of Lahore and Agra were brought to a grand apotheosis in the palace of Shah Jahan's new city Shahjahanabad built between 1639 and 1648. The pavilions and halls for the emperor and the zanana stand on terraces threaded along a canal along the river front. "In front of each Iram like pavilion (*nashiman*)," says Shah Jahan's historian Kanbo, "is a small garden (*baghcha*) so that this paradisiacal ground from one end to the other because of its exuberant vegetation has drawn a veil across the green sky and the sight is presented to the eyes of the beholder like the highest paradise." In the composition of these individual complexes we clearly recognize the pattern of the river front garden which was used here,

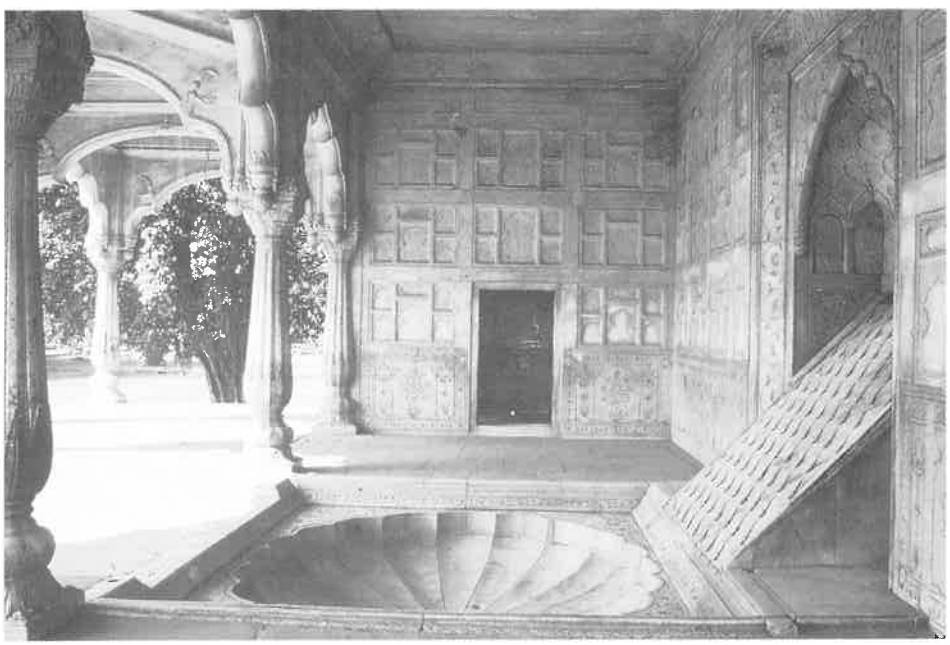


Fig. 11: Delhi fort, Bagh-i Hayat Bakhsh, Shah Burj, interior of verandah (Photo E. Koch, 1993).

in the palace of Shahjahanabad, as a modular unit for the planning of the whole river front. That means that the basic principle of the urban design of Agra was here claimed by the palace for itself.

The largest and most important garden was the Bagh-i Hayat Bakhsh, the Life Bestowing Garden. The garden is only partly preserved but it can be fully reconstructed from the descriptions of Shah Jahan's historians Kanbo and Warith, as well as from nineteenth century plans and views. Here we have to note an important fact. Although the Hayat Bakhsh was modelled on the pattern of the Anguri Bagh of Agra and Jahangir's Quadrangle at Lahore, it was no longer connected to the *zanana* but it had become a palace garden in its own right. The garden represented an independant unit in the semi-official quarters of the palace.

The use of the river front garden scheme as module for the planning of the palace and the emancipation of the main palace garden went hand in hand with what can be described best as a "vegetabilization programme" of the palace buildings. They were mainly decorated with plant forms, and garden elements were integrated into their design (Fig. 11). The garden entirely permeated the concept of the palace.

GARDENS OF THE NOBILITY: RAJA MAN SINGH AND THE BAGH-I-WAH

CATHERINE B. ASHER
Department of Art History
University of Minnesota, U.S.A.

The Bagh-i-Wah (Figs. 1 & 2), one of Pakistan's loveliest gardens, originally was built by Man Singh Kachhwaha, a high ranking Hindu noble who served under the Mughal emperors, Akbar and Jahangir. It is on the outskirts of Hasan Abdal, an area renowned for its association with Islam, Hinduism, Buddhism and even the Sikh tradition as well as for its forested hills, streams and springs.[1] The garden as it exists today, with its terraces, pavilions, *chadars*, water courses and spring-fed tank, is the product of multiple constructions, plantings and patrons.[2] Since Wah's history, development and appearance have been discussed by M. A. Haleem and Shahid Rajput, each of whom has excavated at the site, I will focus my discussion on Man Singh's motivation for constructing the spring-fed tank at Wah.

The apocryphal story of how Wah received its name is well known. Upon seeing the garden Akbar or Jahangir (the ruler varies with each version) allegedly cried out *Wah* in appreciation of its beauty.[3] Although the story is recorded in no contemporary Mughal-period texts, Jahangir is referring almost surely to Wah when impressed by a site near Hasan Abdal. He writes in 1607:

"... There is a waterfall over which the stream rushes with great force. There is no fall like it on the way to Kabul.... In the middle of the basin, which is the source of the stream, Raja Man Singh has erected a small building. There are many fish in the basin of the length of half a *gaz* and quarter a *gaz*. I halted three days at this enchanting place, drinking wine with those who were intimate with me and employing myself in catching fish. Until now I had never thrown a *sufra* net, which is famous kind of net, and which in Hindi they call a *bhanwar jal*. It is not easy to throw. I threw it with my own hand and caught twelve fish, and putting pearls in their noses, let them loose in the water."[4]

Later in 1619 and 1622 he again visits Hasan Abdal for which he only has praise.[5] The emperor writes, "...at this place there is a spring full of water, and a cascade, and a very beautiful reservoir..."[6]

Jahangir in his memoirs never uses the name Wah, but the enthusiasm with which he writes suggests the exclamation," *Wah.*"[7] Several years after Jahangir's initial visit, William Finch in 1611 noted that near Hasan Abdal is a small river and tanks with crystal clear water; there are fish whose noses are pierced with gold rings. He credits Akbar with the rings,

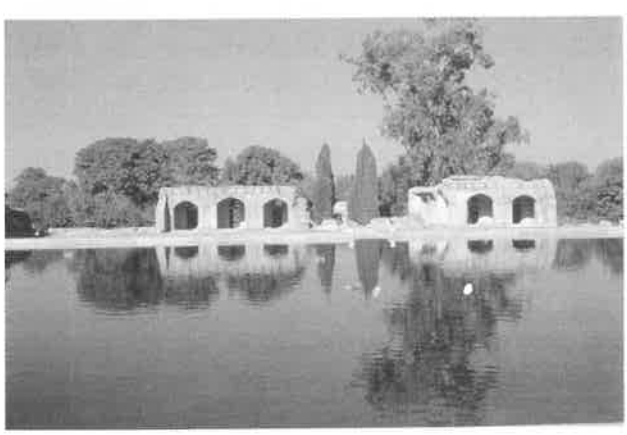


Fig. 1: Bagh-i-Wah, Main tank, Wah.



Fig. 2: Bagh-i-Wah, Main tank, Wah.

but probably he is referring to Jahangir's fish in what we call today Wah garden.[8]

Although he never calls Wah a *bagh* (garden), suggesting a less formal construction than an ordered Mughal *char bagh,* it is clear from his memoirs that the site and its structures met Jahangir's approval.[9] The emperor even resisted the snide comments he frequently made about the powerful Man Singh, who had supported Khusrau's accession to the throne, not his.[10] It is also clear that Man Singh had some role in Wah's development, for Jahangir would be unlikely to credit the raja without good cause. Shah Jahan, too, approved of the site, although he ordered major improvements to be made.[11] Known as the Bagh-i Hasan Abdal, Shah Jahan visited the garden about nine times; his chroniclers described it as, "so exquisitely lovely that there is no spot equal to it on the road, nor indeed in the whole territory of Kabul.[12] Much of the garden's scale and appearance today are the product of Shah Jahan's reign.

Thus we have a garden, although substantially enlarged under Shah Jahan, originally constructed by a prince as a developed natural setting that was less formal in nature than the carefully landscaped *char bagh.* This is in contrast to most surviving gardens which are imperially sponsored and are usually in the major Mughal urban centers.[13] These range from Babur's reign, for example, his *char bagh* at Dholpur about 50 kilometers south of Agra,[14] to those of the last Mughal emperor, Bahadur Shah. He added the Zafar Mahal to the Hayat Bagh in Shah Jahan's Delhi citadel.[15] Of course, many more gardens once existed, most of them built by the nobility; it was the construction of these gardens as well as other structures that gave a visible Mughal presence across the empire. We know from literary sources and the remains themselves that they were strung from Kabul to Bengal.

The first Mughal emperor, Babur, ordered that gardens were to be laid out in all the great cities – presumably by the nobility.[16] Babur's praise for the orderly gardens of his nobles, Zain Khan, Khalifa and Yunus-i 'Ali, in Agra hardly surprises us, for this is the capital.[17] But he also praised distant gardens, for example, Rahim Dad's oleander studded garden in Gwalior, a city that long had been ruled by Hindu Rajput Tomars.[18] Man Singh Tomar's lovely stone palace embellished with yellow and blue tiles, which was greatly admired by Babur, might be imagined as a backdrop for the two early Mughal gardens.[19] We know less about gardens built by Humayun's nobles during his relatively brief reign, but certainly nobles continued to sponsor gardens. By Akbar's and Jahangir's reign this practice was well established and continued to the end of the Mughal period. For example, Akbar's chronicler Abu al-Fazl built a waterfall at Nakodar (Jullundar District, Punjab) around which a garden was later added.[20]

The noble-sponsored garden was clearly a well established Mughal tradition. But Wah in its original conception differed from the traditional Mughal *char bagh.* It appears to lack straight orderly waterways and *chadars;* rather the focus is on spring-fed tanks. Was this simply a quick manner of harnessing natural resources or does Man Singh's garden (which I will continue to call it although I mean something less formal than a *char bagh)* at Wah reflect some pre-existing traditions? An understanding of Man Singh and his unique position at the Mughal court may help answer these questions.

Raja Man Singh's grandfather, his father, and then Man Singh himself were members of the Kachhwaha Rajput house; they were the first Hindu princes to acknowledge Mughal authority.[21] Close ties of loyalty were developed and maintained through marriage. For example, the mothers of both Jahangir and his son, Khusrau, were Kachhwaha princesses. From the age of twelve Man Singh himself resided in the Mughal court to insure Kachhwaha-Mughal ties. In 1589, after the death of his father, Man Singh was granted the designation Raja by Akbar. The raja's innate ability and royal connection allowed him eventually to attain the highest *mansab* (rank) at that time awarded to an *amir* other than a Mughal prince.[22] By his death in 1614, Man Singh had served as governor of Kabul, Bihar and Bengal, among other positions.

Raja Man Singh's administrative and military skills were instrumental in spreading and maintaining Mughal authority; so too his building activity across Mughal domain was instrumental in spreading a uniform aesthetic.[23] Even more significant, his patronage included secular and religious buildings. For example, he built palaces and gardens in Amber and Ramgarh in his ancestral lands (*watan jagir*) in Rajasthan.[24] At Rohtas fort, his seat when governor (*subadar*) of Bihar, he constructed the largest surviving non-imperial palace in the Mughal empire.[25] He provided at least eight temples from Bengal to Rajasthan.[26] The largest of these, the Govind Deva temple, was constructed with imperial Mughal support at Vrindaban, near Mathura.[27] His patronage

also included religious architecture that transcended sectarian lines, for he built at least two mosques – one in Lahore (no longer extant) and one in Rajmahal (Santal Parganas District, Bihar) – and maintained a Muslim shrine near Hajipur (Muzaffarpur District, Bihar).[28]

Much of Man Singh's patronage at Rohtas, Amber, Vrindaban, and Rajmahal transpired after his father's death in 1589, when he was awarded the title Raja.[29] The construction of Wah, though, seems to be a product of Man Singh's earlier days when he served the Mughals in the northwest with his father, Raja Bhagwant Das. After distinguishing themselves in Mewar and Gujarat, Man Singh and his father were transferred to the Punjab in 1578; they remained in the northwest, serving in various positions. This included Bhagwant Das as governor of Punjab (including Lahore) from 1581-82 to his death and Man Singh as governor of Kabul from 1585–1587. In 1587 Man Singh was dispatched to Bihar, never again to return to the Punjab and Kabul.[30]

Man Singh must have built Wah sometime between 1578 and 1587 when he served in the northwest; with the exception of patronage in his own ancestral lands or lands closely associated with his patrimony, all Man Singh's patronage in specific areas corresponds with his service in that locale.[31] Moreover, we know he sponsored several other architectural projects during his time in the northwest – a fort at Ohind and a mosque in Lahore. He also repaired the fort of Sialkot when he was *jagirdar* there.[32] The dates of these projects we know through texts. Not so for Wah, which is not identified by name in any text. Its date can be determined only in the context of Man Singh's overall patronage.

Generally Man Singh's beneficence in the northwest falls into two categories: military and public. The construction of forts was clearly associated with his obligations as a high ranking officer.[33] His construction of a mosque reflects Kachhwaha tolerance and his willingness to serve the Mughal state by serving its subjects, just as Akbar at this very time endowed Hindu temples at Vrindaban, a site of great interest to Man Singh. These two types of patronage set the stage for Man Singh's future activities; they also suggest a third type of architectural activity which likely started with construction at Wah.

It comes as no surprise that Man Singh's ongoing role in consolidating and maintaining Mughal authority in the hinterlands helped formulate his architectural output. During his successful tenure as governor of Bihar from 1587 to 1594, he was able to consolidate power, reversing a period of long-term turmoil. He established his headquarters at the formidable Rohtas fort in Bihar.[34]



Fig. 3: Jharoka-i khass o 'amm (Public Viewing Window) Rohtas Fort, Bihar.

Raja Man Singh not only fortified the hill to further insure its impregnability, but also he built an enormous palace, by far the most impressive palace for any governor in the Mughal empire. Seated in either his *jharoka-i khass o 'amm* (Public Viewing Window) (Fig. 3) or enthroned in his *diwan-i khass* (Private Audience Hall) (Fig. 4) Raja Man Singh would project his image as Mughal governor.[35] Similarly Man Singh's newly established capital of Bengal, Rajmahal, founded when he became *subadar* (governor) there in 1594, was intended to assert the strong message of Mughal authority. Again the message was intentional and much needed, for Akbar hoped that Man Singh's success in subduing rebels in Bihar might be repeated against rebel Afghans and *zamindars* who continued to challenge the Mughals in Bengal.[36]

By far the largest structure the raja provided in Rajmahal was a Jami' mosque (Fig. 5). Earlier he had built a mosque in Lahore and since 1590 he had maintained the shrine of a Muslim saint in Hajipur; hence, the construction of this enormous mosque by a Hindu *amir* is not surprising. Although today the mosque is ruined, a drawing (Fig. 6) made in the early 19th century suggests it originally resembled Akbar's great mosque at Fatehpur Sikri rather than local ones.[37] This was likely intended as a statement of Mughal presence in Bengal, for the Mughals had



Fig. 4: Throne Niche, Diwan-i khass (Private Audience Hall) Rohtas Fort, Bihar.

chronic difficulties in subduing Bengal.[38]

Beside patronage intended to project Mughal authority, some of Man Singh's architecture was intended to commemorate his military success.[39] In thanks the Raja often built a temple for an image of a deity miraculously discovered just prior to the battle. There are a number of examples, but the most significant include: the image of Shila Mata from Bengal that he installed in a temple inside his Amber palace; the Siva linga installed in the temple at



Fig. 5: Jami' Mosque, Rajmahal, Bihar.

Baikatpur (Patna District, Bihar); and the image of Govind Deva at his Vrindaban temple.[40]

By contrast, the motivating forces behind his earlier construction of Wah remain elusive. But we might argue that the construction of Wah may be associated with state maintenance. That is, we might see the building of Wah as parallel to building the palace at Rohtas or his mosque at Rajmahal. As Babur's writings make clear the order and regularity of the imperial Mughal garden is a visual metaphor for the ordered well-run state.[41] Considering Man Singh's subsequent patronage – even his repair and construction of forts at Ohind and Sialkot in the Punjab – his concern for State maintenance is evident.

Man Singh's later patronage is site-specific. That is, there is a clear reason for his choice of any site. For example, Man Singh's gardens in Vrindaban and Ramgarh are associated with his property in each of these locales;[42] the temple at Baikatpur is associated with the miraculous discovery of an image and is furthermore his mother's cremation site. However, we have no recorded event associating the prince with Hasan Abdal. Yet while he served in the Punjab

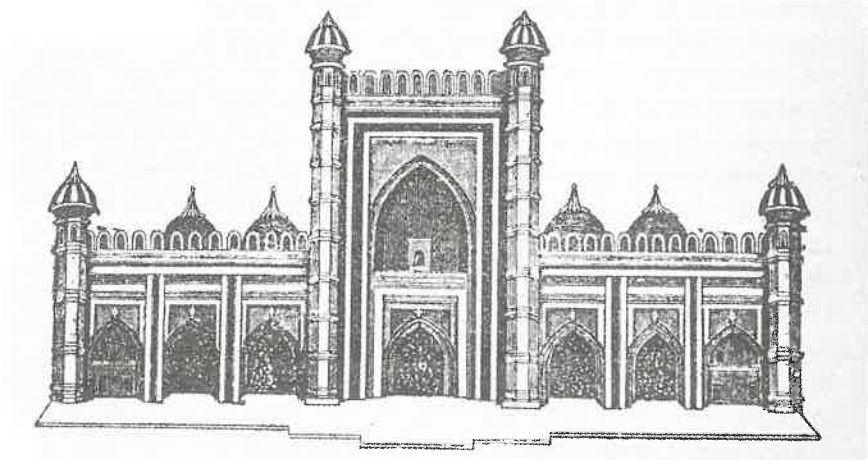


Fig. 6: Jami' Mosque, Rajmahal, by Francis Buchanan-Hamilton from: Robert Montgomery Martin, The History, Antiquities, Topography and Statistics of Eastern India, 3 vols. (London: W. H. Allen, 1838), II: 70.

and Kabul, we know of his many victories.[43] Since his later construction, at least, often followed his victories, I have no problem associating the construction of Wah with one of these victories. The question remains: which one? It may have been his resounding defeat of the troublesome Afghan Raushania late in 1585 who had commandeered and closed the Khyber Pass.[44] Following this Akbar rewarded Man Singh at Rawalpindi for establishing order in Kabul. A few days later Akbar camped at Hasan Abdal and hunted there. It is most likely this series of events inspired the prince's construction at Wah.

How Man Singh acquired the land for his garden at Wah remains unknown,[45] but he certainly could afford it. As governor of Kabul and Kachhwaha heir-apparent, he had great wealth. The more seminal issue is what provisions were made for the garden's maintenance. It is difficult to imagine that Man Singh would construct a garden unless he was assured of its upkeep after his departure from the northwest. Contemporary documents prove Man Singh's commitment to maintain both Hindu temples and Muslim shrines over an extended period of time;[46] these funds would be tax exempt. It is possible that funds for the maintenance of a garden, one whose construction probably was approved by the emperor, were similarly tax exempt.[47] This seems especially likely since the garden was used subsequently as an imperial halting and hunting grounds.[48]

Raja Man Singh's garden at Wah is probably his earliest work. It appears either to predate the Punjab forts and probably the Lahore mosque as well or to be about contemporary with them, although his Govind Deva temple in Vrindaban must have been planned by then if construction had not already commenced.[49] If Wah is one of his formative works, to what extent is it simply a lovely garden that reflected current Central Asian and Mughal traditions? Did Wah in Man Singh's original conception bear any imprint of an older Indian Islamic tradition or even Man Singh's Hindu Rajput tradition? Is it possible that the site – one which looked perfectly "Mughal" to the eyes of the emperor Jahangir – had a rather different meaning to Man Singh?[50] A consideration of the various traditions that may have shaped the garden at Wah may help to answer these questions.

Gardens from the pre-Mughal Indian tradition are known to us largely from textual references and paintings, but very few of these gardens survive.[51] Sultanate period paintings, for example illustrations from the *Ni'mat Nama* (Fig. 7), make clear that gardens were very much part of the Islamic tradition throughout the subcontinent.[52] Water, as at Wah and other Mughal gardens, not surprisingly, was a major component of these gardens. Tanks, some elaborate, associated with such gardens do survive, for example, at the 15th-century Hauz-i Qutb in Ahmadabad and those in Champaner, Gujarat.[53] Other garden-tanks served as tomb settings, for example, Sher Shah's tomb dated 1545 in Sasaram, Bihar (Fig. 8). The water here the interior inscriptions indicate is intended to represent paradise.[54] Remains at Mandu, a hill fort and palace, indicate extensive use of water tanks – some of them lotus shaped (Fig. 9).[55] Thus the tank as the focus for Man Singh's is part of a long standing Indian Islamic tradition.

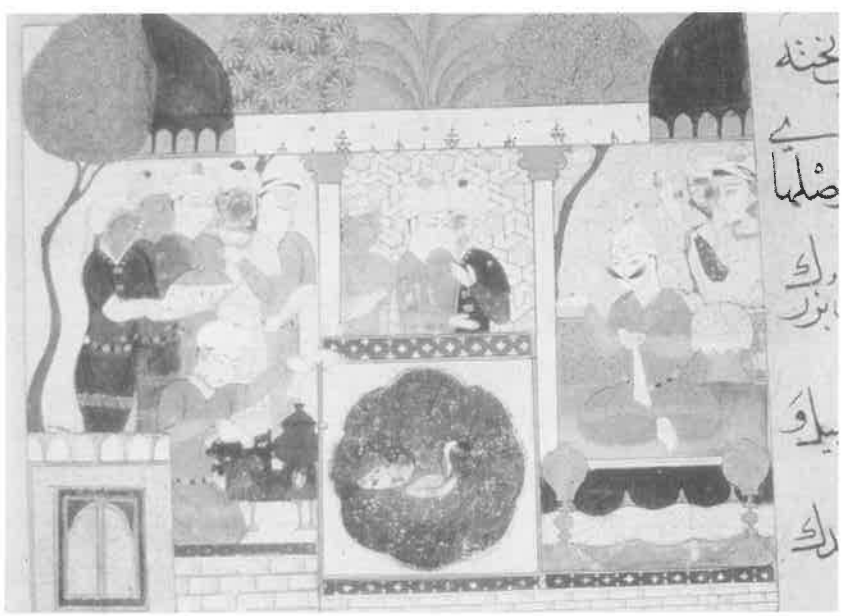


Fig. 7: "Sultan In A Garden", Ni'mat Nama, MS Per 149 f. 14r by Permission of The British Library, Oriental and India Office Collections.

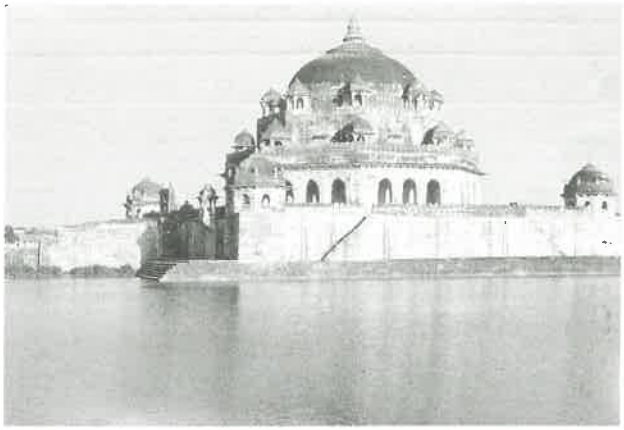


Fig. 8: Tomb of Sher Shah Sur, Sasaram (Rohtas District, Bihar).



Fig. 10: Stream and Hills, Bagh-i-Wah.

Today a small stream with multiple branches winds through part of the garden complex (Fig. 10), although it is widely believed that this is not a part of the garden's original conception.[56] There is, however, a larger stream just outside the original compound walls whose wide and weathered bed suggests some antiquity. These meandering water bodies recall similar ones depicted in Iranian, especially Timurid, paintings (Fig. 11).[57] This feature is not adopted in Mughal *char baghs*, although it most likely was a feature of Babur's pre-Indian gardens. But since Wah is not called a garden (*bagh*) until Shah Jahan transformed it into a proper *char bagh* it is possible that features such as the winding stream, considered unthinkable in the formal Mughal garden, were acceptable here.

Man Singh's landscaped setting at Wah appears to draw on elements from pre-Mughal Islamic and from Timurid traditions, that is, the large tank and



Fig. 9: Lotus Pool, Mandu.

possibly the meandering stream. These features easily could be adopted by the Hindu Rajput Man Singh, who was raised in Akbar's court and now was living in the *suba* of Kabul. But to what extent does Man Singh's own Rajput Kachhwaha heritage play a role in his construction at Wah? Elsewhere his Kachhwaha heritage remains of tremendous importance to him as is revealed, for example, by his patronage of temples built specifically to commemorate his family. These include his largest and most important temples: the Govind Deva to commemorate his father, the Baikatpur temple constructed at his mother's cremation site and the Jagat Siromani at Amber built in commemoration of his heir-apparent's death.[58] While Man Singh showed an enthusiasm for Mughal style arts, he also was an active supporter of traditional Sanskrit literature and poetry.[59] For example, the royal Kachhwaha library in Jaipur holds many Sanskrit texts dedicated to Raja Man Singh. This and other aspects of his architectural patronage suggest that Man Singh was acutely aware of his own Hindu Rajput traditions. Is this reflected in his garden at Wah?

The words of Zain Khan, Babur's chronicler, stating that Hindus abhor water are enough to discourage those interested in Islamic gardens from looking at indigenous Indian garden traditions.[60] Yet there are two strains of this tradition – wholly misunderstood by Babur and Zain Khan – which may pertain to Man Singh and garden construction. Sanskrit texts, even those as famed as the *Mahabharata* and the *Ramayana*, make clear that lush planted gardens and orchards were an important aspect of courtly life.[61] Other Sanskrit texts deal extensively with plant culture and gardening, indicating that this was a highly refined art.[62] The maintenance of public parks, too, was commendable and fell into the category of char-

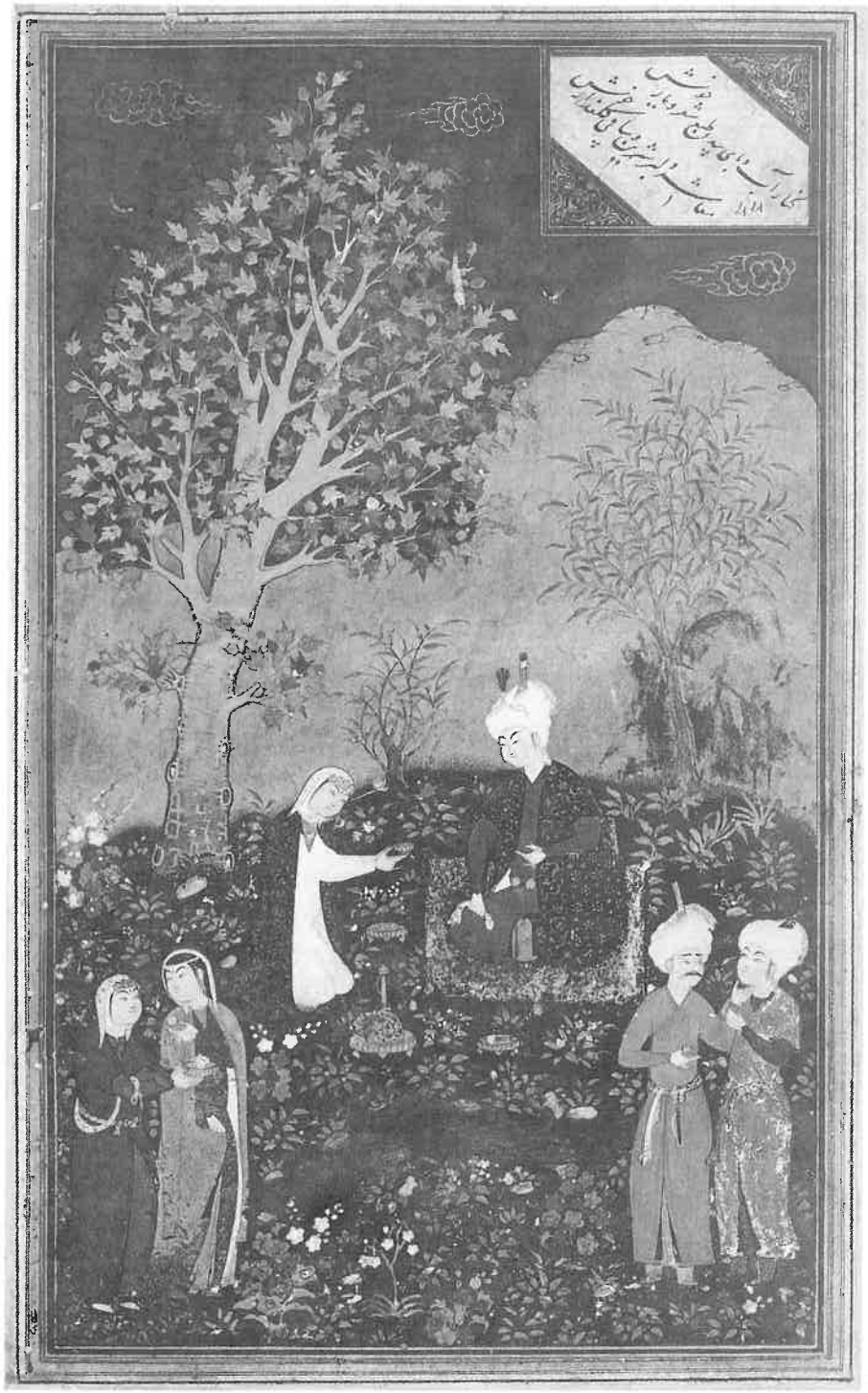


Fig. 11: "Prince in Autumnal Garden", Diwan-i Hafiz, MS 32.50 f. 40v. Courtesy of the Freer Gallery of Art, Smithsonian Institution, Washington, DC.

ity. Water was a focal point of both gardens and parks. Tanks, probably serving as the source of inspiration for Sultanate-period builders such as those at Mandu or Champaner, were foci of gardens, while parks often had a stream, either natural or man-made, running through the middle.[63]

In Man Singh's ancestral Rajasthan only one river, the Chambal, runs year round; all others are seasonal. Thus princes excavated vast tanks, for example, the Ana Sagar at Ajmer or those in Udaipur where palaces were built on the banks or even in the middle of water.[64] At Amber, Man Singh's *watan jagir*, a tank known as Sagar, essentially a reservoir, sits behind his palace (Fig. 12). A stream runs from it down the hilly slope until it reaches oldest temple in Amber dedicated to the town's tutelary deity.[65]

Not only was water a major feature of secular parks and Rajput palaces, but also – or perhaps especially – it was a feature of religious settings as well.[66] Sanskrit texts such as the *Brihat Samhita* relate that temples sites must have plenty of water.[67] They are best if surrounded by forests, rivers, hills and



Fig. 12: Sagar (tank behind Man Singh's Amber Palace), Amber, Rajasthan.



Fig. 13: Forested Temple Setting Above a Gorge, Menal, Rajasthan.

waterfalls. These texts followed actual practice. For example, the forested setting of Menal (Chittaurgarh District, Rajasthan) (Fig. 13), not far from Man Singh's *watan jagir*, seems a perfect translation from text to setting.[68] The temple is situated in a hilly forested area where a river runs across the rocky terrain and cascades into a gorge below. The gods, such texts relate, reside with pleasure in places with water and a beautiful setting.[69]

Perhaps nowhere more than in arid Rajasthan is water associated so consistently with temples. Examples built centuries before Man Singh was born include not only the spectacular waterfall at Menal's forested temple site but also the temples at Baroli (Bhilwara District) (Fig. 14) and Bijolian (Chittaurgarh District) centered around natural springs contained by a tank.[70] At each site the spring enters one of the temples' inner sanctums continually washing the enshrined images.[71] A partially submerged temple surely known to Man Singh, for it is actually within his *watan jagir* at Ramgarh, is adjacent to a palace built by Man Singh himself.[72]

Not only was water an important aspect of the temple setting, but also gardens were often a part of temple complexes. In Vrindaban there is a now overgrown garden attached to Man Singh's Govind Deva complex.[73] Although the land was not purchased for this garden (called a *bagh* in both the Persian and Braj documents) until 1594, Man Singh surely was fully aware of this tradition. For example, there is still a garden, almost an orchard, attached to the Eklalingji temple (Udaipur District, Rajasthan) set next to a tank. At such gardens flowers needed for



Fig. 14: Temple Situated in a Natural Spring, Baroli, Rajasthan.

worship were grown; thus function rather than aesthetic concerns were probably the foci here.[74]

Not only was Man Singh familiar with temple gardens, but also since he grew up in the Mughal court and was a high ranking *mansabdar*, he would be keenly aware of the refined sophisticated Mughal *char bagh*. But may we simply assume that Man Singh had any interest in his patrimonial Hindu traditions at the time he built Wah? After all, he was a young man and likely to be smitten by the sophistication of Persianate Mughal culture. All the same, Man Singh when serving in the northwest had contact with highly educated Sanskrit poets and Brahmins from Sialkot,[75] and appointed one of these men, Murari Dasa, well versed in Sanskrit, prime minister of his ancestral lands in Rajasthan. Others he brought to Amber as court poets, scribes, paper makers and enamelers.[76]

Man Singh, Mughal governor and Hindu Rajput prince, was not a typical of a number of Akbar's highest ranking nobles – Birbal, Raja Todar Mal, Raja Bhagwant Das, Ram Das Kachhwaha among others. Their allegiance to the Mughal emperor was absolute, but at the same time they had their own traditions that had to be honoured. How did this work in terms of artistic patronage? Again let us consider Raja Man Singh's patronage as an example.

Elements of Man Singh's Rohtas palace in Bihar built in the 1590s suggest that the palace was intended for more than the governor's residence. These include its sheer size, the presence of a *jharoka* (usually reserved for the emperor's use alone) and an association with local lore that linked Man Singh with a mythical Hindu king.[77] This is bolstered by two inscriptions on the palace entrance gate showing that Man Singh recognized his dual role as Mughal governor and Hindu raja. The Persian inscription implies that Raja Man Singh built the palace as a servant of Akbar, for it addresses the emperor extensively and makes only a brief reference to Man Singh, the actual patron. But in the Sanskrit one Raja Man Singh asserts his own authority as head of the Kachhwaha house, and there Akbar's name is omitted altogether. Instead, Man Singh is mentioned twice, not using his Mughal title, *raja*, but rather identifying himself as "king of kings, overlord."[78]

The use of an inflated title on a palace intended to serve both the governor's needs and those of the state underscores the dual nature of the relationship between the raja and Mughal emperor. Under the Mughal state system, serving the emperor included defending one's own religion, honor, and even patrimony if necessary.[79] Thus evoking a title that symbolized Rajput ideals and aspirations did not conflict with Man Singh's role as Akbar's governor, for both were vital to the successful functioning of the Mughal empire.

Mughal chroniclers and biographers seem to recognize Man Singh's almost dual existence, stressing his loyalty to the state, his beneficence to all, including Muslims, but also his personal commitment to the Hindu faith.[80] Is any of this apparent in his construction at Wah? We might recall that it was built in an area associated with Hinduism as well as Islam. On one hand the tank and setting at Wah was appreciated by Jahangir and even subsequent emperors as an appropriate Mughal pleasure retreat. But to Man Singh personally, who knew that the gods were attracted to the waters, waterfalls, trees and spring-fed tanks, this garden, probably built in thanksgiving for military victory and advancement, must have evoked a more personal meaning; it was one that would be readily recognized by other Rajput princes with whom he often served.

NOTES

1. C. M. Villiers-Stuart, *The Gardens of the Great Mughals* (London: A. and C. Black, 1913), p. 154.
2. For a brief description of Wah, a Mughal garden originating at a mountain spring, see Sajjad Kausar, Michael Brand and James L. Wescoat, *Shalamar Garden, Lahore: Landscape, Form and Meaning* (Karachi: Department of Archaeology and Museums, Ministry of Culture, Pakistan, 1990), pp. 51-2. The garden's morphology and history have been studied by M. A. Haleem and Shahid Rajput.
3. For slightly different versions see Robert Bradnock, *South Asian Handbook*, 3rd ed. (Bath: Trade and Travel, 1993), p. 1055 and Isobel Shaw, *Pakistan Handbook* (Chico, C. A.: Moon Publications, 1992), pp. 275-76.
4. Jahangir, *Tuzuk-i Jahangiri*, 2 vols. trans. by Alexander Rogers; ed. by Henry Beveridge (reprint ed. Delhi: Munshiram Manoharlal, 1968), I: 99. Hereinafter this will be known as *Tuzuk*.
5. *Tuzuk*, II: 123, 231.
6. *Tuzuk*, II: 123.
7. *Wah*, meaning beautiful is proclaimed when a poem is recited well or in appreciation of a fine performance. It is similar to the use of *bravo* after a beautifully rendered aria.
8. William Finch in Samuel Purchas (ed.), *Hakluytus Posthumus or Purchas His Pilgrimes*, 20 vols. (Glasgow: James MacLehose and Sons, 1905–07), IV: 58.
9. M. A. Haleem's and Shahid Rajput's work indicates that the site was enhanced in Jahangir's reign.
10. See *Tuzuk*, I: 138 where Jahangir terms Man Singh, "one of the hypocrites and old wolves of this State."
11. See the paper of Abdul Rehman for a detailed discussion. Also see Muhammad Salih Kanbo, *'Amal-i Salih*, 3 vols. (Lahore: Majlis Tarqi Adab, 1967), II: 253.

12. 'Inayat Khan, *Shah Jahan Nama*, trans. A. R. Fuller, ed. W. E. Begley and Z. A. Desai (Delhi: Oxford University Press, 1990), p. 338. For other visits see pp. 395, 422, 443, 465, 474 of the same work.
13. A notable exception is Srinagar and the rest of Kashmir, but that was a resort where the Mughals went to vacation.
14. See Elizabeth Moynihan, "The Lotus Garden Palace of Zahir ad-Din Muhammad Babur," *Muqarnas* 5 (1988), pp. 134–52. Dholpur is not in an urban setting, but Babur did build gardens in urban centers, for example, Agra and Gwalior but they no longer survive.
15. Ebba Koch, *Mughal Architecture: An Outline of Its History and Development (1526–1858)* (Munich: Prestel, 1991), 126-27.
16. Zain Khan, *Tabaqat-i Baburi*, trans. by S. Hasan Askari, annotated by B. P. Ambastha (Delhi: Idarah-i Adabiyat-i Delli, 1982), p. 156.
17. Zahir ad-Din Muhammad Babur, *Babur Nama*, Trans. Annette Beveridge (reprint ed., New Delhi: Oriental Books Reprint Corporation, 1970), p. 532 (hereinafter known as *Babur Nama*) and Zain Khan, pp. 160-61.
18. *Babur Nama*, II: 610–14.
19. *Babur Nama*, II: 608–10. See G. H. R. Tillotson, *The Rajput Palaces: The Development of an Architectural Style, 1450–1750* (New Haven and London: Yale University Press, 1987), pp. 57–62 for illustrations.
20. *Tuzuk*, I: 136.
21. For sources on Man Singh and his family see Catherine B. Asher, "Architecture of Raja Man Singh: A Study of Sub-Imperial Patronage," in Barbara Stoler Miller, ed., *The Powers of Art: Patronage in Indian Culture* (New Delhi and Oxford: Oxford University Press, 1992), pp. 183-84. See also R. N. Prasad, *Raja Man Singh of Amber* (Calcutta: The World Press, 1966), pp. 21–119. The most useful Mughal account of Raja Man Singh's career is in Abu al-Fazl, *Akbar Nama*, 3 Vols. trans. H. Beveridge (reprint ed.; Delhi: Rare Books), III: 40 of the index (Hereinafter *Akbar Nama*). His career with additional useful information are found in two Mughal-period biographical accounts, Samsam al-Daula Shah Nawaz Khan and 'Abd al-Hayy, *Ma'asir-ul-Umara*, 2 vols. trans. H. Beveridge (reprint ed.; Patna: Janaki Prakashan, 1979), II: 48–57 (hereafter cited as *Ma'asir*), and Farid Bhakkari, *Zakhirat al-Khawanin*, 3 vols. (Karachi: Pakistan History Society, 1961–74), I: 103–111. Volume one is translated in English as Farid Bhakkari, *The Dhakhiratul Khawanin of Shaikh Farid Bhakkari*, trans. Ziyaud-Din A. Desai (Delhi: Idarah-i Adabiyat-i Delli, 1993), pp. 74–79. He is discussed in a genealogical account of the Kachhwaha nobility, compiled in the late 17th century, *Kachhawan ri Vanshavali*, ed. Shyam Singh Ratnawat (Jaipur: Centre for Rajasthan Studies, University of Rajasthan, 1981), pp. 81–85 (hereinafter cited as *Vanshavali*).
22. *Akbar Nama*, III: 1257. According to M. Athar Ali, *Apparatus of Empire, The Apparatus of Empire: Awards of Ranks, Offices and Titles to the Mughal Nobility, 1574–1658* (Delhi: Oxford University Press and Centre of Advanced Study in History, Aligarh Muslim University, 1985), p. 41 his highest rank was 7000/7000. For an explanation of this ranking system, see M. Athar Ali, *The Mughal Nobility Under Aurangzeb* (reprint ed.; Bombay: Asia Publishing House and Department of History, Aligarh Muslim University, 1970), p. 39.
23. See Asher. "The Architecture of Raja Man Singh," pp. 183–201.
24. Tillotson, pp. 94-95 provides illustrations of Man Singh's portions of the Amber palace. Unfortunately Ramgarh remains unpublished.
25. For photographs and text on Rohtas see Asher, "The Architecture of Raja Man Singh," pp. 188–91, and her "Sub-Imperial Palaces: Power and Authority in Mughal India," *Ars Orientalis*, 23 (1993), pp. 285–88. Also the same author's *Islamic Monuments of Eastern India and Bangladesh*, Part 3.2 of *South Asian Art* (Leiden: Inter Documentation Co. on Behalf of the American Committee for South Asian Art, 1991), provides extensive photographic coverage. Also see M. H. Kuraishi, *List of Ancient Monuments Protected Under Act VII of 1904 In the Province of Bihar and Orissa*, Archaeological Survey of India, New Imperial Series, Vol. LI (Calcutta: Government of India Central Publication Branch, 1931), pp. 146–169.
26. Prasad, pp. 150–52 includes many more, but little documentation. For those which can be safely attributed to Man Singh, see Catherine B. Asher, "Kachhwaha Pride and Prestige: The Temple Patronage of Raja Man Singh," in Margaret Case, ed., *Govinda Deva: A Dialogue in Stone* (New Delhi: Indira Gandhi National Centre for the Arts, in press).
27. Tarapada Mukherjee and Irfan Habib, "Akbar and the Temples of Mathura and its Environs," *Proceedings of the Indian History Congress, 49th Session* (Panajim: Indian History Congress, 1988), pp. 234–42.
28. For Man Singh's patronage in Lahore, see Bhakkari, I: 107 and Desai's translation of Bhakkari, p. 76. For Rohtas, see note 25. For Rajmahal, see Asher, "Architecture of Raja Man Singh," pp. 191–93 and Kuraishi, pp. 217–20; for his patronage at Hajipur, see Hasan Askari, "Some Documents Relating to the Mausoleum of Mamu Bhanja at Jaroha, Hajipur," *Bengal Past and Present*, LXVI (1946-47), 39–44.
29. *Akbar Nama*, III: 863.
30. For a chronology of the advancements of Raja Bhagwant Das and Man Singh until Bhagwant Das' death, see Athar Ali, *Apparatus of Empire*, A 59, A 157, A 191, A 212, A 253, A 261, A 288, A 289. Also consult the entry for Man Singh in *Akbar Nama*, III which is well indexed. For a good secondary interpretation, see Prasad, pp. 1–75. It might be noted that their governorships were shared responsibilities.
31. The exceptions are the palaces and gardens in his own *watan jagir* of Amber and Ramgarh. It is only natural that he would build in his patrimonial lands throughout his life. A second exception is the Govind Deva temple in Vrindaban. For a discussion of his patronage there, see Asher, "The Architecture of Raja Man Singh," pp. 184–86, and her "Kachhwaha Pride and Prestige," forthcoming.
32. The Ohind fort was built in 1586 according to the *Akbar Nama*, III: 736. Its construction was connected with campaigns against the Yusufzai. The Lahore mosque, cited in Bhakkari, I: 107 and Desai's translation of Bhakkari, p. 76), is doubtless associated with Bhagwant Das' governorship in Lahore between 1585–89.
33. See "Architecture of Raja Man Singh," pp. 195-96. Abu'l Fazl 'Allami, *The A'in-i Akbari*, Vol. I, trans. H. Blochmann (reprint ed., Delhi: Aadiesh Book Depot, 1965), p. 232 details the emperor's obligation to build for the welfare of the subjects and State. These obligations would filter down to Akbar's agents, the *mansabdars*. See John F. Richards, *The Mughal Empire* (Cambridge: Cambridge University Press, 1993), pp. 58–63.
34. *Ma'asir*, II: 226 and *Akbar Nama*, III: 146. Also see note 25. Many readers will know the Bihar Rohtas' name sake in Pakistan. That is Rohtas fort, built by Sher Shah Sur, not far from Dina on the Lahore – Islamabad road.
35. See Asher, "Sub-Imperial Palaces: Power and Authority in Mughal India," plates 10, 15, 17 for illustrations.
36. See Asher, "The Architecture of Raja Man Singh," 191–93 for the Rajmahal Jami' mosque here and in the following paragraph.
37. Robert M. Martin (ed.), *The History, Antiquities, Topography and Statistics of Eastern India*, 3 vols. (London: W. H. Allen, 1838), II: 70.

38. Since many of the rebels were once Mughal *amirs* the allusion to the great mosque at Fatehpur Sikri would have been clear.
39. There are other important categories of commemoration associated with Man Singh's architectural patronage, for example the commemoration of deceased family members. For this aspect, which is outside the realm of this paper and for material in this paragraph, see Asher, "The Architecture of Raja Man Singh," pp. 186–188, and "Kachhwaha Pride and Prestige: The Temple Patronage of Raja Man Singh," in press.
40. For illustrations of these temples and their images, see Margaret Case, ed. *Govinda Deva: A Dialogue in Stone* –(Delhi: Indira Gandhi National Centre for the Arts, in press).
41. *Babur Nama*, p. 532, and Zain Khan, p. 7.
42. While today the site of Man Singh's garden and fort are called Ramgarh, its contemporary name was Rajgarh. Prasad, p. 16 gives the inscription which refers to the construction of a fort, well and garden at Rajgarh. See documents (numbers 19 and 20) for the land in Vrindaban sold to Man Singh for the Govind Deva temple garden in Mukherjee and Habib, "Land Rights in the Reign of Akbar, The Evidence of the Sale Deeds of Vrindaban and Aritha," *Proceedings of the Indian History Congress* (Gorakhpur: Indian History Congress, 1989-90), pp. 241-42; 251-52. I am grateful to Irfan Habib for providing me with detailed information and the precise texts of the documents. Other places where Man Singh built palaces and probably gardens as well included his land in Varanasi and Pushkar. See Gopal Narayan Bahura and Chandramani Singh, *Catalogue of Historical Documents in Kapad Dwara, Jaipur*, Part II: *Maps and Plans* (Jaipur: [Jaigarh Charitable Trust], 1990), pp. 3, 353.
43. See Prasad, pp. 76–65.
44. For these events, see *Akbar Nama*, III: 712–714 and Prasad, pp. 66-67.
45. No source indicates he held land there. Prasad, p. 74 cites Sialkot as his *jagir*; and he does give a time frame. However, the exact location of *jagirs* is frequently not included in Mughal chronicles.
46. See Askari, pp. 39–44 for his support of the Hajipur shrine. Man Singh's and subsequent Kachhwaha support of the temple at Baikathpur is in Brahmadeva Prasad Ambashthya, "History and Documents of Baikathpur Temple," *Journal of the Bihar and Orissa Research Society*, 46 (1–4), pp. 342–60. For documents relating Man Singh's support of the Govind Deva temple, see the following three articles by Mukherjee and Habib: "Land Rights in the Reign of Akbar," pp. 239–42; "Akbar and the Temples of Mathura and its Environs," pp. 234–38; "The Mughal Administration and the Temples of Vrindaban During the Reigns of Jahangir and Shahjahan," pp. 289, 293.
47. I am grateful to John Richards for discussing this matter with me. Also see Shirin Moosvi, *The Economy of the Mughal Empire, c. 1595: A Statistical Study* (Delhi: Oxford University Press, 1987), p. 157.
48. See notes 4, 5, and 12. Saqi Must'ad Khan, *Maasir-i_'Alamgiri*, trans. J. N. Sarkar (Calcutta: Royal Asiatic Society, 1947), pp. 81–84, and Muhammad Hashim Khafi Khan, *Muntakhab al-Lubab*, trans. Moinul Haq as *Khafi Khan's History of 'Alamgir* (Karachi: Pakistan Historical Society, 1975), pp. 238–43 among others give details of Aurangzeb's visits to the garden at Hasan Abdal.
49. See Asher, "Kachhwaha Pride and Prestige: The Temple Patronage of Raja Man Singh," in press for the vow Man Singh made to construct the temple.
50. It is notable that Jahangir never calls the site a garden or *bagh*. But he clearly finds it beautiful and a suitable setting for his own personal enjoyment.
51. For the most recent article on Sultanate gardens, see A. Welch, "Gardens Babur Did Not Like: Landscape, Water and Architecture for the Sultans of Delhi," in James L. Wescoat and Joachim Wolschke-Bulman (eds.), *Mughal Gardens: Sources, Places, Representations and Prospects* (Washington D. C.: Dumbarton Oaks Research Library, forthcoming 1996).
52. See for example J. P. Losty, *Indian Book Painting* (London: The British Library, 1986), plate 10.
53. For the Hauz-i Qutb, better known today as the Kankaria Tank, see K. V. Soundara Rajan, *Ahmadabad* (New Delhi: Archaeological Survey of India, 1980) p. 30. For the *hauz* at Champaner, see *Indian Archaeology: A Review*, 1974-75, pp. 14-15, plates XIVB, XVA-B.
54. Catherine B. Asher, "Legacy and Legitimacy: Sher Shah's Patronage of Imperial Mausolea," in Katherine P. Ewing, (ed.), *Shari'at and Ambiguity in South Asian Islam* (Berkeley and Los Angeles: University of California Press, 1988), p. 85 and the same author, *Architecture of Mughal India* (Cambridge: Cambridge University Press, 1992), p. 14.
55. Ghulam Yazdani, *Mandu, the City of Joy* (Oxford: Printed for the Dhar State at the University Press, 1929), Plate XVII provides an overall view. There is a lotus shaped pool at Wah in the *hammam* area, although according to M. A. Haleem it postdates Man Singh's construction there.
56. The stream is most evident between the tank, newly excavated in 1993, and the private land of the Hayat family. Before the 1993 excavation the stream criss-crossed much of the garden. M. A. Haleem indicates that the stream has surfaced recently.
57. For examples, see Thomas W. Lentz and Glenn D. Lowry, *Timur and the Princely Vision* (Los Angles and Washington D. C.: Los Angeles County Museum of Art and the Arthur M. Sackler, 1989), p. 117 ("Humay and Humayun in a Garden," Musee des Arts Decoratifs, Paris) and pp. 264-65 ("Timur Granting an Audience in Balkh" from a *Zafarnama* in the John Hopkins University, Milton S. Eisenhower Library, Garrett Collection, Baltimore).
58. Asher, "The Architecture of Raja Man Singh," pp. 185–87.
59. Gopal Narayan Bahura, *Literary Heritage of the Rulers of Amber and Jaipur* (Jaipur: Maharaja Sawai Man Singh II Museum, 1976), pp. 28–33 discusses Sanskrit manuscripts in the Jaipur Pothikhana written in the time of Man Singh. Many of these are dedicated to him.
60. Zain Khan, p. 112.
61. For example, *Mahabharata*, trans. Kamala Subramaniam (Bombay: Bharatiya Vidya Bhavan, 1965), p. 115.
62. Varahamihira, *Brhat Samhita*, trans. by M. Ramakrishna Bhat as *Varahamihira's Brhat Samhita*, 2 vols. (Delhi: Motilal Banarasidass, 1981-82), I: 524-25 (hereafter *Brhat Samhita*). Ajaya Mitra Shastri, *India As Seen in the Brhatsamhita of Varahamihira* (Delhi: Motilal Banarasidass, 1969), pp. 268-69. I am grateful to Allen Thrasher for discussing this with me.
63 Shastri, p. 269
64. Examples survive in Ajmer and Udaipur from the 17th century. See Tillotson (p. 126) for an illustration of the Jag Mandir in Udaipur; Asher, *Architecture of Mughal India*, p. 175 and Koch, p. 104 for the Ajmer pavilions.
65. Aman Nath, *Jaipur: The Last Destination* (Bombay: India Book House, 1993), pp. 36-37 for illustrations of the tanks and temple.
66. *Brhat Samhita*, I: 536–38; Shastri, pp. 269, 395.
67. *Brhat Samhita*, I: 537-38.
68. For Menal see R. C. Agrawala, "Early Mediaeval Chapels at Menal, Rajasthan," *Bharatiya Vida*, XXII (1962), pp. 43-44 and George Michell, *Hindu, Buddhist, Jain* Vol. I of *The Penguin Guide to the Monuments of India* (New York: Viking Press, 1989), p. 299.

69. *Brhat Samhita*, I: 537-38.
70. Michell, pp. 279, 281; L. K. Tripathi, *The Temples of Baroli*, Plate I, and Adris Banerji, "Monuments of Bijolya," *Journal of the Asiatic Society*, fourth series, VII, 1-2 (1965), pp. 99–106. For Menal see note 67.
71. Tripati, pp. 10–12, plate I calls this temple number three at Baroli. Michell, p. 280 indicates it is the Undeshvara temple at Bijolian.
72. The temple remains unpublished.
73. For the documents about this garden, see Mukherjee and Habib, "Land Rights in the Reign of Akbar," pp. 241-42; 251-52.
74. *Brhat Samhita*, I: 536.
75. Bahura, *Literary Heritage of the Rulers of Amber and Jaipur*, pp. 29-30.
76. Bahura, *Literary Heritage of the Rulers of Amber and Jaipur*, pp. 29-30, 34.
77. Asher, "Architecture of Raja Man Singh," pp. 187–89.
78. It reads, "*Sri maharajadhiraja maharaja Sri Mansi[hna]*," Kuraishi, *Ancient Monuments*, p. 168.
79. J. F. Richards, "Formulation of Imperial Authority," in J. F. Richards, ed., *Kingship and Authority in South Asia* (Madison, Wisc.: South Asian Studies, University of Wisconsin, 1978), p. 275, and Norman P. Ziegler, "Some Notes on Rajput Loyalties during the Mughal Period," in J. F. Richards, ed., *Kingship and Authority in South Asia* (Madison, Wisc.: South Asian Studies, University of Wisconsin, 1978), pp. 215–40.
80. *Ma'asir*, II: 55–57; Bhakkari, I: 107–110 and Desai's translation of Bhakkari, pp. 76–79.

THE MUGHAL GARDEN 'WAH' NEAR HASANABDAL: SOURCE MATERIAL, REPORT OF EXCAVATIONS OF 1993-94 AND NEW DISCOVERIES

SHAHID AHMAD RAJPUT
National Fund for
Cultural Heritage Islamabad

INTRODUCTION[1]

About two kilometers east of Hasanabdal beside the G. T. Road, is a 16th to 17th century Mughal garden initially called *Bagh-i-Hasanabdal* now popularly known as Wah Garden. It was a private property till 1976 but due to its so-called historical and architectural importance, Wah garden was acquired by the government and was handed over to the Department of Pakistan Archaeology for its excavation, restorations and maintenance (Fig. 1).

The love of Mughal emperors for natural beauty, spring waters, and cascades founded a Mughal garden tradition in the subcontinent. A large number of gardens were created under Mughal patronage. One of these gardens was Wah near Hasanabdal.

This paper deals exclusively with the source material, i.e. history and the description of the new discoveries made during 1993 and 1994 excavations. Wah garden was not preplanned and it was used as a transit camp by the Mughal emperors. It evolved over a number of years, growing and changing according to the whim of the emperor who used it. However, all the known traditional architectural features associated with Mughal gardens can be seen here. During Akbar's period between 1581 and 1586, Raja Man Singh was appointed in the area to keep the enemy beyond Attock. This was when he might have built a small building here in the middle of a pond, as it was recorded by Jahangir in his Tuzuk of 1607.[2]

In 1639, on his way to Kabul, Shahjahan stayed in Hasanabdal for the first time[3] after his enthronement and ordered his department of civil engineering to build new buildings and develop this garden. For two years, the most famous architect of his time, Ahmad Mimar Lahori, who prepared the plans of palaces, serais and gardens all over the subcontinent, supervised the building of this garden. Fol-

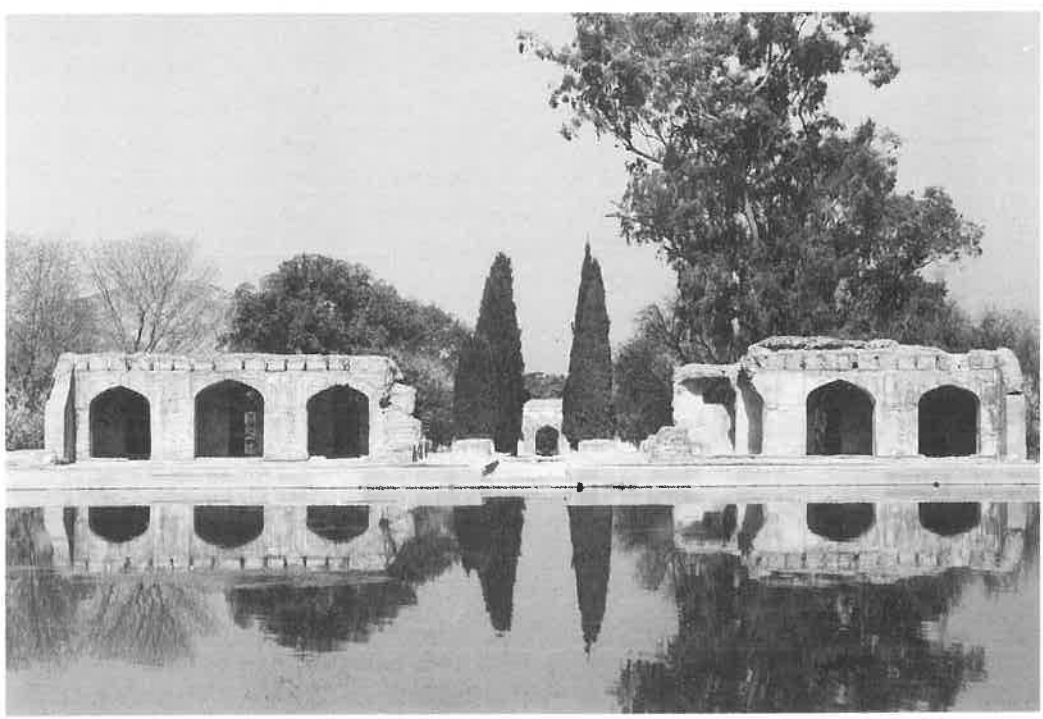


Fig. 1: The Magnificent Baradari of Wah Garden.

lowing the traditional Mughal pattern, beautiful ponds, *baradaris*, water channels, cascades, and fountains were provided. On the left of the southern *baradari*, a bath/*hammam* of hot, cold, and medicated water was erected. The interior walls of the *baradari* were embellished with stucco traceries depicting vases, fruits, foliage and trees, traces of which are still to be seen *in situ*. During the following years, in 1646, 1647, 1649 and 1652, on his way to and from Kabul, Shahjahan encamped in this garden. The contemporary chroniclers of Shahjahan, Mulla Abdul Hamid Lahori and Muhammad Saleh Kamboh, recorded this garden. The former recorded it as *Bagh-i-Bahisht A'in*, and the latter as the *Gulistan-i-Irum*.[4] Aurangzeb Alamgir was the last of the Mughal emperors to stay in Hasanabdal and he remained there for one and a half years[5] in 1674 and 1676. During this time he must have frequently visited Wah garden. After that Wah garden suffered great negligence particularly under the Durranis and the Sikhs when everything in it was destroyed.[6] During the British period, in 1865, the garden was handed over to Muhammad Hayat Khan of Wah so that it could be saved from further deterioration.[7]

The present excavation began in November 1993. Since that time much has been revealed and the work is still in progress. My brief was to research the hydraulics with a view to reinstating the original hydraulic system if possible and in this connection a number of important discoveries were made, e.g. a large water tank on the eastern end of Wah garden, three water channels running parallel with the length of the garden and fifteen fountains in the central water channel of which twelve fountains are in the upper terrace and three in the lower, with water inlets situated in the upper terrace. In addition, seven watch towers in the perimeter wall were discovered during the recent excavations. There is also a *hammam* attached to the southern wing of the *baradari* which was excavated earlier in 1976.

All these features are discussed in detail in this paper but the reader's attention is first drawn to the garden's history in order to establish the origin of its name, how and when this garden came into existence, who created it and how it developed.

HISTORY

This area was given the name "Hasanabdal" after Hasan, a famous saint of Qandhar, where he is still known and revered as Baba Walli as he is in Pakistan. Abdal[8] was his title. He died and was buried in Qandhar. It is written on his tomb stone that Mirza Shah Rukh (1406–1447) met him in Qandhar with due respect in 1417 A.D., and whatever he had heard about the saint, he saw the same with his own eyes. The saint died during the life of Mirza Shah Rukh,[9] between 1417 and 1447. It is not known when the saint visited this place but, during his stay in Hasanabdal, he made a *khanqah* for his meditation on top of a hill which is still visited by locals and foreigners alike.

It is worth mentioning here that the European travellers who visited Hasanabdal and recorded it in their travelogues misinterpreted the meaning of the name "Hasanabdal" after whom the valley was named. They interpreted the meaning of "Abdal" as mad or lunatic.[10]

Hasanabdal lies on the main road from Kabul to Lahore. Akbar stayed or passed through Hasanabdal several times between 1581 and 1592. In 1581 Akbar travelled via Hasanabdal to Attock where he stayed for fifty days,[11] laying the foundation stone of the fort on May 30, 1581. He then continued to Kabul and returned to Lahore via Attock. On these two occasions he might have stayed in Hasanabdal, for the distance between Hasanabdal and Attock is ten *kos*.[12] Since the normal distance travelled by the army in one day was ten *kos*, this distance would make Hasanabdal a perfect *manzil* or a halting place. During his eight days stay beginning on December 13, 1585, Akbar went to hunt in a *qumargah* near Hasanabdal and also during this stay sent expeditions to check Yusufzais in Malakand/Swat as well as to invade Kashmir.[13]

Near Hasanabdal, even before the time of Akbar, there was a pond in the middle of which Raja Man Singh built a small building, as recorded by Jahangir in 1607 during his first visit to Hasanabdal.[14] In 1581, when Akbar laid the foundation stone of Attock Fort, he appointed Raja Man Singh to protect the frontiers.[15] Raja Man Singh stayed in Hasanabdal from 1581 to 1586, during which time he might have built that small building as the mortar and lime for the construction of the Attock Fort was supplied from Hasanabdal. The remains of this small building have now been identified beneath the existing *baradari* and are discussed in detail with its plan in a later part of this paper.

Abul Fazl has mentioned the visits and activities of Akbar in and around Hasanabdal but there is no mention of any garden laid out by Akbar. This was however, an ideal camping ground for a Mughal

encampment with abundant fresh water springs to supply the prolific orchards and the whole army as, indeed, they presently supply the 700,000 people of Wah Cantonment. There is still a fine *baoli* of the Suri period called *Lohsar Baoli* in Wah Cantt., beside the Grand Trunk Road.

Jahangir visited Hasanabdal six times between 1607 and 1626. On his first visit in 1607 he stayed here for three days. He described his first stay as follows:

> 12 Muharram 1016 A.H./28 April 1607 Wednesday, I stayed at Baba Hasanabdal. To the east of this place at about one *kos* there is a cascade whose water falls with a great speed. Between Wah and Kabul there is not a single cascade like this, but there are two or three similar cascades on the way to Kashmir. In the middle of that pond which is the source of this cascade Raja Man Singh built a small building. This pond is full of fish of a quarter yard in length. I stayed at this attractive place for three days and enjoyed wine and fishing with those who were intimate. I have never used *bhanwar-jal* (a famous Indian fishing net). I casted this net by my hand and caught twelve fish, put pearls in their noses and let them loose in the water.[16]

Four years later an English traveller, William Finch, although he never went to Hasanabdal, repeated this story and attributed the anecdote to Akbar.[17] This chronology was confused by subsequent writers.

However, later in October of the same year, i.e. 1607, on his way back from Kabul, Jahangir stayed at Hasanabdal to hunt.[18] Jahangir took an interest in the development of Hasanabdal. Thus he sent Rs. 4,000 in 1608, and again Rs. 5,000 the following year for the development and construction of a bridge and a building in Hasanabdal.[19]

Perhaps at this time the *hammam* or a portion of it was developed. The *hammam* as it stands now shows at least two types of architecture of different periods of which one is definitely Jahangiri or earlier.[20]

Jahangir's descriptions of his third visit to Hasanabdal are very important as they provide us with an intimation of the garden under study.

> 15 Rabi al Awwal 1029 AH/10 February 1620 Tuesday, landed at Hasanabdal ... at this *manzil gah* there is a flowing spring, a cascade and a very fine pond. On Thursday at the beginning of 53rd lunar year of my life I celebrated my lunar weighing "Taladan". Since the journey ahead was mountainous and there were plenty of ups and downs, it was very difficult to take the whole army at once, therefore it was decided that Hazrat Maryam Zamani (Jahangir's mother Jodh Bai) and other court ladies should stay here for a few days before resuming their journey.[21]

It seems likely that this *manzil gah*/a halting place, was the place of a fast flowing cascade and an attractive pond with a building in the middle admired by Jahangir during his first visit to Hasanabdal. The money sent earlier to Hasanabdal for a building also leads one to imagine that there was some sort of building made recently for the stay of the emperor near the pond. The same pond as was recorded above, on the first visit of Jahangir, is approximately one *kos* from Baba Hasanabdal in the east, i.e. Wah garden.

On his fourth visit to Hasanabdal in 1622, Jahangir again mentioned in his *Tuzuk* that he stayed near the spring in Hasanabdal for four days.[22] During this stay he hunted 30 mountain rams with arrows and a gun inside a hedge (*qumargah*) raised for this occasion. Hence Hasanabdal had already become a popular spot for hunting, celebrations, overnight halts, and was admired frequently by the emperor Jahangir. It is thus apparent that there was some sort of royal encampment or garden already in existence in the vicinity where Jahangir could leave his mother and other court ladies for a few days rest, and that Hasanabdal had become an important *manzil gah*, a halting place, for the Mughal emperors on their way to Kashmir and Kabul.

The Shahjahani historians, Abdul Hamid Lahori and Saleh Muhammad Kamboh, visited Hasanabdal with Shahjahan during his twelfth regnal year in April 1639, and recorded Hasanabdal as the most beautiful and gratifying garden between Delhi and Kabul.[23]

According to his chroniclers Shahjahan visited Hasanabdal nine times during his reign, between 1639 and 1652. He always stayed at Hasanabdal on his way to and from Kabul except for once in 1647 on his way back from Kabul when he did not stay there.[24] During his third visit, on his way back from Kabul in October 1646, the stay of Shahjahan in Hasanabdal is recorded to have been in a garden called *"Bagh-i-Bahisht'Ain*[25] or Heavenly garden. Chroniclers report that Shahjahan visited Hasanabdal for the fifth time in April 1647 and stayed in a building constructed in the garden.[26] Two years later, in 1649, when Kamboh came to Hasanabdal with Shahjahan, he recorded Hasanabdal as *Gulistan-i-Irum*[27] or paradise garden.

Thus we have ample historical evidence that during the time of emperor Shahjahan there was a garden appreciated by the connoisseurs of gardens, as so beautiful and striking that a stop at this *manzil* became imperative.

Finally Aurangzeb Alamgir stayed in Hasanabdal for one and a half years between July 6, 1674 and January 2, 1676, during which time he stayed for some time in this garden. His historians refer to this place as *Bagh-i-Hasanabdal*.[28] Shahjahan's historians recorded the royal gardens as Hasanabdal. Jahangir admired its cascade, pond, and its building with the name Hasanabdal. The name "Wah" does not occur in any of the historical references.

How then did this garden of Hasanabdal acquire the name of Wah garden? There is a gap in the history of Hasanabdal after Aurangzeb, till 1815 when Elphinstone came to Hasanabdal as a traveller and recorded his observations.

WAH GARDEN AS SEEN BY THE EARLY TRAVELLERS

Elphinstone

> The valley of Hasanabdal recalled to our recollection the country we had left. It had indeed been famous in all ages for its beauty, and had been a favourite resting place of the great Mughals, on their annual migration to Cashmere; Nor could there have been a scene better fitted for the enjoyment of their easy and luxurious grandeur ...
> ... About two miles off was a royal garden now gone to decay, there was something melancholy and desolate in every thing about it, which was scarce less impressive than its original splendeur. It contained some deep and extensive basins filled with the pure water of these hills, some ruined buildings (one of which was remarkably elegant); and here we for the last time, saw the plane (chinar) trees, which forms the favourite ornament of all the gardens of the West.[29]

It is important to note that the name of this place so far is Hasanabdal.

Then a very interesting thing happened and a dramatic change took place when the garden was visited by another English traveller, Moorcroft, in 1823. In his travelogue he repeats the false anecdote of William Finch as given above that Akbar admired this garden and said "Wah Bagh" (what a beautiful garden!). Hence the garden was so named as it is known as Wah garden to this day.

Moorcroft did not acknowledge William Finch in his travelogue nor did anybody challenge Finch's fabrication. The irony is that all the later travellers quoted this anecdote without hesitation or investigation. However, the impact of Moorcroft's study was so strong that even the Rawalpindi Administration Report of 1865, the Journal of Indian Antiquary 1873, and the Rawalpindi District Gazetteer 1883, recorded this place as Wah Garden and to this day the name of the garden is Wah but following Moorcroft rather than Akbar. Henceforth let us call it Wah Garden since we are left with little choice.

Nevertheless, Moorcroft's account is the first and only detailed account among European travellers to add to our knowledge of Wah Garden.

Moorcroft

> Advancing across the low ridge of the hills, we came to a plain in which stood the village of Wah, and an extensive garden, in the usual Mohammedan style, constructed by the order of emperor Akbar, on the site of an old serai, the beauty of which drew from the monarch the exclamation of "Wah!" whence the name of the new pleasure-ground originated. It covers a space about a quarter of a mile in length and half that in breadth, enclosed by walls partly in ruins. The gateways and turrets that were constructed along the boundary wall are also mostly in a ruinous condition (Fig. 2). The eastern extremity is occupied by two

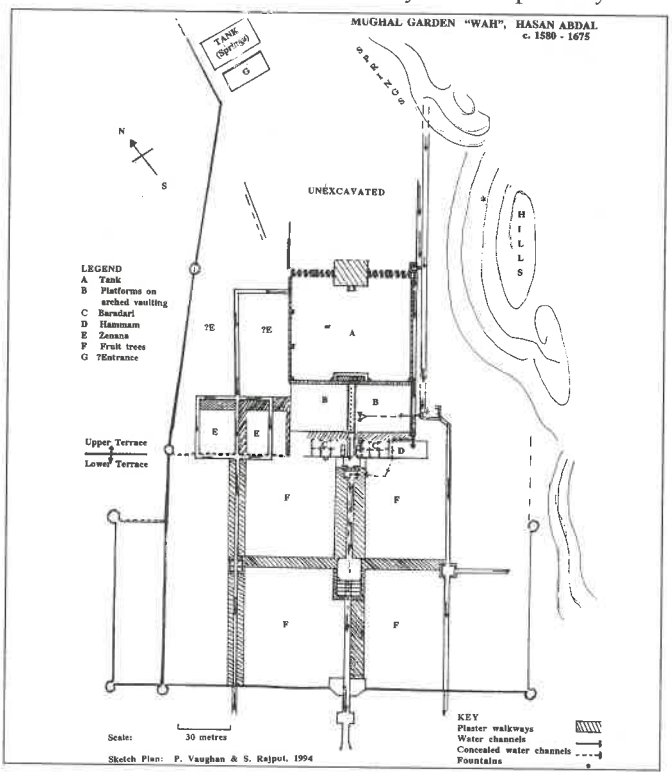


Fig. 2: Master Plan of Wah Garden.

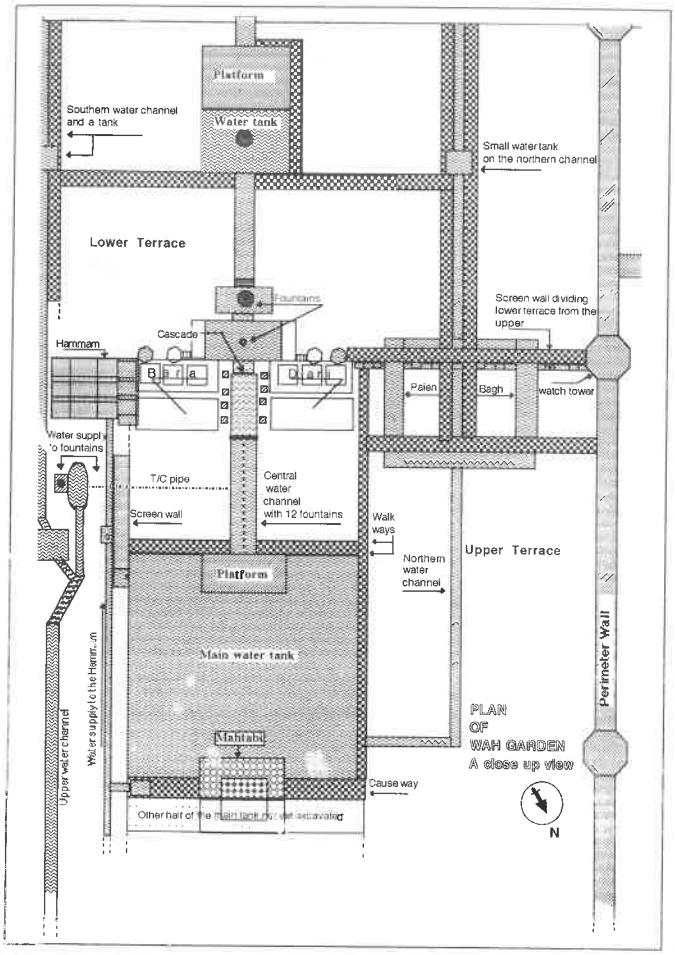


Fig. 3: A close up Plan of Wah Garden by Shahid Ahmad Rajput.

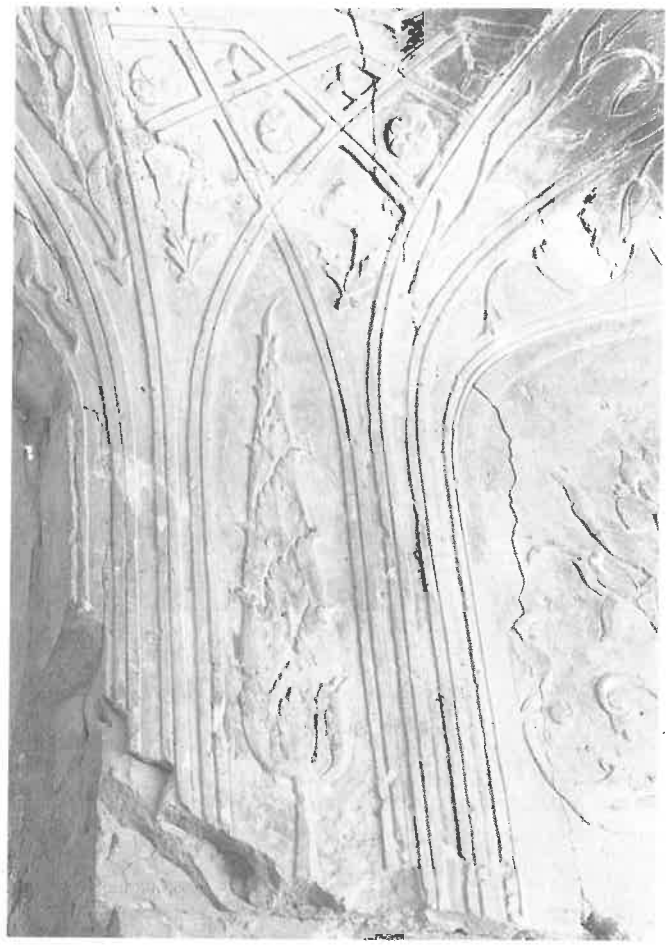


Fig. 4: Exquisit stucco work on the interior walls of the baradari at Wah Garden.

large stone-walled tanks; the western by parterres, and they are divided by a building which served as a pleasure-house to the emperor and his household. It was too small for a residence, consisting of a body and two wings, the former containing three long rooms, and the latter divided into small chambers (Fig. 3). The interior of the whole is stuccoed, and in the smaller apartments the walls are decorated with flowers, foliage, vases, and inscriptions in which, notwithstanding the neglected state of the building and its antiquity, the lines of the stuccoed work are as fresh as if they had but just been completed, indicating a very superior quality in the stucco of the east over the west (Fig. 4). The chambers in the southern front of the western wing, and other continued beyond it, constitute a suite of baths, including cold, hot and medicated baths and apartments for servants, for dressing, and reposing, heating rooms and reservoirs (Fig. 5). The floors of the hammam have been paved with a yellow breccia and each chamber is surmounted by a low dome with a central sky-light. Fresco paintings of flowers and foliage in compartments embellish the walls, and unless injured by mechanical violence, the colouring has lost little of its original lustre. Although possessing nothing majestic or imposing, the bath of Wah Bagh must have been both commodious and elegant. The water, which was supplied from the reservoirs first noticed, is clear and in great abundance. It comes from several copious springs, at the base of some limestone hills in the neighbourhood and, after feeding the tanks and canals of the garden, runs



Fig. 5: Hammam or bath at Wah Gardens

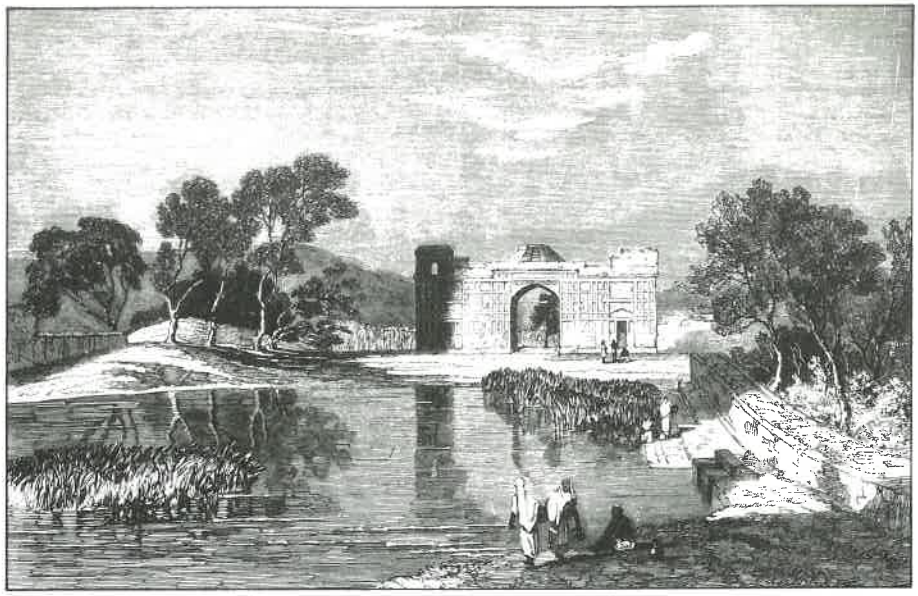


Fig. 6: A sketch of Eastern gateway of Wah Garden from an engraving by G. T. Vigne, 1835.

off with the Dhamrai river that skirts the plain on the north and West.[30]

Later travellers did not add to this significantly.

The Illustrated London News, Saturday, April 20, 1850, published an article about Wah Garden with an engraving after a sketch of G. T. Vigne[31] in 1836 (Fig. 6). This sketch was also published by F. S. Aijazuddin in his book, *The Historical Images of Pakistan*, p. 131, Lahore, 1992.

The News article follows:

"Hasyn-Abdal (Hasanabdal), in the Punjab:

> It is named after a Mohammedan saint whose tomb lies here. It is situated in a delightful valley, watered by springs which gush from amongst the rocks - Burns states some hundred springs; Von Hugel, three. This last writer denies that the place is a valley; he also reproves Moore and Hamilton for giving too flattering a description of it; but it is not to be forgotten that the glorious Akbar expressed the feeling excited in his mind on viewing the spot by exclaiming "Wah!" the usual interjection of admiration; hence the ruined garden is so named. Elphinstone styles it a valley, and the authorities to which we have referred, and even the Baron himself subsequently, are warm in their praises of the beauty of the place.

Hasanabdal is on the high-road from Lahore to Attock. It is thus mentioned in Thomas Moore's exquisite oriental romance "Lalla Rookh". Thomas Moore was an Irish poet who never visited India. He was paid 3000 guineas in 1814 by Longman Publications to write an "Oriental story" in verses.[32] So he wrote this story which was published four years later in 1817.

Thomas Moore's "Lalla Rookh" became very popular and remained so throughout the nineteenth century as well as early twentieth century. For well over a century, it was constantly staged by royal families in Europe and Russia.[33] Books were written on "Lalla Rookh", one of which is "Emeralds set with Pearls" by Florence Parbury. It is a coincidence that almost a century later Parbury wrote her book in the same Library where Thomas Moore wrote the "Lalla Rookh," i.e. Chatsworth House Library situated in Derbyshire in the Peat District of England. In her book Florence Parbury included a tribute to Thomas Moore.[34]

> "I am told, dear Moore, your lays are sung,
> (can it be true you lucky man?)
> By moonlight in the Persian tongue,
> Along the streets of Isfahan"
>
> -Lutterell

Here are two paragraphs from "Lalla Rookh" for the interest of general readers:

> They were now not far from the forbidden river (the Attock) beyond which no pure Hindu can pass, and were reposing for a time in the rich valley of Husyn-Abdal, which had always been a favourite resting-place of emperor in their annual migration of Cashmere. Here often had the light of the faith, Jahangir, wandered with his beloved and beautiful Nurmahal, and here Lalla Rookh have been happy to remain for ever, giving up the throne of Bukhara and the world for Feramroz and love in this sweet lonely valley. The time was fast approaching when she must see him no longer – or see him with eyes whose every look belong

to another, and there was a melancholy preciousness in these last moments which made her heart cling to them as it would to life. During the latter part of journey, indeed, she had sunk into deep sadness, from which nothing but the presence of the young minstrel could awake her. Like those lamps in tombs, which only light up when the air is admitted, it was only at his approach that her eyes became smiling and animated. But here, in this dear valley, every moment was an age of pleasure; she saw him all day, and was, therefore, all day happy – resembling, she often thought, that people of Zinge, who attribute the unfading chearfulness they enjoy to one genial star that rises nightly over their heads (the star Soheil, or Canopus) ...

... The whole party, indeed, seemed in their liveliest mood during the few days they passed in this delightful solitude. The young attendants of the Princess who were here allowed a freer range than they could safely be indulged within a less sequestered place, ran wild in the gardens, and bounded through the meadows lightly as young roes over the aromatic plains of Tibet. While Fadladeen, besides spiritual comfort he derived from a pilgrimage to the tomb of the saint from whom the valley is named, had opportunities of gratifying in a small way, his taste for victims, by putting to death some hundreds of those unfortunate little lizards, which all pious Mussulmans make it a point to kill; taking for granted, that the manner in which the creature hangs its head is meant as a mimicry of the attitude in which the faithful say their prayers![35]

The association of killing lizards with the Muslim action of prayer was as preposterous as much of Moore's story.

In 1865, the Deputy Commissioner of Rawalpindi, Krecroft wrote in his Administration Report: "Wah Bagh is given to the late Gen. Nicholson's A.D.C. Hayat who is now Extra Assistant Commissioner on the condition that he will look after its maintenance. This arrangement will stay during the present administration but I recommend it to be continued." On his recommendation Wah Garden remained the property of the Hayat family until it was acquired by the Government in 1976.

Villiers Stuart[36] visited this garden earlier this century and published her account in 1913, in which she quoted Moorcroft as above. Villiers Stuart adds; "The place is said to owe its present name to Akbar, who was so struck with its beauty, that it drew from him the exclamation of Wah Bagh! (Oh, what a garden!) and Wah Bagh it is to this day. But it was Akbar's son Jahangir who actually built the garden palace ... The present owner takes a great interest in this old Imperial Pleasure Ground, and has recently built up the ruined walls and done much to restore the gardens".

Following the death of Muhammad Hayat Khan (1838–1901), this garden became the property of his son, Aslam Hayat Khan (1874–1924). Thus Stuart visited Wah garden during the time of Aslam Hayat who, according to Stuart, looked after it very well.

EXCAVATION REPORT–FEBRUARY 1993–JULY 1994

During the past thirty years the garden has been looked after but only as far as the plantation of flowers and fruit trees is concerned. There is no doubt that this garden was once a gratifying garden under the Hayat family, but the little remains of its architecture were always covered with wild vegetation. The main water tank, excavated recently, was filled with earth and many wild trees grew in it. Three large water channels with wide walkways 7 feet 3 inches, were buried under earth. There was no *hammam* in 1976 when this garden was acquired and excavated by the Department of Archaeology, Government of Pakistan. Before that the *hammam* was only a mound of earth, like the mound to the east excavated and cleared recently by the Department of Archaeology. In the eastern mound the original Mughal plastered water channels and terra-cotta (T/C) pipes feeding the fountains were found. In other words Wah garden at the time of its acquisition in 1976 was, apart from its *baradari* buried under the two to six feet of earth and wild vegetation which are now excavated.

Recent excavations from December 1993 to July 1994 have determined the chronology of its architecture. There are at least three different phases of architecture: First phase, attributable to Raja Man Singh, second phase, attributable to Jahangir, third phase, attributable to Shahjahan. This paper describes the garden as it is known today:

DESCRIPTION OF THE GARDEN

a) Hydraulic System
b) Hammam
c) Baradari
d) Other gates, wall, and watch towers.

The Hydraulic System of Wah Garden

Our recent excavations have discovered a large water tank on its eastern end, fifteen fountains in the central water channel and their water inlets, three water channels, a Paien Bagh/Zanana, a few architectural ornamental objects in stone, and the hammam excavated in 1976. Our excavations confirm much of Moorcroft's description which I shall refer to as we examine each area and study the hydraulic system of Wah Gardens.

Water Tank

The main water tank is the principal feature of the garden. As shown in the plan it is situated at the eastern end of the upper terrace and it measures 220 feet x 214 feet and 5 feet 6 inches deep. The removal of debris and in-fill has revealed seven pointed arches between the tank wall and the platform in the centre of the tank indicating a causeway (Fig. 7). These arches are parallel on the either side of the platform suggesting that the causeway went right across the tank. Later selected trenches sunk beyond the causeway at the north-eastern end revealed the continuation of the northern wall suggesting that the tank extended beyond the causeway. This would be consistent with Moorcroft's description of two tanks although the precise form is yet unclear in view of the asymmetrical axis of the garden.

The layout of the water channels, tank and positioning of the pavilions are not symmetrical. Indeed, the lack of symmetry is a notable feature of the garden. The reason for this lack of symmetry is that the lay out follows the topography of the site and the principal source of springs.

There were also other considerations for the lay out. For instance the sophisticated techniques for major hydraulic systems were well known as shown in the Shalamar Garden. That such techniques were not used in Wah garden probably means that Wah was never intended as a major Mughal establishment but rather as a temporary halting place on their way to somewhere else. This makes it particularly interesting as no other garden of this type has survived.

Water Source

The principal source of water to the main water tank and eventually the supply of water to the whole garden except to the fountains and the southern channel lies either in the part yet to be excavated where there are many springs whose water is temporarily diverted to Timra Nalla (Moorcroft recorded it as Dhamrai river) or in the tank associated with the *Farudgah* (currently outside the Department's jurisdiction). The walls of this tank are plastered like the Mughal channels. This is the source of enormous amount of water supply to Wah Cantt. (Population 700,000) yet the surplus forms a fast flowing stream which now joins Timra Nalla but which originally may have fed the main tank at the upper terrace. This aspect needs excavation as does the identity and orientation from the *Farudgah.*

The *Farudgah*, so-called, in the north-east of Wah garden corresponds with the entrance as described by Hugel.[37] The structure, which is brick and stucco, with a large dome, appears to be of the Shahjahan period. It may even belong to the Sikh period, but further study is required. Although the principal



Fig. 7: Arches supporting the causeway at Wah Garden.

arches of this *Farudgah* have now been filled in to form a private residence, it remains substantially the same as that illustrated by Vigne (Fig. 6).

Water Channels of Wah Gardens

There are two outlets of water at the Northern and Western walls of the main tank. Once the tank is filled, water flows into these outlets forming a northern channel in the north and central channel in the west. Both channels run through the whole length of the garden and finally join the river which once flowed along the west of the garden.

Northern Channel

This channel is fed through an arch situated on the north-eastern end of the main tank. This channel is 2.6 feet wide and 1.6 feet deep and leads to the north from the main tank but in the middle of the northern pavilion when it turns westwards it widens up to three feet. However, its depth remains the same throughout its length in the upper terrace, i.e. 18 inches. Here there are six terra-cotta (T/C) pipes embedded in bricks at regular intervals (Fig. 8). These are called stepping stones. Their purpose is to maintain the water level and to keep it thoroughly fresh as T/C pipe allowed water to run through from the base. These stepping stones measure 12 inches deep and 18 inches wide and the diameter of the embedded pipes is 6 inches. This channel runs straight to the boundary wall of the upper terrace built parallel to the western end of the Baradari which acts as a division between the upper and lower terraces. Here this channel passes through an arch, reconstructed in 1976. The arch measures 6 feet x 8 feet (Fig. 9) and enters the lower terrace. Just before the northern channel enters the lower terrace there is a "Paien Bagh" or "Zanana" in the upper terrace. When water reaches the *paien bagh* it flows into two wider but

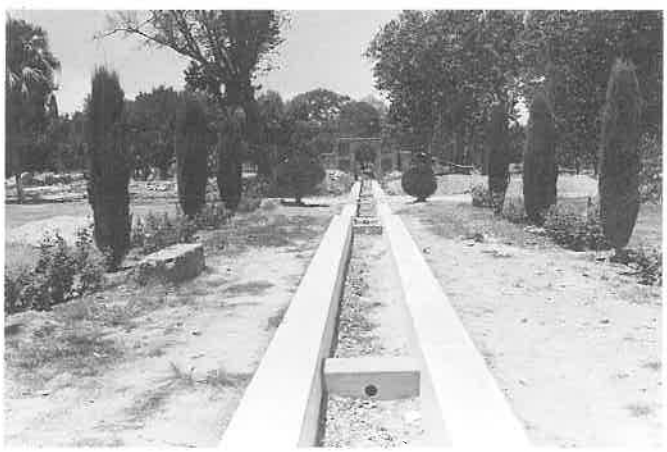


Fig. 8: Stepping stones in the northern water channel at Wah Garden.



Fig. 9: An arch on the northern water channel, reconstructed in 1976

shallower channels 45 inches wide and 10 inches deep on either side of the northern water channel, and after passing through the boundary wall of the upper terrace, the water turns again to meet the northern water channel before running into the lower terrace (Fig. 3).

In the lower terrace this channel, i.e. northern channel widens up 4 feet and 10 inches deep with a walkway measuring 7 feet 3 inches on either side. On this channel in the middle of the lower terrace there is a water tank measuring 13 feet 3 inches x 13 feet 3 inches and 1 foot 6 inches deep. This tank was divided into four in a later period but before Wah garden was acquired by the Department of Archaeology in 1976. In 1994, however, after its excavation and documentation the tank was buried under the walk ways during the process of the garden's development and a northern channel was built passing straight through the tank.

Central Channel

From the middle of the western wall of the main tank in the upper terrace, starts the main or the central channel which is 10 feet 4 inches wide and 1 feet 3 inches deep. This channel passes through the *baradari* down in the lower terrace, making a cascade. Water flows into the central channel when the main tank at the eastern end of Wah garden is filled to the height of 5 feet 6 inches. There is a stone bridge on this channel at the distance of 91 feet from the main tank. Hitherto, only four fountains were known between this bridge and the main tank, but during our present project eight more fountains were discovered in the same area at regular intervals, i.e. 7 feet 6 inches. These fountains are connected by a terra cotta pipe embedded in thick masonry which is 40 inches deep. The drawing in (Fig. 10) depicts the depth and width

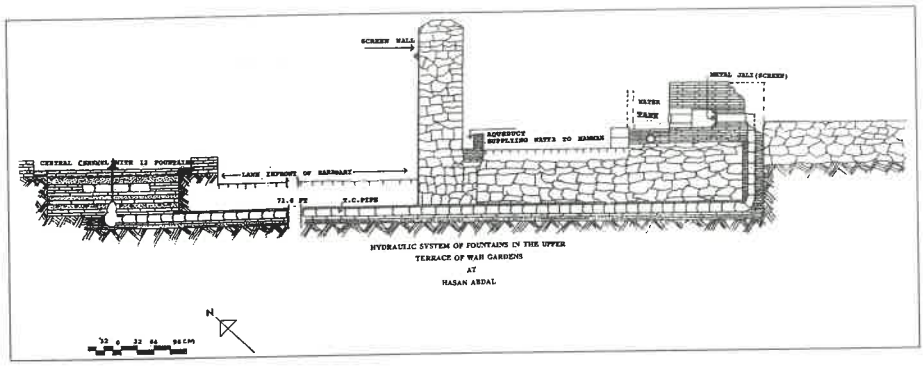


Fig. 10: Drawing of the hydraulic system at Wah garden. Discovered and drawn by Shahid Ahmad Rajput.

of the central channel and the details of how the fountains were connected with terra-cotta pipe and how the water was supplied to these fountains.

Beyond the stone bridge the floor of this channel is embellished with *sang-i-abri* and *sang-i-khattu* the black and golden stones set in a chevron design (Fig. 11). This design continues from the bridge down to the lower terrace including the cascade. The cascade tapers at an angle of 45 degrees. However, this is not the original 17th century design as can be seen from the broken masonry which suggests a vertical chute like either the one in Shalamar, Kashmir or the one at Shalamar Lahore built for Shahjahan. The date of the present chute, and the reorientation of the *baradari* on the upper terrace, has yet to be determined. Water flows from the cascade down to the lower terrace in a tank measuring 14 feet 3 inches x 19 feet 3 inches with a fountain in its centre. From this tank, the water enters into yet another smaller tank measuring 7 feet 9 inches x 16 feet 11 inches which also has a fountain, the only one with an eight petalled flower in situ made from Sang-i-Khattu (Fig. 12). These two tanks are connected by a small T/C pipe as well as by a cascade measuring 3 feet 10 inches x 8 feet 10 inches. Water enters into the main channel once again from the latter tank. Here the channel is bordered on either side by tall cypress trees to the outer boundary. (Young trees are seen in the illustrations in Crowe's book[38] and were planted earlier this century. What they replaced is not clear). Halfway through the lower terrace, the main channel joins another tank 40 feet 2 inches x 40 feet 6 inches also with a fountain in its centre. This fountain is embedded in an octagonal base 2 feet 10 inches x 10 feet x 10 feet and this fountain is also connected with T/C pipe embedded in traditional thick masonry.

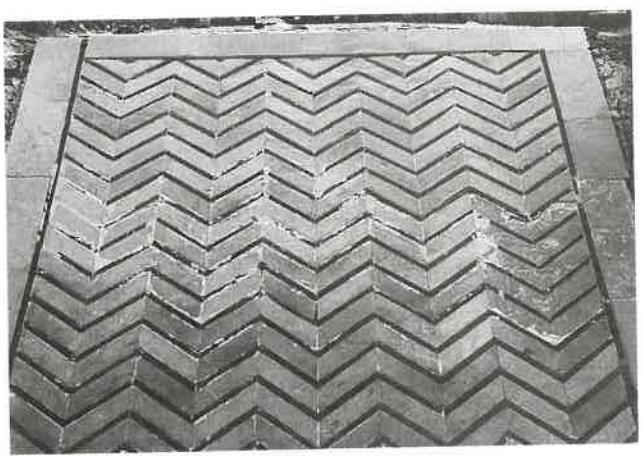


Fig. 11: Black and Golden stones set in cheveron design in the central water channel at Wah Garden.

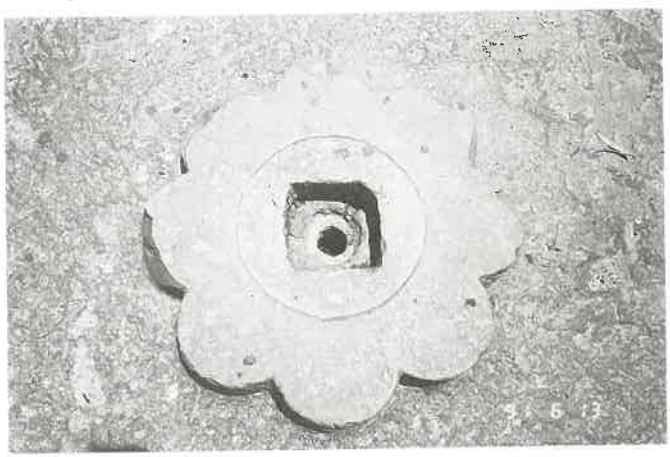


Fig. 12: The only remaining fountain base in the central water channel at Wah Garden.

Adjacent to this tank is a platform initially understood to be a *Mahtabi*. Beneath this platform are three channels through which the water resumes its course through the main channel once again. This channel continues to the western end of the garden where it passes through a small gateway (Fig. 13) and joins another smaller tank outside the boundary wall. This tank has a small tapering drain indicating the end of the central channel. A trench sunk just beyond this drain revealed a thick layer of river pebbles showing that at this point the water of the central channel flowed into a river which once bordered this garden on the West. This excavation confirms Moorcroft's descriptions.

Southern Channel

Parallel to the northern channel and on the south



Fig. 13: A small gateway in the west of Wah Garden.

of the central channel there is yet another channel, though it is badly damaged. Like the other two channels mentioned above, it also starts from the upper terrace and runs through the lower terrace to the western wall of the garden. Similar to the northern channel this channel also has a small tank which in a later period was divided into four smaller tanks, two on either side almost in the middle of the lower terrace. However, unlike the northern and central channels this channel was fed by the surplus water of a higher water channel running behind the screen wall and supplying water to the fountains in the central channel at the upper terrace (Fig. 2).

This discovery of the hydraulic system in the Summer 1994, enabled the fountains to be reinstated according to the original method. Water was drawn through a channel much higher than the garden ground. This upper channel is as big, both in width and depth, as the northern and southern channels. The source of water to the upper channel was certainly somewhere up in the eastern hills of Wah Gardens. Unhappily the source of water no longer exists at its original level but while excavating the upper channel, which was faced with the original Mughal plaster and buried about four to six feet below the existing level, we found water in abundance.

Our excavations uncovered the upper channel beyond the present garden boundary. This channel continues to the hill situated in the East. Excavations could not proceed further East as there is a cemetery apparently, right on top of our channel. However, there is a strong water flow from many springs passing beneath the upper channel, and it would be possible to divert this spring water into the channel to provide a continuous water supply to the *hammam* and to the fountains once again.

It seems that the water supplied through the upper channel was more than enough for the fountains since the T/C pipe connected with the fountains is only six inches in diameter. Thus the purpose of the southern channel was to direct the surplus water to the southern part of the garden.

The fountains in the upper and lower terraces are buried in an additional layer of masonry, corresponding to the height of the tank. This suggests that at one point the level of the tank was raised to facilitate the embellishment of the central channel with fountains. Evidence of a *jali* screen embedded in the tank walls at various places around the edge, and fragments of *jali* (screen) (Fig. 14) found during excavations of the tank, suggest that this embellishment was undertaken by Shahjahan. The style of *jali* which is found in two slightly different forms, appears in various illustrations of the *Padshahnamah* in the Royal collection at Windsor, and also in a miniature depicting Darah Shikoh in a garden which may well be this very garden.

The Hammam or Bath at Wah Garden

Adjacent to the southern end of the Baradari there is a *hammam* (Fig. 15). Here the water was supplied by an independent aqueduct running beside the eastern wall of the main water tank. The aqueduct supplying water to the *hammam* is nine inches wide and one foot deep. Fortunately, the *hammam* is still in a good state of preservation, showing

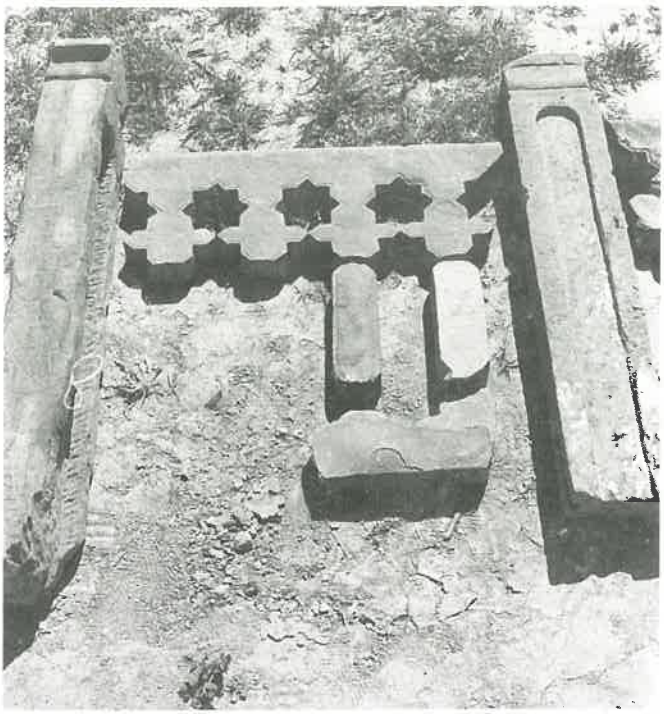


Fig. 14: Fragment of stone Jali/screen found from the main water tank during our excavations.

almost all the necessary architectural features in situ of which we can identify the water supply, the heating room, the hypocaust and latrines. Some imprint

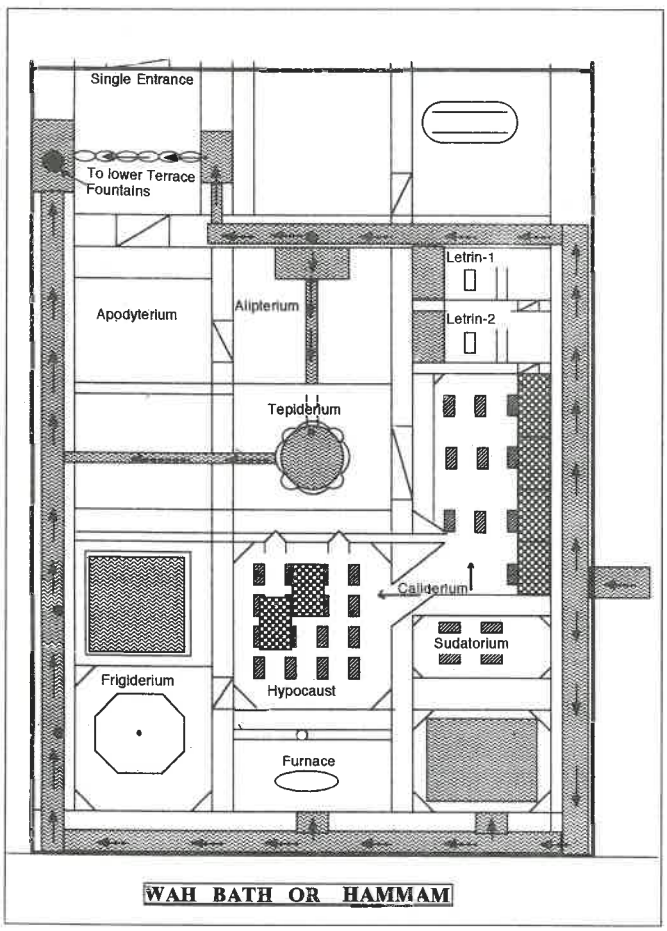


Fig. 15: Drawing of the Hammam at Wah Garden by Shahid Ahmad Rajput.

and interesting aspects of this bath are: that it is connected with the *baradari;* it has a single entrance through the western wing of the *baradari;* it has a complex arrangement of rooms and halls as was seen and recorded by Moorcroft.[39] Its walls are extra thick to maintain the inside temperature; it has hollow pavements and the provision for a hypocaust, for circulating hot air and steam in the *hammam* and for boiling water for a hot bath; there is a furnace which is connected with the hypocaust. The furnace has an entrance from the outside of the *hammam* for an easy and continuous supply of the fuel, there is also an excellent arrangement of running water and the provision of pools for hot, cold and medicated water; it has an effective drainage system still in operation; initially it had special ventilators in the ceiling of the rooms and its walls on the inside were once embellished with cut plaster painting and floors with mosaic as recorded and published by Moorcroft[40] in 1823. Traces of painting on the wall and mosaic in the floor are still to be seen intact (Fig. 16). Moorcroft saw and recorded in his descriptions that all the chambers of the bath were surmounted by low domes with central skylight. But when this *hammam* was excavated in 1976 not only its low domed ceiling but also its walls were badly damaged and the whole suite of baths was buried under a mound of earth. Some functional and more important architectural features or elements of this *hammam* are as follows: Apodyterium where the bather undressed and left his clothes, measuring 7.4 feet x 7.8 feet; Alipterium – where oil was anointed, measuring 12 x 12 feet; Calidarium – hot room, it has two wings, measuring 14 x 14 feet and 14.10 x 9.4 feet; Sudatorium – steam room, measuring 12 x 10 feet; Tepidarium – warm room, measuring 14 x 14 feet. (Tepidarium generally is a large hall with a beautiful pool in the middle, such as found at Wah garden, and it was used as a



Fig. 16: Beautiful design in the floor of the Hammam at Wah Garden.

special meeting room); Frigidarium – cold bath, measuring 12.10 x 10.6 feet. It has an octagonal pool, measuring 4.4 x 4.4 feet, with a fountain in the middle. These are the most important features of all the known Mughal *hammams*.

More research is required for this project so that the remains may be saved from further deterioration.[41] The Department of Archaeology never published any report of its primary excavations. However, from an archaeological point of view the primary excavation reports are of vital importance. It is hoped that the reports will be made available in the near future, as they will be invaluable for further understanding of this edifice, specially in the light of finds made during the primary excavations.

The Baradari

The *baradari* as it stands today constitutes a complex of two wings one to the north and the other to the south of the central water channel. This magnificent building with a few traces of painting and stucco traceries from its past glory stands in the middle of the garden in the upper terrace and faces the main water tank. There is a lawn between the main tank and the *baradari*. The lawn was initially planted but now it is covered with grass and this lawn is divided into two halves by the central water channel with twelve fountains in it in front of the *baradari*.

The northern wing of the *baradari* contains two small rooms and a verandah whereas the southern wing contains three small rooms and a verandah. However, when Moorcroft visited it in 1823, he recorded that there were three long rooms in the former wing and the latter wing was divided into small chambers.[42] It appears that Moorcroft took the verandahs of this baradari to be long rooms but even if we assume this to be correct, there are only two long rooms intact at present. Nevertheless, the walls of the entire building on the interior were embellished with stucco. Few traces are beautifully preserved to this day. In the smaller apartments or chambers the walls are decorated with flowers, trees, fruit vases, trays, wine cups and bottles. As recorded by Moorcroft the lines of the stucco work are as fresh as if they had but just been completed. Moorcroft also records that there were some inscriptions inside the *baradari* but unfortunately at present there are none. What those inscriptions were and what message they communicated, if only they had been recorded by Moorcroft!

Other Gates, Wall and Watch Towers

Gates

There are two gates to this garden. One in the west (Fig. 13) and the other in the east (Fig. 6). Presently, only the western gate is in the territory of the Department of Archaeology and some people assume that it is the main entrance to the garden. It is a rather small gate and consists of an arch with two very small rooms on either side. The river Dhamari once bordered this garden on the west as was recorded by Moorcroft[43] in 1823. Our excavations support Moorcroft's descriptions and it is here that all three channels mentioned above joined the river. It is quite unlikely that this gate, which is too small and is literally on the river could have served as the main entrance to the garden.

However, the eastern gate is by contrast quite grand. Presently it is outside the jurisdictions of the Department of Archaeology. Baron Charles Hugel and G. T. Vigne visited[44] the garden in 1836. Hugel recorded their impression with a sketch of its entrance by G. T. Vigne, "....I wandered long about these once splendid rooms, some adorned with a specimen of the finest stones, others with rich carvings, but now abandoned to the most perfect solitude. The entrance is still worthy of the residence of an emperor. At the bottom of the garden stands a little building ..."

The Department of Archaeology calls this entrance the *Farudgah*. The Farudgah corresponds with the entrance as described by Hugel.[45] The structure, which is brick and stucco, with a large dome, appears to be of the Shahjahan period but the excavations here are incomplete. It may even belong to the Sikh period, but further study is required. Although the principal arches of this Farudgah have now been filled in to form a private residence, it remains substantially similar to Vigne's illustration (Fig. 6).

Wall and Watch Towers

At the beginning of this century, in 1909, when Villiers Stuart visited this garden, the perimeter wall of Wah garden was repaired and looked after nicely by Aslam Hayat Khan.[46] At the time of the acquisition of Wah garden in 1976, the entire wall was badly damaged and buried under mounds of earth. At a few places where this wall is still standing intact, its height and width can be determined. It is eight feet high and two to four feet wide. The wall is made of stone and it is plastered over with a traditional thick

mortar of lime. At places there are still some traces of cut plaster painting on the inside of the garden wall. Since the wall is not yet fully excavated the total area of the garden and its real orientation with the rest of the garden is still unclear. In his travelogue of 1823, Moorcroft recorded the area of Wah garden to be a quarter of a mile in length and half that in breadth.[47]

Nevertheless, all the excavated portion of the wall has been recently restored by the Department of Archaeology. There are some eight watch towers in this wall so far discovered. These watch towers are badly damaged and they were buried except one in the south. This southern watch tower is double storied. The walls on the inside of this tower were embellished with blind niches/panelling and the entire area of the walls and ceiling on the inside of the tower was burnished with white lime which now has gone to decay. The rest of the towers were excavated during the Winter and Summer of 1994. They were all badly damaged but some features are common in all the watch towers; they are all more or less of the same size (Fig. 17) and were surmounted by a low dome ceiling (broken ceiling found during the excavation); they were connected with each other with a walkway 7 feet 3 inches along the inside of the perimeter wall; all but one in the north have entrance from the garden, the tower in the north also has an entrance from the outside of the garden, the walls of the towers were finished on the inside with white lime. There is not yet sufficient evidence to indicate whether they all had two storeys. However, since the time of their discovery in the Summer of 1994, they have not been touched and they have further deteriorated.

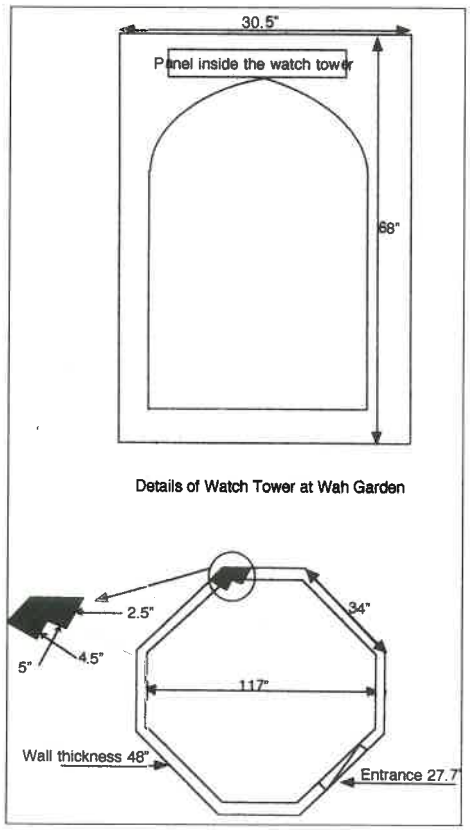


Fig. 17: Drawing of the Watch Tower at Wah Garden by Shahid Ahmad Rajput.

CONCLUSIONS

The Mughal garden at Wah initially called "Bagh-i-Hasanabdal" took its present name only in 1823 after Moorcroft. Raja Man Singh erected the first building, a little pavilion no longer intact, in the pool during his stay in the area between 1581 and 1586. Later due to its serenity, the abundance of fresh spring water, and its location, Mughal emperors admired and stayed in this area and sent money to construct buildings and bridges. The whole structure shows alterations and additions at many places in different phases of construction. There is historical and archaeological evidence for the chronology of its construction.

The aggrandizement, with the enlargement of the tank, the installation of fountains, and construction of a grand entrance, corresponds with the descriptions given by Lahori and Kamboh, so that it was once indeed a *Bagh-i-Bahisht'Ain* and *the Gulistan-i-Irum*. We hope we can make it so once again.

REFERENCE MATERIAL

Abul Fazl, *Ain-i-Akbari*, Munshi No 1 Kashor, Calcutta, 1881.

Aijazuddin, F.S. *The Historical Images of Pakistan*, Lahore, 1992.

Bahadar, M., "Mughal Garden Wah", *Journal of Central Asia* Vol. XI, No. 2, 1988.

Beveridge, H., *Ain-i-Akbari and Akbar Nama*, Culcatta, 1939.

Burnes A., *Travels into Bukhara*, Vol. 1, London 1834.

District Gazetteer of Attock, 1865.

Elphinstone, M., *An Account of the Kingdom of Caubul*, London 1815.

Foster, *Early Travels in India, 1583–1619*, London, 1921.

Hugel, Baron Charles *Travels in Kashmir and the Punjab*, London, 1845.

Kamboh, *Amal-i-Saleh*, Calcutta, 1927.

Lahori, *Badshah Nama*, Calcutta, 1868.

Maclagan, E. D. *"The Earliest English Visitors to the Punjab 1585–1628", The Journal of the Punjab Historical Society.*

Mohan Lal, *Travels in the Punjab, Afghanistan and Turkistan*, London, 1946.

Nadiem, Ihsan H., "The Hydraulics of Shalamar Garden", *Journal of the Pakistan Historical Society*, Vol. xxxiv, 1986 Part I, pp. 1–13.

Nath, R., *Some Aspects of Mughal Architecture*, Delhi 1976.

Rogers, A., *Tuzuk*, RAS London, 1909.

Saqi Mustaid Khan *Ma'sir-i-Alamgiri*, Calcutta, 1870.

Siddiqi, M. H., *Tarikh-i-Hasanabdal*, Lahore, 1977.

Akbar Nama, Kanpur, 1883.

Sir Sayyed Ahmad Khan, *Tuzuk-i-Jahangiri*, Ghazipur, 1963.

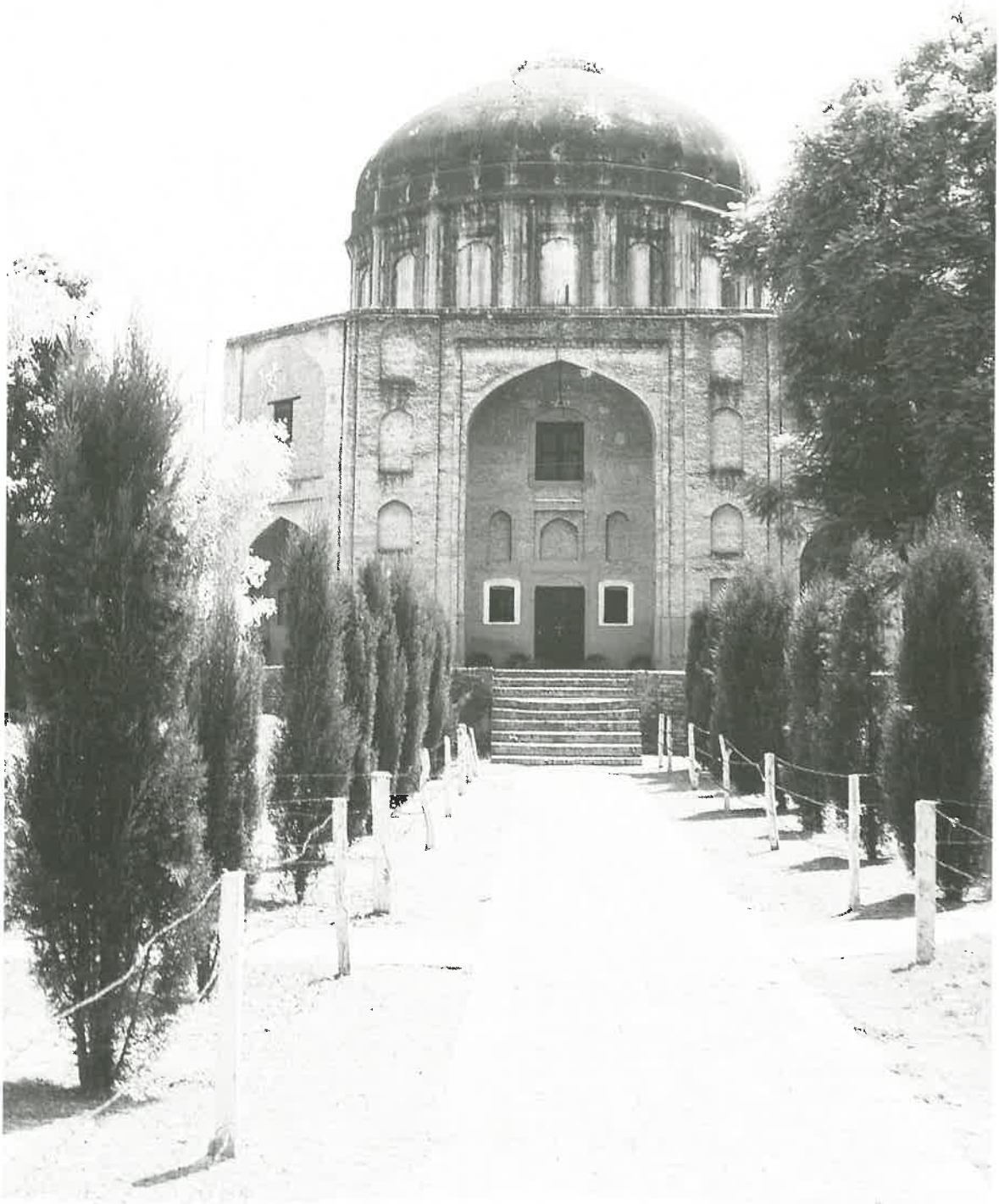
The Journal of the Punjab Historical Society Vol. 1.
Thomas Moore, *The Lalla Rookh* London, 1817.
Villers Stuart C. M., *Gardens of the Great Mughals*, London, 1913.

ACKNOWLEDGEMENT & FOOTNOTES

The author is thankful to the Department of Pakistan Archaeology, particularly to Dr. Ahmad Nabi Khan (Former Director General of Pakistan Archaeology and Museums) who provided me with the opportunity to work at Wah Gardens as an Archaeologist from February 1993 to July 1994. Also thanks are due to Mr. M. A. Haleem (Deputy Director, Department of Archaeology, Taxila) who provided valuable help and direction during my excavations.
My special thanks are due to Khawaja Shahid Hosein, former Secretary, Ministry of Culture, Tourism and Sports, Government of Pakistan and now Ambassador of Pakistan to UNESCO in Paris, who took personal interest in the Wah Garden project and helped to get the work restarted in January 1994 by providing significant financial help to the Department of Archaeology, hence helping the author to continue his research and excavations at Wah gardens.
The work presented here was undertaken during 1993 and 1994 on the encouragement of Phillppa Vaughan - Art Historian and Director of the Royal Asiatic Society, London. Without her encouragement and help in many ways this work could not have been attempted. I am greatly indebted to her generous help.
Professor Dr. Erica Dodd and Francis Dodd helped the author with valuable suggestions in compiling this paper, I sincerely acknowledge their assistance with special thanks.

FOOTNOTES

1. This paper was presented at an International Symposium held in Lahore and Wah on 5–10 November, 1993, organized by the Smithsonian Institution, Washington, D.C. the University of Engineering and Technology and the Pakistan Department of Archaeology.
2. Sir Sayyed Ahmad Khan, *Tuzuk-i-Jahangiri* 48, Ghazipur, 1963, Rogers, A, *Tuzuk*, 99, RAS London, 1909.
3. Lahori, *Badshah Nama*, 2: 143, Calcutta, 1868.
4. *Ibid.*, 2; 605, Kamboh, *Amal-i-Saleh* 2: 508 Calcutta, 1927.
5. Saqi Musta'id Khan, *Ma'sir-i-Alamgiri*, 134 Calcutta, 1870 as cited by Siddiqi, *Tarikh-i-Hasanabdal*, 70, Lahore, 1976.
6. *Ibid.*, 17 and 74, *Attock District Gazetteer* 326, Vol, 1930.
7. Krecroft, *Administration Report, Rawalpindi* 1865, op.cit., 75.
8. Abdal is a Persian word, meaning a substitute, certain persons by whom God continues the existence of the world, their number is seventy, or whom 40 reside in Syria and 30 elsewhere. When anyone of these dies his place is filled up by one selected from among the rest of mankind, Abdal has also acquired the meaning of a hermit (Steingass, *Persian English Dictionary* Rpt. N. Delhi, 1981.)
9. Elphinstone, M., *An Account of the Kingdom of Caubul*, 72–74, London, 1815; Siddiqi, op.cit., 29–35, In his book Siddiqi has also published an illustration of the Tomb Stone of the Saint at Qandahar.
10. Elphinstone, M., 72–74; Moorcroft, *Travels in the Himalayan Province of Hindustan and the Punjab from 1819–1825*, 2, 309, London, 1825.
11. *Akbar Nama*, 3; 210.
12. One Mughal *kos* is equivalent to 2.5 Km.
13. Abul Fazl, *Ain-i-Akbari*, Munshi Nol Kashor, 2:160, Calcutta, 1881 and *Akbar Nama*, 3:210, Kanpur, 1883, Beverage, H., *Ain-i-Akbari* and *Akbar Nama*, Culcutta, 1939.
14. Sir Sayyed Ahmad Khan, op.cit. 48, Ghazipur, 1963, Rogers, A. *Tuzuk* 99, RAS London, 1909.
15. *Akbar Nama*, 3:210.
16. Sir Sayyed Ahmad Khan, op.cit., 48, 1963, Rogers, A., *Tuzuk*, 99, RAS London, 1909.
17. Maclagan, E. D., "The Earliest English Visitors to the Punjab, 1585-1628", in *The Journal of the Punjab Historical Society* Vol. I, pp. 109–134, Foster *Early Travels in India, 1583–1619*, p. 168, London, 1921.
18. Sir Sayyed Ahmad Khan, op.cit., 61
19. Sir Sayyed Ahmad Khan, op.cit., 26
20. This was pointed out by Philippa Vaughan. She worked at Wah Garden in April 1993 and was sponsored by the British Council, Islamabad. Her paper on Wah Garden will be published in the forthcoming Bulletin of School of Oriental and African Studies, University of London.
21. Sir Sayyed Ahmad Khan, op.cit., 288-89
22. Sir Sayyed Ahmad Khan, op.cit., 343-344
23. Lahori, *Badshah Nama* 2: 143, Calcutta, 1868, Kamboh, *Amal-i-Saleh* 2: 304, Calcutta, 1927.
24. Kamboh (*Amal-i-Saleh*) *Shahjahan Nama*, 3:7
25. Lahori, *Badshah Nama*, 2:605
26. *Ibid.*, 2:640
27. Kamboh, op.cit., 2:508.
28. Saqi Musta'id Khan, *Ma'sir-i-Alamgiri* 134, Calcutta, 1870
29. Elphinstone, M., *An Account of the Kingdom of Caubul*, 72–74, London, 1815.
30. Moorcroft, *Travels in the Himalayan Provinces of Hindustan and the Punjab from 1819–1825*. 2: 317–319, London, 1825: This account of Moorcroft was published as it is by Wilson in 1841 from London in a single volume, pp. 317–319; and it was included with a little alteration by Villiers Stuart, *Gardens of the Great Mughals*, pp. 155–57, London, 1913.
31. The author is thankful to Khawaja Shahid Hosein, former Secretary, Ministry of Culture and Tourism and now the Ambassador of Pakistan to UNESCO in Paris, who provided the author with this sketch from his personal library in London.
32. Siddiqi, op.cit. 84, Lahore, 1976.
33. Parbury, F., *Emeralds set with Pearls*, 13–19, London, 1909.
34. *Ibid.*, 13–19.
35. Published in *The Illustrated London News*, Saturday, April 20, 1850
36. Villiers Stuart, op. cit, 155–57.
37. Baron Charles Hugel, *Travels in Kashmir and the Punjab*, 224, London, 1845.
38. Sylvia Crowe and Sheila Haywood, *The Gardens of Mughal India*, 126-27, London, 1972.
39. Moorcroft, 317–319
40. *Ibid.*, 317–319
41. Nath, R., "Mughal Hammam and the Institution of Ghusal Khana" in *Some Aspects of Mughal Architecture*, 40–48, Delhi, 1976, This paper was also published in *The Islamic Culture*, Hyderabad, vol. XLIV, No. 2 (April 1970). In his Report Nath has discussed in detail the Hammam complex of Fatehpur Sikri. His study is very helpful to further understanding and for conserving the Hammam at Wah.
42. Moorcroft, op. cit. 317–319.
43. *Ibid.*, 317–319.
44. Baron Charles Hugal, 209-210 and 224.
45. *Ibid.*, 224.
46. Villers Stuart, op. cit., 155–57.
47. Moorcroft, op. cit., 317–319.
48. *Ibid.*, 317–319.



Tomb garden of Nawab Saeed Khan in Peshawar now being used as a church.

THE GARDENS OF PESHAWAR

ABDUR REHMAN
Department of Archaeology,
University of the Peshawar, Pakistan

Placidly perched in its garden setting and interspersed by rippling waters of the Bara brooks, medieval Peshawar was undoubtedly one of the most charming cities of ancient Pakistan. And so indeed was the whole Peshawar valley. Giving a verbal picture of the beauty of this land, *the N.W.F.P. Gazetteer* records: "The scenery of the Peshawar valley especially at certain seasons of the year has earned frequent eulogy. In the western tract this is quite distinctive and peculiarly attractive, a land of streams and rivers, the frequent villages often half hidden amid groves of sheltering trees. Giant crops of sugarcane and maize, alternating as the seasons change with broad stretches of verdant wheat or barley, spread a picture of rural plenty to be equalled possibly but surely seldom surpassed in the length and breadth of India. There is an intimate charm about these scenes which grows the more frequently they are revisited".[1] Seen from Cherat in the cold clear light of a winter day the great plain of Peshawar with its converging rivers and rectilinear canals – both shot to silver here and there as the day revolves – this is the amphitheatre of surrounding hills, backed in the north by a chain of giant mountains, provide a prospect which is not easily to be forgotten by the beholders.[2] The ranging hills form a real frame, cut and sculptured, and thrown in high relief against a clear sky. The city of Peshawar occupied the foreground in such a picture.

In the olden days the city stood in the middle of the two forks of the Bara river, the northern skirting the ramparts of the Bala Hisar and the southern passing by the lower city.[3] In the last century all the gardens and the neighbouring fields were watered by brooks and fountains conducted from the river Bara.[4] Under what names these brooks or canals were known has been forgotten. But the name *Jui Saeed* (i.e., Saeed's canal) still survives in the area between the Dabgari garden and the Kohati Gate of the old city. The river Bara, which during the rainy season often flowed out of its banks and caused much damage to the city, has now been diverted farther south. Its old bed still carries the drainage of the city. Although the river has departed for ever, the alluvial soil spread by it in the course of centuries is ideally suitable for growing gardens. This fact was not lost upon by the successive rulers of Medieval Peshawar who bedecked the outskirts of the city with beautiful gardens.

Most of these gardens have disappeared and had it not been for the descriptions left behind by Alexander Burnes, Mohin Lal and Elphinstone even their names would have been lost. The most recent among these is the Wazir Bagh situated not very far from the Sard Chah Gate of the old city. (Figs. 1, 2, 3) It was founded by Fateh Khan, *Wazir* of the Durrani ruler Shah Mahmud between 1802-03.[5] Alexander Burnes visited this garden early in the nineteenth century and called it "the kings garden". The garden is now being looked after by the Municipal Committee, for the city has recently expanded even further south than this. The committee has also carried out some clumsy restoration work, but the old look



Fig. 1: Wazir Bagh : General View.



Fig. 2: Wazir Bagh : Walkway and Modern Pavilion.

of the garden has greatly suffered. Even the resting house is in a dilapidated condition. Moreover, some new buildings have cropped up within the precincts of this pleasure-resort as grotesque memorials to the recent population explosion. Trees and rose-beds have suffered greatly. However, the old alignment of the avenues is still preserved.

The garden consists of four arms of a cross enclosing within the arms four grassy plots, now used for play ground. In the north-south axis of the arm there are two oblong cisterns with only one fountain in the northern cistern. On this axis, which has a double row of foot paths, we have three circular platforms, now showing tall trees. This is cut by two east-west cross avenues. The central avenue still maintains rows of trees and garden plots.

The Wazir Bagh, according to Gopal Das, was visited every Friday by the Muslim population of the area for enjoyment.[6] Alexander Burnes describes his own visit: "On Friday after our arrival we accompanied the chief and his family to some flower gardens, where we spent the greater part of the day in conversation. The chief himself sat under one tree, and we ranged ourselves beneath another. Iced *Sherbet* and confections were brought to us... In the afternoon we returned to the Kings garden, which is a most spacious one, and sat down on the ground, with Sooltan Mahamed Khan and his family to partake of sugar cane cut into small pieces... We then followed the chief to his family burying ground, where his two elder brothers, Atta and Yar Mahamed Khan, who fell in battle, lie interred. The whole branches of the family were present, and offered up their afternoon prayers in a mosque close to the grave. The sight was an impressive one... The day finished with a visit to a holy man named Shaikh Iwaz and such is the usual manner of spending a Friday among Dooranee nobles of Peshawar".[7]

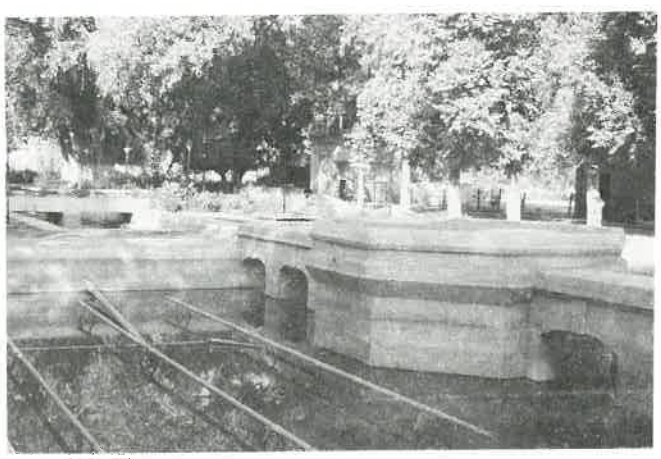


Fig. 3: Wazir Bagh : Modern Water System.

To the east of the city lay another garden called "Sayid ka Bagh." Except for the famous *dargah* of Shaikh Junaid,[8] the entire area is now occupied by houses. "Here a new suburb called Rahimabad, has recently developed, but around the *dargah* is the locality of Shaikhabad, now fast growing with the overpopulation of the city. The name of the Sayid still clings to a watch tower, standing between the *dargah* and the city with its dilapidated bricks well that once supplied drinking water to the people."[9]

In another garden outside the city walls lies buried Nawab Sa'eed Khan in a lofty edifice (Fig. 4) the only double domed building in Peshawar. The garden has completely disappeared and is now partly occupied by the Mission Hospital. That the area around this hospital was a garden maybe inferred from its present name, i.e., the Dabgari garden. Nawab Sa'eed Khan was a well known Mughal governor of the *suba* of Kabul during the reign of Shah Jahan. It was due to his diplomacy that the Safavid governor 'Ali Mardan Khan surrendered himself and Qandahar to the Mughals. There is nothing in the contemporary literature to show where Sa'eed Khan was actually buried, but a tradition prevailing in Peshawar attributes this building to him. Whatever the case maybe, the building is not a watch tower as alleged by S. M. Jaffar. The watch towers which till recently stood outside the city of Peshawar were just domed pavilions. It was indeed a usual practice of the Mughals – a custom ultimately traceable to Central Asia – to build garden-tombs (*Rauza*) during the life time. The tomb of Saeed Khan is most probably one of such type.[10] It stands in the middle of a spacious quadrangle, enclosed by a wall with corner turrets. The space within the walled enclosure must have been turned into a *charbagh* garden with fountains in the middle.



Fig. 4: Tomb Garden of Nawab Saeed Khan.

The garden residence of the Durrani governor Yar Mahamed Khan was situated inside the Kohati Gate.[11] The building has been modified and is now being used for an entirely different purpose. It houses the Edwards High School, whereas the garden which surrounded it is partly occupied by the All Saints Church built in 1883.[12] The domical structure of the church building is a curious innovation. Among other gardens which have been completely lost may be mentioned Nazar Bagh situated to the east of the Bala Hisar fort. The Bagh-i Sardar Khan, where the Mughal emperor Jahangir once stayed during his journey to Kabul was probably situated outside Peshawar near Sardargarhi. Another Mughal emperor Shah Jahan is known to have spent some time in a garden known as Bagh-i Zafar which may have been situated near Akbarpura to the east of Peshawar.

To the north of the Bala Hisar fort spread out over a wide area another garden - the most beautiful of all-called the Shalimar. It was built by Ali Mardan Khan who, as noted above, defected to the Mughals in the time of Shah Jahan. Elphinstone gives a detailed description.

"In the gardens, indeed, flowers are abundant and disposed with considerable taste. A description of one of them that belonged to the king, and is the finest at Peshawar, will give a true, though favourable idea of the rest. It is called the garden of Shah Lemaun (correctly Shalimar). Its shape is oblong. Some handsome structures belonging to the Balla Hisar, form the southern side; and, part of the hill on which that castle stands, is included in the garden, the other sides are enclosed with walls. The northern part of the garden, which is cut off from the rest, is laid out irregularly and is full of trees. The remainder forms a square, divided by avenues, which cross each other in the middle of the garden. That which runs from east to west, is formed by stately rows of alternate cypresses and planes, and contains three parallel walks, and two long beds of poppies. At the east end of this walk is the entrance; and, at the west, a handsome house containing a hall, and two other apartments. The space from north to south is also bordered by cypresses and planes, beneath which are bushes planted very thick of red, white, yellow, and China roses, white and yellow jasmine, flowering cistus, and others were entirely new to me. At the north end of this opening is a house, such as I have already described. The space between the walks is filled up by six long ponds, close to each other; and so contrived, that the water is continually falling in little cascades from one to another and ending in a basin in the middle of the garden. In the center of this basin is a summer house two storeys high surrounded by fountains, and there are fountains in a row up the middle of all the ponds: there are sixty nine fountains altogether, which continued to play during the whole day, we spent at the garden and were extremely agreeable, as the summer was then far advanced. The rest of the garden was filled up with a profusion of fruit-trees, which I have mentioned, as growing at Peshawar. Some of them were so thick that the sun could not penetrate them at noon, when they afforded a dark, cool, and picturesque retreat.[13]

The term Shah Bagh (the King's garden) still survives, though its actual name, Shalimar, has been forgotten. Part of the Shalimar is now occupied by the Jinnah Park. The rest of the area has been engulfed by the ever increasing residential buildings. The present Shahi Bagh is a poor representative of the grand old garden.

To Ali Mardan Khan goes the credit of building another garden retreat.[14] It was situated a little away from the old city to the west. Mohan Lal records, "An evening walk led me to the garden of Ali Mardan Khan, a Persian nobleman, who has filled the country from Mashad to Delhi with monuments of his taste and magnificence. In the center of the garden is a fine building, three storeys high, surrounded by fountains. The rest of the garden is filled with an exuberance of fruit and rose trees. I left the garden a little before sunset and passed on the road through the garden named Shahlemar[15]." The garden of Ali Mardan Khan has long been destroyed but his building was renovated apparently shortly before the British rule and housed the British Residency. It was later on used by the Brigade and station staff. The open area on the eastern side of the building is known as the Services Ground. On the other side of the Residency a new garden was laid out and named the Mackeson Garden. Afterwards it came to be known as the "Company Bagh" and is now called "Khalid bin Walid Bagh"

What happened to the gardens of Peshawar? Alexander Burnes has the answer, "I found that the Sikhs have changed everything, many of the fine gardens round the town had been converted into cantonments; trees had been cut down, and the whole neighbourhood was one vast camp, there being 30,000 to 40,000 men stationed on the plain." The short-lived Sikh rule soon vanished away but it deprive Peshawar of its beautiful setting for ever. Nor did the British successors of the Sikhs take any step to restore the garden retreats. The lands were gradually sold away to meet the residential demands of the increasing population. Bereft of its garden setting Peshawar now presents the sorry spectacle of a congested city where smoke and dust rule supreme.

NOTES AND REFERENCES

1. N.W.F.P. *Province Gazetteers, Peshawar District,* 1932, p. 4.
2. *Ibid.,* p. 5.
3. A. H. Dani, *Peshawar: Historic City of the Frontier,* Peshawar, 1969, p. 9. The present author has heavily drawn upon this work for information and acknowledges his indebtedness to Prof. A. H. Dani.
4. Mohan Lal, *Travels in the Punjab, Afghanistan and Turkistan,* London, 1846, p. 52.
5. O. Caroe, *The Pathans,* p. 273.
6. Munshi Gopal Das, *Tarikh-i-Peshawar,* p. 147.
7. Sir Alexander Burnes, *Travels into Bokhara,* London, 1834, vol. 1, pp. 91-92.
8. A. H. Dani, op.cit., p. 10.
9. *Ibid.,* The socalled watch tower may in fact be a pavilion which generally accompanied *baolis* of the Mughal period in this region. A similar watch-tower along with a baoli (stepped well) can still be seen near the village Chamkani.
10. A. H. Dani, op.cit., p. 176.
11. Mohan Lal, op.cit., p. 41.
12. W. Jukes, *Reminiscences of Missionary Work in Amritsar, 1872-73 and on the Afghan Frontier in Peshawar 1873–90,* pp. 17-18.
13. Elphinstone, *An Account of the Kingdom of Kabul,* vol. 1, pp. 97-98.
14. *Gazetteer of the Peshawar District,* 1897-98, p. 365, followed by S. M. Jaffer, *Peshawar Past and Present,* p. 131, footnote, maintains that he was a Durrani Chief. But Elphinstone, Burnes and Mohan Lal speak of him as the famous governor of the time of Shah Jahan.
15. Mohan Lal, op.cit., pp. 47-48.

QUTB SHAHI GARDEN SITES IN GOLCONDA AND HYDERABAD

ALI AKBAR HUSSAIN
National College of Arts, Lahore

Medieval Muslim gardens–called Turco-Iranian, Hispano-Arab or Islamic–were built in a variety of geo-cultural regions from Spain to India. Some examples of the type in India and Pakistan survived during the days of British Indian archaeology. The built evidence has been re-examined since, giving rise to broad divisions of the type - and generating fresh interest and the need for closer scrutiny. In the face of its built evidence, the tendency to lay stress on the Mughal garden heritage of the subcontinent is justified and inevitable, although it limits the awareness and significance of the garden landscape (Muslim and Hindu) of pre-Mughal times. The term Mughal (or Mughal Indian) garden is somewhat inadequate too in describing the range of gardens built in the subcontinent from the 16th to the 18th centuries - including those built in the Deccan. Because both Bijapur and Golconda (Fig. 1) arose from the Bahmani state (an offshoot of the Delhi Sultanate), garden development in these two states could be viewed as a continuity of Sultanate and pre-Mughal traditions. Moreover, the Shi'ite rulers of Bijapur and Golconda (the 'Adil Shahs and Qutb Shahs, respectively) were acutely conscious of their cultural ties with Safavid Iran (rather than with Mughal India). although it might be added that, since Hindu feeling had to be acknowledged, the sanctity of the tank could not be ignored in the glory of blue and green-tiled domes. This is not to say that the Mughal kings rejected their cultural heritage in India (there is the evidence that Babar's Dholpur garden was watered by the reservoir built by his predecessor, Sikandar Lodhi, by damming up a stream).[1] But the existence of perennial streams in north India enabled the Mughals to engineer surface canals for irrigation, and the efficient aquifer systems of the Indo-Gangetic *Duab* regions relieved them to excessive reliance on surface storage of water – the native practice.

It would be useful, therefore, to speak of the 16th and 17th century gardens of the 'Adil Shah and Qutb Shahs as Deccani Muslim gardens, acknowledging their roots in the Deccan plateau and distinguishing these from the Mughal-built garden in the Indo-Gangetic plains. This distinction is highlighted by comparison of relative garden settings, particularly when considering topography and sources of irrigation water across the Vindhya divide, in the *Duab* regions and the gneissic plateau (Fig. 1). the "mesa-



Fig. 1: Bijapur and Golconda: Political boundaries in 17th century (Source: A Historical Atlas of South Asia).



Fig. 2: Western Deccan : Mesa-like terrain.

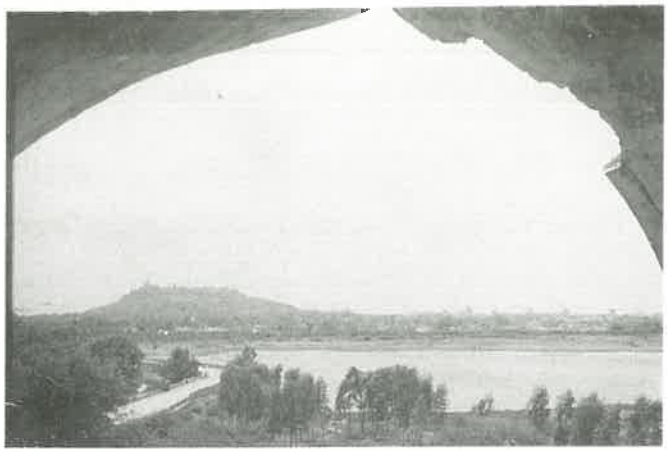


Fig. 3: Eastern Deccan : Tor and Tank.

like terrain of Maharastra" and "the tor-boulder-tank topography of Talangana."[2] Figs. 2-3 are settings which differ widely from the alluvial expanses of Northern India and Pakistan. In Haryana, Punjab and Uttar Pradesh, approximately half of irrigation needs are met today through ground water,[3] while the (now extensive) canal system has been a feature of irrigation since Sultanate times. In Andhra Pradesh and Karnataka, on the other hand, wells supply only a fifth of the irrigation water today,[4] and extensive areas of irrigation have depended on surface storage of water of which some spectacular examples are to be found at Warangal and Bidar – the work of the 11th century (Hindu) Kakatiyan kings of Warangal.[5] The large stepped well *(bauli or bauri)* is a noticeable feature, too, in Karnataka, a well-preserved 17th century example being the *Taj Bauri* (233 feet to a side) at Bijapur where arrangements for raising and supplying water south to a series of gardens (the *Naw Bagh or new garden)* were observed by Cousens in the earlier part of this century.[6]

While surface canals in Andhra Pradesh and Karnataka are small channels, diverted from perennial streams to irrigated areas in their vicinity, there is some evidence for the construction of extensive underground canals, engineered by *afaqis* (or foreigners, predominantly Iranians). At Bidar (the 15th century capital of the Bahmanid Sultans), Yazdani makes note of the subterranean canals in the impermeable trappean bed (100 feet or more below the porous laterite crust), created by widening natural rifts in the heart of the rock, commencing from the mouth of the spring. (The valleys below these springs provided sites for extensive plantations. and one such site was utilized in making the terraced garden called Farah Bagh, built by the Mughal governor of Bidar, in 1671, after Bidar was captured from the 'Adil Shahs).[7] Yazdani also refers to the masonry channels at Bidar linking the Kakatiyan Kamthana tank with a stone-lined square cistern, 260 feet to a side, a mile away – which is said to have been in the middle of a garden originally.[8] Bijapur's "subterranean tunnels", bringing in water from reservoirs outside the city, have been studied in considerable detail by Cousens.[9] At Golconda, there is evidence for similar connections between the Durug Tank and the citadel via the Qutb Shahi necropolis.[10] Until 1952, a canal from the Durug tank (twelve miles from the citadel) linked a succession of *baulis* in the Qutb Shahi necropolis, irrigating 50 acres of royal tomb gardens. The canal extended to another succession of wells in the *Bala Hisar* (upper citadel), water being pumped up by oxen-power to irrigate the gardens there. Although now in a ruinous state, the canal can still be traced.[11]

The large, pleasure gardens of the Qutb Shahs were located, for the most part, around (and on the margins of) water storage tanks outside the Golconda citadel and on the outskirts of Hyderabad, the twin capital founded in 1591 as an Indian Isfahan (*Safahan-i nawi* or the New Isfahan).[12] Pleasure gardens also surrounded large, tank-fed water cisterns (*or hawd*), both excavated and constructed, and royal gardens were built also along the perennial stream (Musa) which drains Golconda and Hyderabad (Fig. 4). In siting water tanks and garden view points in Golconda and Hyderabad, natural advantages were

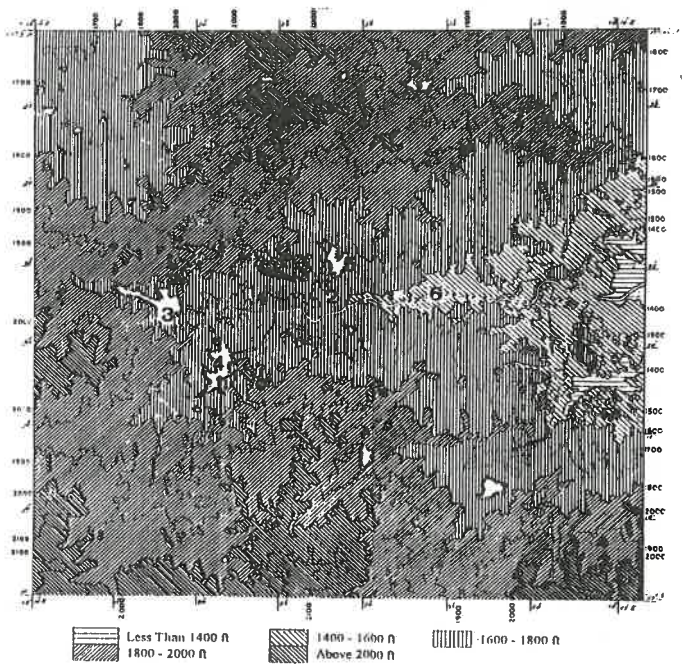


Fig. 4: Golconda and Hyderabad : Topographical survey map (Source: Alam)
(1) Golconda (2) Hyderabad metropolitan area (3) Osmansagar (4) Himayastsagar (5) Husainsagar (6) Musa river.

sought by the Qutb Shahs. By throwing an earthen or a stone-lined bank or bund across a land hollow, surface run-off could be conserved beyond the period of monsoonal rains, a bed of granitic or crystalline rock providing an impermeable stratum for the improvement. A hill nearby, a few hundred feet above the general level, was an opportunity, moreover, to exploit both view and breeze and provide a welcome retreat for the sultans and their consorts from the surrounding plains sweltering at over 100 F in May, the hottest month. At both Golconda and Hyderabad, a palace or pavilion-adorned hill, beside a garden-ringed tank, must have been a common sight. The citadel of Golconda, 350 feet above 'the vale of the Musi' and once embowered in greenery, was a clear expression of such a landscape conception as is suggested by the network of wells, *baulis* and tanks around it (Fig. 5). So, also, seemingly, the two pavilion-crowned hills west of the citadel, which rise 150 feet above the 16th century *Bagh-i-Ibrahim*[13] (now a rice-field) and the adjacent tank[14] (named, likewise, after Ibrahim, third in the Qutb Shahi line (Fig. 6). As suggested by a succession of terraces up



Fig. 6: Golconda : Bagh-i-Ibrahim and Ibrahim Tank.

one of these hills, terminating in a Qutb Shahi *baradari* (12 door pavilion), the garden of Ibrahim apparently extended upto what may be conceived as a lofty view point (Fig. 7). The structures at the summits (the *baradari* and a mosque, were named (or renamed) after two special consorts of the sultans, Taramati and Pemamati.[15]

Similarly, a garden cluster surrounded the 16th century Husain *sagar* (Husain lake) while a hill

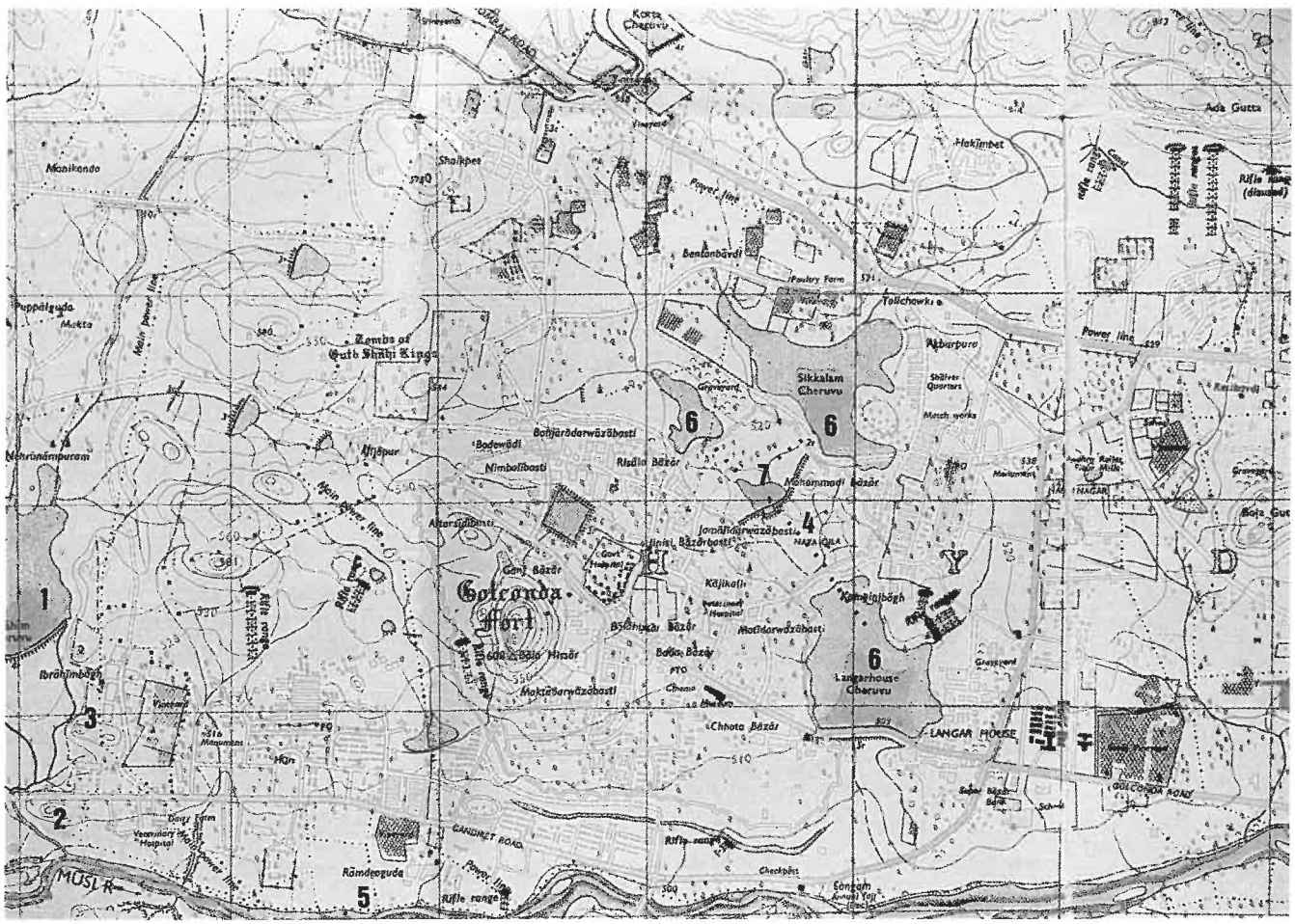


Fig. 5: Golconda: Part Plan
(Source: Hyderabad Guide Map 1974)
(1) Ibrahim Tank (2) Baradari Taramati (3) Mosque Pemamati (4) Naya Qila (5) Musa river (6) Tank (7) Naya Qila' Tank.

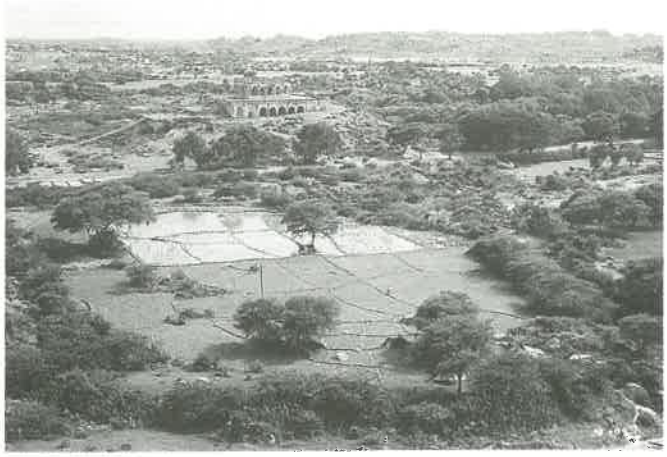


Fig. 7: Golconda : Baradari of Taramati from mosque.

nearby (the *Kuh-i-Nabat Ghat)*[16] was exploited as a natural view point (Fig. 8). Husain *sagar*, 11 miles in circumference, was also commissioned by Ibrahim Qutb Shah although (unfortunately for the sultan) it was named after its builder, Shah Husain Wali, a sufi from the *Chishtiyya khanqah* of Gulbarga.[17] The tank collected run-off from the surrounding high ground (particularly from the Banjara monadnock

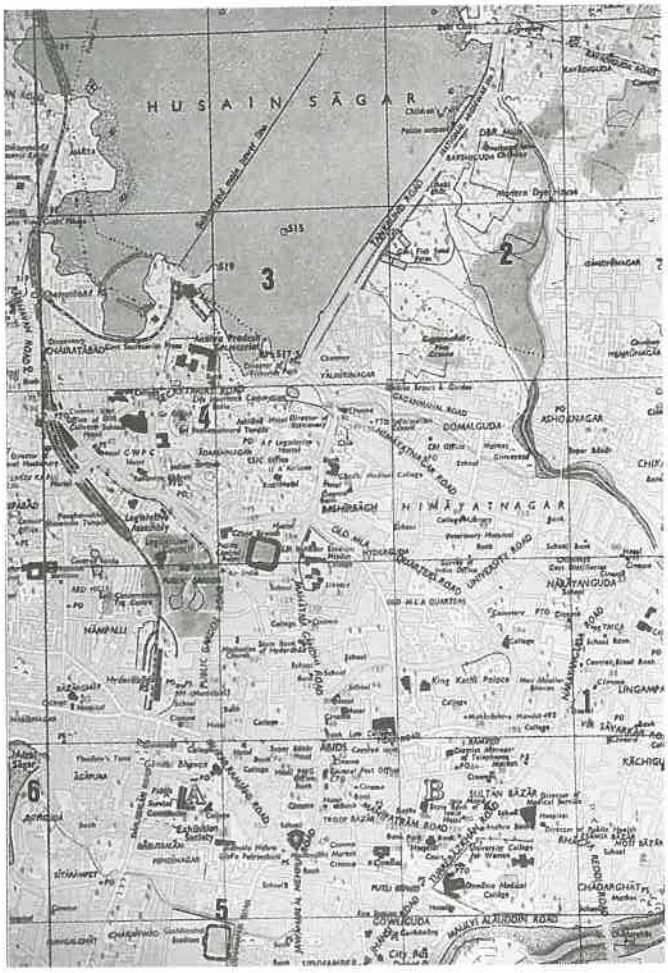


Fig. 8: Hyderabad Urban Area : Part Plan (Source: Hyderabad Guide Map at 1:20,000)
(1) Lingampalli (2) Phul Bagh (Indira Gandhi Park) (3) Husain Sagar (4) Nawbat Pahar (Kuh-i Nabat Ghat) (5) Gosha Mahal (6) Afzalsagar.

to the west) and was fed by a 36-mile long canal originating in the upstream reach of the Musa river (engineered in the 16th century by Niknam Khan).[18] Its mile-long embankment, 100 yards wide and 50 yards high, was of stone and lime construction.[19] At the summit of the hill, 300 feet above the water, an airy three-storied palace had been built by Hyderabad's founder, Muhammad Quli, the fourth in line. A garden pavilion could be seen here until recent times which the Mughals (recalling stories of the hedonistic Qutb Shahs) had named the 'Stool of Satan.[20] Muhammad Quli's palace overlooked the jungle-backed expanse of Husain *sagar* to the west and the irrigated orchards, "which extended two *farsakhs* (six miles) around the hill and where lofty tents were set up before a royal visit".[21] According to Hakim Gilani (who maintained a court journal during the sixth sultan, Abdullah's period of rule), the canals irrigating these gardens were dug up in anticipation of the Safavid Iranian ambassador's first visit to Golconda (during Muhammad Quli's lifetime); and the Iranian ambassador, perched on the hill-palace of Muhammad Quli, was presumably entertained by *chiraghan* (illuminations) of the Husain *sagar* similar to those on the occasion of Sultan 'Abdullah's visit (in the year 1050 AH or 1641. Gilani writes that, in preparation of this event, wooden screens, 20 yards high, had been put up along the (mile-long) embankment and the embankment, illuminated with earthen lamps, was transformed at night into a wall of *Nur* (Light). The woodwork extended along the three sides of the tank below and carried an extraordinary representation of trees, animals and huge *mihrab* cutouts – all of which were illuminated. Temporary markets and bazars ornamented the water front, and every evening wooden rafts were lit up and set afloat in the water together with thousands of earthen pitchers and jars, each carrying a candle. During the day, swimmers (including women) demonstrated a variety of skills in the water while elephants threw huge columns of water into the air with their trunks. The festivity lasted for several days and the population of Hyderabad, attached to Husain *sagar*, was entertained by a rare display of fireworks until two in the morning. On the fourth evening, continues Gilani, the Sultan was joined by the Iranian and Hindustani envoys and the fireworks and illuminations enjoyed from the *Nabat Ghat* palace. For this occasion, bonfires had been built in the jungle clearings on high ground – to the east and west of the tank – and the

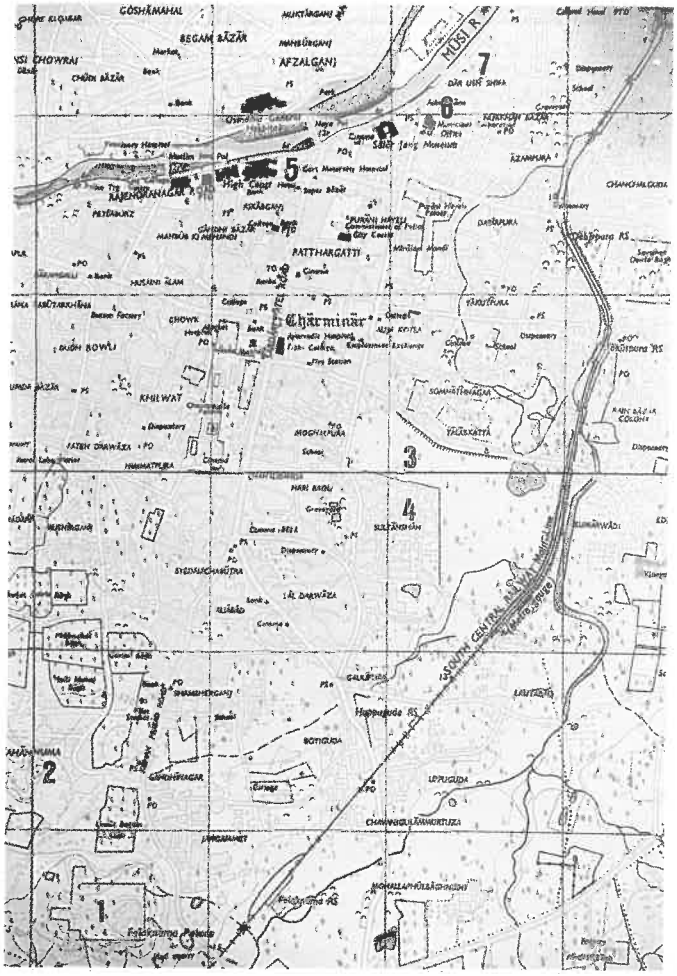


Fig. 9: Hyderabad Urban Area : Part Plan (Source: Hyderabad Guide Map, 1:20,000)
(1) Falaknuma (Kuh-i-Tur) (2) Jahannuma (3) Mir Jumla Tank (4) Sultan Shah Bagh (5) Amin Bagh (6) Bagh-i-Muhammad Shahi (7) Dar as Shifa.

jungle lit up with the glow of scattered fires.[22]

Another garden cluster defined the 'tor-boulder tank' area four *farsakhs* (twelve miles) south of the city where numerous Qutb Shahi garden sites appear to be recorded still on a present-day map (Fig. 9), albeit carrying the names of the (Mughal) Asafiyya nobles to whom these Qutb Shahi estates were transferred as *jagirs* (land grants). Crowning the highest point here in Qutb Shahi Hyderabad was the three-storied palace of Muhammad Quli – the *Kuh-i-Tur* on whose ruins the *Falaknuma* (sky-like) palace of Mahbub Pasha (the 6th Nizam) was built in the 19th century.[23] *Kuh-i-Tur* (the mount on which God's Light was revealed to Prophet Moses (peace be upon him) was an appropriate name for Muhammad Quli's palace for, as the sultan observed in a poem, it was forever radiant with God's Light, and its radiance brightened the eyes of its onlookers like collyrium from the ash of (the burnt) Mount of Moses.[24] Ironically, Muhammad Quli's *Kuh-i-Tur*, which seems to have been a *Shabistan* (harem), was radiant only when inhabited during the monsoonal season serving then as a royal *ishratgah* or pleasure retreat.[25] With the onset of rains, royal visits to the gardens surrounding the city were planned, and an entire army travelled with the Sultan when he visited the *Bagh-i-Gulshani*, the *Bagh-i Lingampalli*, the *Bagh-i Dilkusha* or the *Kuh-i Tur*.[26] Such visits could last the entire period of the rains. During the day the hunt would be enjoyed while evenings were for wine, music, poetry and the company of women.[27] Surrounding *Kuh-i-Tur* were two miles of orchards and the garden villas of *amirs* which became camping grounds for the travelling army while bazars were set up around this tent colony.[28] It was only during the rains, of course, that the (150 feet x 90 feet) *hawd* of the palace-court was transferred into "the mirror of Alexander". Likewise, the *hawd* in the four *shahnashins* (upper balconies) and in each of the four palace *aywans* (entrances) were brimful only during the rains when "the cloud-like spray from fountains in their midst fell back in a sparkle of stars".[29]

While the summit of a hill fulfilled the sultan's need for panaromic view of the landscape the tank embankment was also a natural view point. In Qutb Shahi times, as one could imagine, overflow channels from the tank fed not only the Indira Gandhi Park (built over an older garden, presumably) but gardens such as (the now non-existent) *Bagh-i-Lingampalli* (Fig. 8) which is frequently mentioned in Qutb Shahi texts in connection with week-long royal picnics.[30] Another garden - the *Sultan Shahi Bagh* – is believed to have existed adjacent to the Mir Jumla Shah Muzaffar tank embankment in the heart of the city (Fig. 9). According to Sherwani, Abdullah Qutb Shah adorned it in 1661 with two palaces which stood opposite each other across an extensive *hawd*. The present name of the locality is after this garden.[31]

Today, however, the remains of *Bagh-i Naya Qila*[32] provide the only physical evidence of gardens on tank margins. This garden site is located on the undulating ground north-east of the citadel within the *Naya Qila* (New Fort) and until the first Mughal siege of Golconda (in 1656) it was a pleasure garden on the outskirts of the citadel. After the Mughals retreated, 'Abdullah Qutb Shah had the fort extended to include the *Naya Qila* site where an elevation with views of surrounding country could be utilized as a bastion.[33] About forty acres of, now mostly rice-field, the garden is contained by the rising, boulder-strewn land east of it, a stone embankment along its northern side and the walls of the old and the new forts



Fig. 10: Golconda : Part Plan (Source: Huderabad Guide Map at 1:20,000) (1) Bastion (2) Water Inlet (3) Water Outlet (4) Bagh-i Naya Qila.



Fig. 12: Naya Qila, Golconda : Tank Outside Walls.

along the west and south respectively (Fig. 10). The impression of a vast sunken area is heightened by the rising ground to the east (retained by a wall) and particularly by the 20 feet high stone embankment north of which is the water storage tank – the source of the garden's water-supply (Fig. 11). The tank is perennial, replenished by two others outside the walls (Fig. 12) and irrigation water piped into the garden courses down to yet another tank, the *Langarcheruvu*, south of the *Naya Qila* after filling the two *baulis* and stone-cisterns of the garden. In effect the *Naya Qila* forms part of a tank network. During the rains when the water level in the *Naya Qila* tank rises, water outlets at the tank's upper level come into operation filling a chain of stone cisterns (*hawd*) lining the embankment and the garden's eastern edge. In Qutb Shahi times, the water from the cisterns was let out on the inclined granite slabs at the level of the garden sending ripples of light flying as it hit the slabs.[34] The 600 feet long water axis of the garden oriented along the (roughly) north-south direction of drainage connects two water cisterns (*hawd*) of which the southern one at the far end of the garden, measuring 300 feet by 350 feet is the larger (Fig. 13). At its centre are traces of a pavilion (reached by a causeway presumably) and recalling the water pavilions – pleasure-retreats-referred to in ancient Hindu texts such as the *Kama sutra*.[35] The water axis, composed of three longitudinal divisions, is 75 feet across (while the total width, including the flanking walks is 125 feet. Halfway along the length are traces of another pavilion connected with the flanking walks. The transitions from cistern to water axis to cistern (which involve progressing changes in level southwards) break up the flow of water into sprays. There are suggestions of a secondary axis in the *baradaris* to the east of the smaller *hawd* (which is 125 feet by 125 feet). The impression of a secondary axis is reinforced by the line of an aqueduct (Fig. 14). Passing over the eastern wall and extending into the garden, the aqueduct would have discharged its flow (the run-off from higher ground)



Fig. 11: Naya Qila, Golconda : Tank, embankment, garden, site.

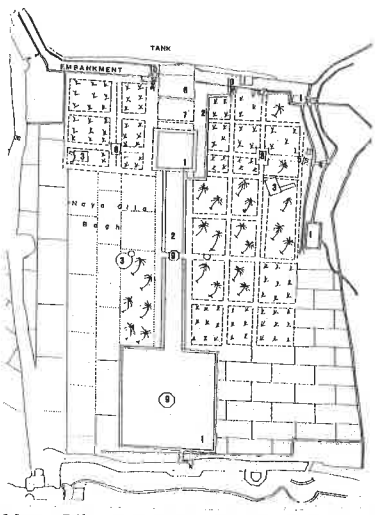


Fig. 13: Bagh-i Naya Qila; Golconda: (Source: Golconda Survey Plan at 1" = 200'
(1) Hawd (2) Watercourse (3) Bauli (4) Aqueduct (5) Cascade (6) Dal Badal Chabutra (7) Lower Chabutra (8) Baradari (9) Pavilion (10) Entry.



Fig. 14: Naya Qila; Golconda : View of aqueduct from bastion.

in the form of cascade, over a wall pierced with niches and holding candles at night (Fig. 15).

The tank embankment, one end of which is the *Naya Qila* Gateway, gives access to the garden below. Projecting halfway along its length is – what is known as – the *Dal Badal Chabutra*[36] where, presumably, a tent of state with satellite awnings, suggesting a mass of clouds, was pitched. This is the point of entry, and steps and ramps on either side of the *chabutra* (terrace) descend to the garden – to a lower terrace overlooking the smaller *hawd;* while below the Dal Badal chabutra (at garden level) are rooms for guards.

Professor Zor, writing in 1940,[37] says that the site of the *Naya Qila* functions as a *mela* or festival ground during *Basant*, the first harvest of the year when temples, tanks and water cisterns are adorned with flowers and the entire world is a sport. Zor adds that the *Bagh-i Naya Qila* must have been a favourite setting of the pleasure-loving Sultans for the merriment of *Holi* at *Basant*. Muhammad Quli's various *qasidas* (odes) in celebration of *Basant*[38] might be used to supply the details of such merrymaking which is not difficult to envision in the garden given the lavish use of water there. The *Bagh-e-Naya Qila* was measured during the days of British archaeology but seems to have been forgotten since. When the Mughal Asaf Jahs walled the city of Hyderabad, Golconda's administrative and economic functions were transferred there and the town depopulated. The garden seems to have suffered the same neglect that characterizes the town and is plainly evident in a walk through it.

Among large, pool-centered garden-palaces, *Gusha Mahal*, in Hyderabad is clearly the foremost example of its time, although, today it is the name of a locality, merely. A pleasure retreat of the last Qutb Shahi Sultan (Tana Shah), north of the river on the city outskirts *Gusha Mahal* could once accommodate more than 3,500 people. Its vast water reservoir fed by a canal from the Afzal Tank is now filled up and part of a football stadium (Fig. 8) and there are no remains now of the 'one-league' enclosure of garden-palaces described in the 18th century by French troops stationed in Hyderabad.[39] The only contemporary example of a pool-fronted garden-palace is the 'Adil Shahi *Athar Mahal* just outside the *Ark Qila* at Bijapur (and connected with it by a walkway over the moat. *Athar Mahal's* extensive *hawd* (65 yards by 50 yards) is 8 feet deep and supplied with water from the *Begum Talao* reservoir south of the city. The *hawd* was not excavated but instead constructed with thick masonry walls and along the two longer sides and at the upper level of the *hawd* are walks bordered with shallow pools, the whole bordered on three sides now with lawns 10 feet or so below. The palace forms the fourth side, the royal seat *shahnashin* overlooking the *hawd* and surrounding garden across a two-storied portico with a gilded wooden ceiling, held up on immense columns of teakwood (Fig. 16).



Fig. 15: Naya Qila; Golconda : Cascade over Wall.



Fig. 16: Athar Mahal, Bijapur : Hawd and Palace (Jahaz Mahal back).

The enjoyment of water is manifest everywhere in the Deccan – in the *bands* of steps around water cisterns and the subterranean chambers of a *bauli*, in pool-centered garden enclosures, in island and lakeside pavilions and their cloud-showers and water jets. The village of Kumatgi (outside Bijapur) may be cited for lake wide garden pavilions of the 'Adil Shahs, and the new royal city, Newraspur, which Ibrahim 'Adil Shah founded, at the close of the 16th century, had garden-palaces along a 21 and a half mile lake-front, as originally conceived.[40] In Hyderabad, there is little now to suggest that the Musa stream was once lined with garden-palaces for, excepting some crumbling garden pavilions overlooking the Musa stream and the last Nizam's riverside garden (with its reminders of the Italian Rennaissance, (Fig. 17), little remains. In Qutb Shahi times, the northern boundary of the city was the Musa river, and garden-palaces extended along the river to the west and east of the city's northern axis. Those on the west side include the *Amin Bagh* after Muhammad Quli's minister, Mirza Muhammad Amin-Shahstrani. The locality is still known as *Amin Bagh*, part of it now taken up by Hyderabad's Maternity Hospital.[41] An old fountain in black stone in the hospital compound (with stone tigers and elephants spouting water on each other) is believed to have been part of the Qutb Shah garden.[42] The garden was used for the recreation and residence of royal visitors such as the envoy from Safavid Iran, Imam Quli Big (who resided in Hyderabad for six years.[43] Hakim Gilani summed it up as a *qita* (fragment) of *bihisht* (paradise).[44] Further west of the *Amin Bagh* was Muhammad Quli's *Naddi Mahal* (Palace of the River) which was completed (on the orders of the sixth Sultan, 'Abdullah) with gilded wooden ceilings and columns.[45] The plain along the river which it overlooked was used for playing *chawgan* (polo) and functioned as a *maydan* for large public gatherings such as the *'Ashura* assembly on the seventh evening of Muharram whose splendour prompted Hakim Gilani to compare it to the Day of Resurrection.[46] Along the river bank to the east was the *Bagh-i Muhammad Shahi* an extensive pleasure garden[47] with date and coconut alms, *Jaman* (Eugenia sp.) and *champa* (Michelia sp) trees, pomegranate and (Indian) almond and grape clusters in the *mandwa* (overhead trellis), as Sultan Muhammad Quli himself describes in a poem.[48] Flanking a well of the garden was the *Dar al-Shifa*, a teaching and 400 bed hospital as well as a centre for research in traditional *Yunani* and *Ayurvedic* medicine (Tibb). Such a location was an ideal one for the Hyderabad "house of healing" where the concept of natural cure held essential significance. While the *Dar al-Shifa* still stands, Muhammad Quli's garden has wholly disappeared, washed away by monsoonal floods in the river.

Similarly, there is little physical evidence of the smaller "gardens contained within the palace" (including evidence of *zanana* gardens). The *Bala Hisar's* only surviving garden is the *Nagina Bagh* (Jewelled garden), now stripped of its carpets of jewel-like flowers although the checkerboard framework of terraces, planting plots and walks is reasonably well-preserved (Fig. 18).[49] There are also the remains of a mosque, a bath (which was customary in garden but now wholly in ruins), and a cusped stone cistern or *hawd* scooped out from the rock. Further down, in the lower citadel where some properties are owned by old feudal households (now sadly lacking both money and conscience) many a 'protected' place (such as the *Muti Mahal* or Pearl Palace) has been demolished and sites converted into building plots for sale. The *New Mahal* (adjacent to the *Muti Mahal)*

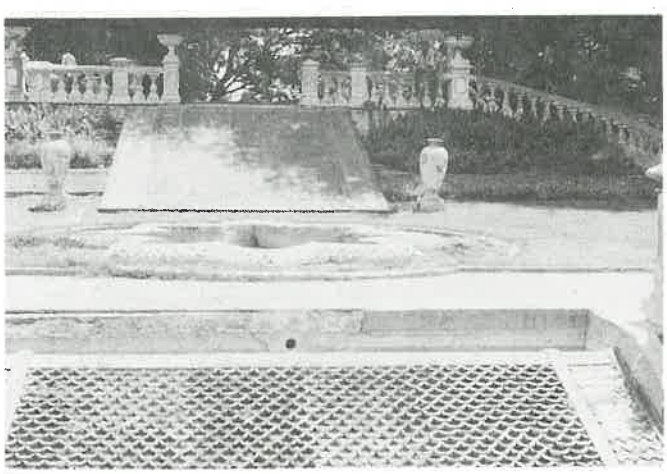


Fig 17: Musa gardens, Hyderabad: View along plan axis.

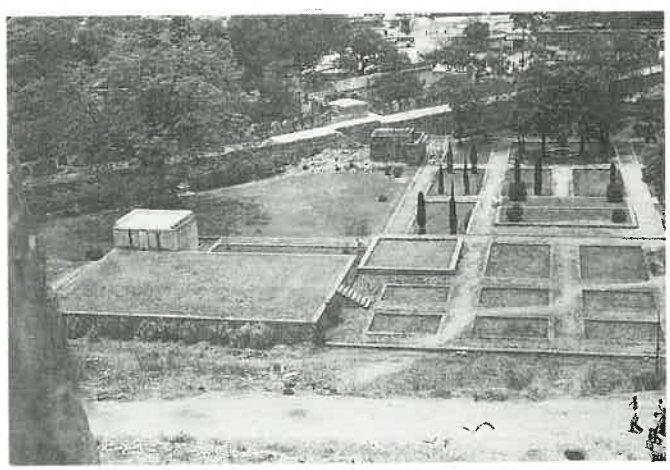


Fig. 18: Nagina Bagh, Bala Hisar Golconda : View from above.

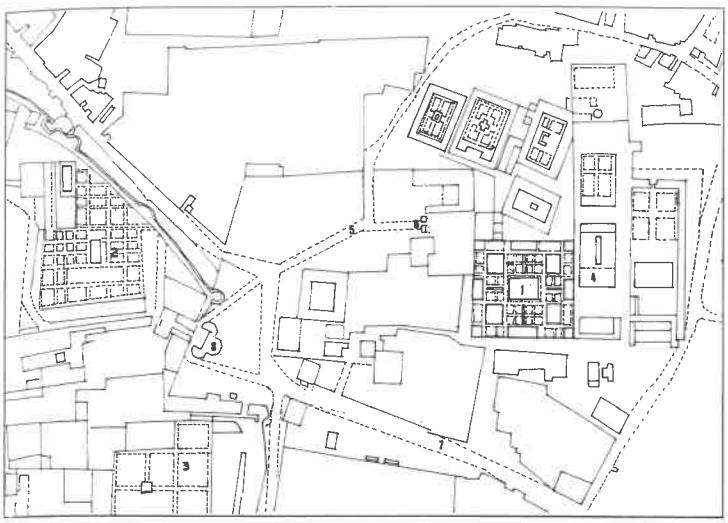


Fig. 19: Golconda Fort : Part Plan
(Source: Golconda Survey Map at 1"=200')
(1) Naw Mahal (2) Nagina Bagh (3) Mahal (4) Muti Mahal (5) Zanana Darwaza Land (6) Zanana Darwaza (7) Bala Hisar Road (8) Darwaza Bala Hisar.

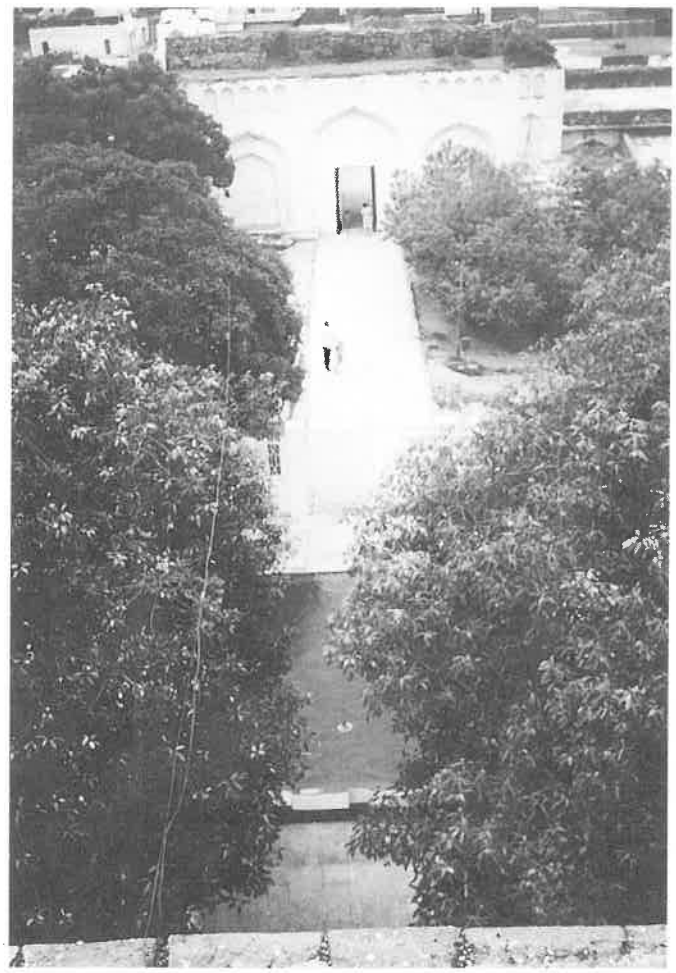


Fig. 21: Mosque Garden, Kalsumpura, Karwan : Hawd and Entrance.

a charming composition of nine palaces amidst plots "for orange and other fruit trees", railed *chabutras* and stone-lined water parterres and cisterns[50] (all within a wall) now serves the needs of a manufacturer of handloom carpets (Fig. 19-20). That notwithstanding, the intimacy of the *zanana* can still be experienced here.

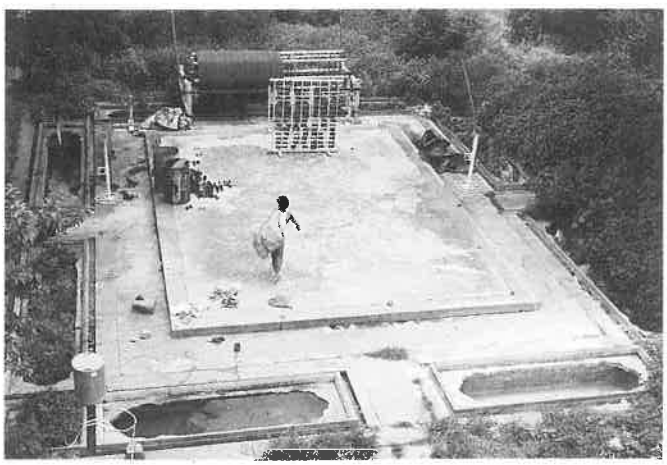


Fig. 20: New Mahal, Golconda Fort : Palace-garden Chabutra.

Distinguished from the various kinds of pleasure garden – although also for 'earthly delectation' – are the mosque and *serai* gardens and the carefully constructed mausolea. At Hyderabad, there is implicit evidence of mosque gardens at Karwan, the 16th and 17th century business distract connecting Golconda with Hyderabad. Both the mid-17th century *Toli Masjid* here and that dating from the same time in the locality of Kulsumpura nearby form part of walled enclosures each a little over two acres in area with their *hawd* terraces roughly centered within their enclosures, 6 feet higher than the surrounding ground levels (Fig. 21).[51] At one corner, in each mosque enclosure, is to be seen a large well and, at the *Toli Masjid*, the system of garden water supply is evident. Water raised up the well to a water trough is piped to smaller wells (each approximately 3 feet by 3 feet) spaced at intervals along one side of the enclosure, a pair flanking each of the three entrances from the Karwan road.

Golconda's royal necropolis perhaps its only

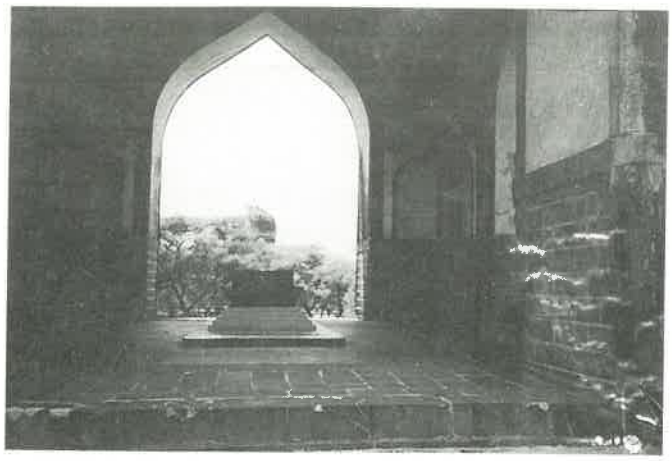


Fig. 22: Baridi tomb gardens, Bidar : Gateway between tomb gardens.

remaining attraction. Little remains of the blue and green glazing of domes, but the structures have been repaired and the *chunam* (lime) lining of domes are whitewashed periodically. Some of the mausolea here involved a lifetime of labour while in the case of others even a lifetime was not enough, apparently, in the preparation of a last resting place. Stepping up in tiers from the surrounding ground, each mausoleum is a 'mountain of light' at the centre of a cross axis plan, and the relationship of one with the other would seem predetermined and planned. Of much interest within the complex is the 'attendant' *hammam* (or bath) for funeral rites of the royal dead. This consists of three halls where cisterns for hot and cold water and (aromatic preparations, presumably) with waste pipes may be observed still, although the focus of interest is the circular marble platform with twelve rays or waves, in black inlay, radiating from its centre where the royal corpses were washed.[52] The source in the Deccan for such a tomb group would appear to be the 16th century Baridi enclosures at Bidar, housing the tombs of 'Ali Barid (d. 1580) and Ibrahim Barid (d. 1587) (Figs. 22, 23). Although not identical in area (the mausoleum of



Fig. 23: Baridi Tomb garden, Bidar: Gateway between tomb gardens.



Fig. 24: Tomb Garden, Muhammad Quli Qutb Shah, Golconda.

Ibrahim Barid – 10 acres – being almost twice in area), both are square walled enclosures with (evidently) four entrances in the middle of their enclosing walls. The plan axes are defined by paths, and each path creates, "two gardens, one on either side", – as Yazdani has phrased it.[53] The succession of platforms leading up to the main structure are seen to grander effect at Golconda, however, where – as at Muhammad Quli mausoleum – the upper terrace at sarcophagus level is 18 feet above the surrounding ground (Fig. 24).[54] There is nothing, however, in the restoration of Muhammad Quli mausoleum, to suggest a (grape) *mandwa* (trellis), a characteristic feature of a palace and (occasionally of) a tomb *chabutra*, which is suggested in a 19th century photographic view (Fig. 25).

The Qutb Shahi necropolis was walled and rejuvenated in the days of the Nizams. Since 1965, when the Andhra Pradesh Department of Archaeology took over its management, it has been embellished with modern fountain jets and is now quite treeless too thanks to the Department's untiring zeal. As one official explained, too many trees tended to detract

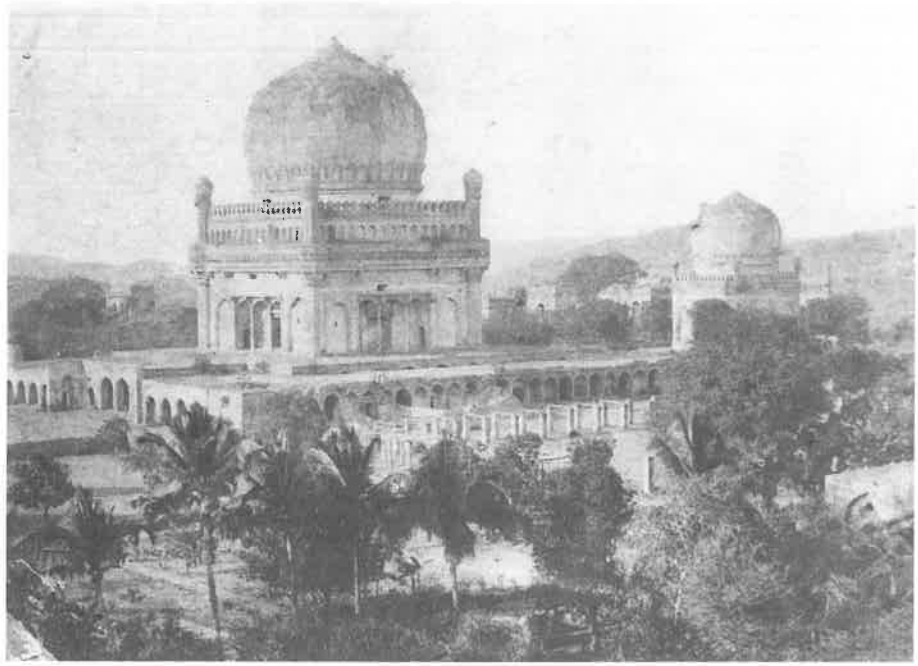


Fig. 25: Golconda : Tomb garden of Muhammad Quli Qutb Shah (19th century view)· (Courtesy Salar Jang Library, Hyderabad)

from the monuments themselves, which after all, was what visitors came to see. Without their canopy of trees, the mausoleum gardens of the Qutb Shah's lack that sense of enclosure which is so vital and precious in a Mughal garden. Like the 40 acre site of Muhammad 'Adil Shah's *Gol Gumbaz* (in Bijapur) where empty traces sweep up to the tomb making a mockery of the mausoleum, the Qutb Shahi necroplis can no longer be called a garden, merely a series of monuments – soon to be engulfed in the encroaching desert.

NOTES

1. E. B. Moynihan, *Paradise as a Garden in Persia and Mughal India*, New York, London Scholar Press, 1976, pp. 103–106.
2. S. M. Alam, ed., *Planning Atlas of Andhra Pradesh*, Governments of India and Andhra Pradesh, 1974, p (i) Section 2.
3. J. R. Goodin & D. K. Northington, ed., *Plant Resources of Arid and Semi-Arid Lands*, Florida, Academic Press Inc., 1985, p. 85.
4. *Ibid.*, p. 87.
5. G. Yazdani, *Bidar: Its History and Monuments*, London: Oxford University Press, 1947, p. 203. Tanks at Kamthana, Pakhal and Ramappa in Warangal are noted. The embankment of Kamthana tank is described as a mile long 30 feet to 40 feet above the water surface with earthworks 100 feet at top and much wider at base protected by masonry work. Cf. the dimensions of the 16th century Husain *sagar*, p. 4.
6. H. Cousens, *Bijapur and its Architectural Remains*, Bombay, 1916, p. 124. Writes that the *Taj Bauri* was enclosed within high walls. Also gives dimensions of *Chand Bauri*, p. 121, 'another tank of the same class'.
7. G. Yazdani, op.cit., 176-77 the *Farah Bagh*, "Garden of Joy", Yazdani writes, "a spot where water oozes out from the bosom of the rock and the valley below is divided into natural terraces and clothed with luxuriant verdure". The site was sacred to "the votaries of Hindu faith ... and images of god ... installed near the figures where water flows ... before the buildings were given over by the Asaf Jahis to the keepers of the Hindu shrine".
8. *Ibid.*, pp. 203–205.
9. H. Cousens, op.cit., p. 122. Earthen pipes supplied water from the reservoirs to water towers where silt was intercepted – and as inlet and outlet pipes were at two different levels, this released necessary pressure.
10. A. Qayyum, *Qutb Shahi Gumbadin* (Tombs), *Andhra Pradesh Oriental Research*, 7, 1990, pp. 50-51. The author is Assistant Director, Department of Archaeology, Hyderabad. Repairs to the canal from the Durug Tank to Golconda's fort are referred to in *Annual Report of the Archaeological Department of HEH the Nizam's Dominions for the year 1937–1940, Yazdani ed.*
11. See this author's Ph.D. dissertation. *The Scented Garden in Deccani Muslim Literature*, University of Edinburgh, 1994, Chapter 2.
12. H. K. Sherwani, "Cultural Aspects in the Reign of 'Abdullah Qutb Shah, *Islamic Culture* 30:1 (1956), pp. 45–75. Professor Sherwani writes that "the original garden extended from the twin hillocks later topped by a baradari and a mosque right up to the ruins of the palace lying towards the west of the mosque". The palace spoken of has disappeared altogether. For a description of buildings on top of hillocks, see G. Yazdani ed. *Annual Report of Archaeological Department of HEH the Nizam's Dominions*, 1924-25.
13. Two miles in circumference and built by Ibrahim Qutb Shah in 1560.
14. The latter, according to an inscription, believed to be hers in the Qutb Shahi necropolis, was "from eternity, a Rose of Paradise." See *Annual Report 1924-25*, op. cit., p. 2.
15. The present name of the hill – *Nawbat Pahar* – evolved apparently in the Mughal practice of making public announcements from its summit to the accompaniment of *Nawbat* (Kettledrums). Adjacent to the *Nawbat Pahar* is the *Fath Maydan* (or Victory Square), a name which has been in use since Aurangzeb's conquest. The hill is called - *Kuh-i Nabat Ghat* – by Hakim Gilani, a contemporary historian. See *Hadiqat as Salatin* of Hakim Nizamuddin Gilani (S. A. A. Bilgrami ed., Hyderabad: *Idara Adabiyyat-e-Urdu* 1961) Urdu trans, K. M. Sarwar, Hyderabad: Syed 'Abdul Qadir Khushnawis, 1986, p. 44.
16. And the Sultan's son-in-law. See *Hadiqat* K. M. Sarwar trans; op. cit., p. 44.

17. J. Sarkar, *Journal of Hyderabad Archaeological Society*, 1917. The channel was completed in 1856 and called Baljapur Canal.
18. *Hadiqat*, K. M. Sarwar transl, op. cit., p. 44. The dimensions in yards are approximate. Gilani provides dimensions in *gaz*, which was smaller than a yard.
19. Sherwani op. cit., p. 45–75.
20. *Hadiqat*, K. M. Sarwar transl. op. cit., p. 192.
21. *Ibid.*, pp. 192-93.
22. Zor, S. M. Q., ed., *Kuliyyat Sultan Muhammad Quli Qutb Shah*, Hyderabad Deccan: Ibrahimia Press, 1940 (1359 AH), p. 120.
23. S. Ja'far, ed., *Kuliyyat Muhammad Quli Qutb Shah.*, Delhi, Tarriqi-i-Urdu Bureau: 1985, p. 411. The poem *Koh-i-Tur* translated into spoken Urdu by Zor, op. cit., p. 123.
24. Zor, op. cit., p. 125, Cf. *Hadiqat*, K. M. Sarwar transl., op. cit., p. 64.
25. *Hadiqat*, K. M. Sarwar transl., op. cit., p. 73. Gilani gives names of several gardens around the city adding that royal visits to these began with the onset of rains. See also pp. 44, 73, 74 for reference to Sultan Abdullah's week-long visit to the *Bagh-i-Lingampalli* and the *Bagh-i-Gulshani* and a month-long visit (the following year) to *Kuh-i-Tur*.
26. *Ibid.*, p. 64.
27. Refers to a tent colony in the (surrounding) gardens at the foot of the hill and to the setting up of bazars around the whole.
28. Zor, op.cit., p. 123. See also p. 18 for dimensions of the reservoir (*hawd*). Refers to the *Tarikh-i-Zafrah* (in Persian) of Girdharilal Ahqar (written in 1185 A.H) and to the *Tarikh-i-Qutb Shahi* (Persian Ms. Folio 269, Salat Jung Museum, Hyderabad). Both works record the dimensions of the *shahnashin* and of the raised *hawd*.
29. *Hadiqat as-Salatin*, op. cit., p. 44. According to Sherwani, the garden was constructed in 1609 by Muhammad Quli Qutb Shah. It was used by 'Abdullah Qutb Shah as a resort and was rebuilt by Asaf Jah II in 1761.
30. H. K. Sherwani, op. cit., According to a chronogram, the *Bagh-e-Sultan Shah* was erected in 1662 "in the vast park-like garden laid by the Mir Jumla on the banks of the Mir Jumla Tank'.
31. *Golconda Survey Map* of the Department of Archaeology, n.d. The survey at a scale of 200 feet to 1 inch was carried out under the direction of M. Karamatullah Khan, Superintending Engineer, General Branch PWD, Ghulam Yazdani, Superintendent, Department of Archaeology; and Anantha Krishna Rai, Assistant Superintendent, Hyderabad Municipal Supply. The survey was presumably undertaken in the first quarter of the present century. Rough measurements of this author's correspond to those of the *Golconda Survey Map.*
32. Sarkar, J., "The Last Siege and Capture of Golconda", in *Journal of Hyderabad Archaeological Society*, 1918.
33. As suggested by fragments of these slabs which can be seen in the garden below the cisterns on the embankment. These and other rough measurements of this author correspond to those of the *Golconda Survey Map* op. cit.
34. G. C. Chakladar, *Social Life in Ancient India: Studies in Vatsyayana's Kama sutra*, Calcutta, 1929. Chakladar draws attention to the *samudragrhas* ("cool summer-houses for lovers") in the *Kama sutra.*
35. As indicated on *Golconda Survey Map*, op. cit. *Dal Badal* in Sanskrit refers to a mass of clouds, a large army, large tent, see Duncan Forbes, *Dictionary of the Hindustani Language*, London 1848.
36. Zor., op. cit., p. 208. Zor discusses *Bagh-i-Naya Qila* in the chapter titled *"Nawruzawrl (and)* BasantI" of his *Muqaddima* (Preface).
37. *Ibid.*, pp. 370–74.
38. Observtion made during the course of this author's postgraduate research seminar in Edinburgh, July 1992 by J. B. Byrom, Director of Landscape Studies, University of Edinburgh and author of "India Gardens: An Introduction: in University of Edinburgh, Landscape Occasional Papers, Paper 3, March 1984.
39. J. Sarkar, "Hyderabad and Golconda in 1750 as seen through French eyes: Diary of an officer in Mon.de Bussy's army, in *Islamic Culture*, 1936, pp. 234–47.
40. H. K. Cousens, op. cit.
41. Zor, op. cit., p. 130. According to Zor, the garden extended from the river bank southwards to the royal palace complex.
42. K. O. Qarni, *Qarni's Sketches of Hyderabad*, Hyderabad, Nazir Ahmad Publishers 1990, on p. 25 is a sketch of the fountain.
43. Gilani, *Hadiqat*, K. M. Sarwar transl. op. cit., p. 123. The palace spoken of also as the *Hina Mahal* after it was adorned' by a palace in Muhammad Quli's lifetime.
44. *Ibid.*, p. 66.
45. *Ibid.*, p. 90.
46. Zor, op. cit., p. 156.
47. *Ibid.*, p. 156. Traces the boundaries of the garden. See *Hadiqat*, Sarwar transl, op. cit., p. 72 for destruction to the garden caused by flooding in Musa river.
48. *Kuliyyat*, S. Ja'far ed., op. cit., p. 729. The Qasida: *Bagh-i-Muhammad Shahi* transl, into spoken Urdu by Zor. See Zor, op. cit., pp. 133–36.
49. *Golconda Survey Map*, op. cit., Another garden is indicated on the map as *Mahal Taramati*, but apart from its *bauli*, there are no traces left to it.
50. S. H. Bilgrami and C. Wilmot, *Historical and Descriptive Sketch of His Highness the Nizam's Dominions*, Calcutta, 1883, 2 vols. Vol. I. The authors write that court was held in *Naw Mahal* frequently in the time of Nizam Ali Khan II "but the present Nizam rarely visits Golconda".
51. *Toli Masjid* built by Mir Musa Khan in 1671 (1082 AH) is discussed in *Annual Report of the Archaeological Department of HEH the Nizam's Dominions for the year 1921–24*, p. 10. The enclosure of the mosque at Kulsumpura (nearby) measures 352 feet by 306 feet, the mosque-*hawd* platform being 120 feet by 88 feet. The *hawd* is 24 feet square and the *bauli* in the corner is 36 feet square (all dimensions approximate).
52. Royal Bath built by Sultan Quli, the founder of the Qutb Shahi dynasty of Golconda. See S. A. A. Rizvi, *A socio-intellectual history of the Isna 'Ashari Shi'is in India 7th to 16th century*, Canberra, 1986, 2 vols. vol. 1.
53. G. Yazdani, *Bidar, its history and monuments*, op. cit., p. 151–60.
54. See *Annual Report of the Archaeological Department of HEH the Nizam's Dominions for the year 1918-19* pp. 5-6. The lowest terrace 13 feet 6 inches above surrounding garden is 200 feet square, the second terrace 3 feet 6 inches higher, is 126 feet 3 inches square, the tomb itself being 71 feet 3 inches square, a foot higher.

PART II:

CONSERVING THE MUGHAL GARDEN

Texts, Places, and Policies

Although internationally famous for their beauty and symbolic meanings, only a small number of Mughal gardens have survived. They have posed numerous issues of "Conservation" for societies, past and present. Although conservation problems are often mentioned, they have not received the creative attention they deserve. The photographs in the following pages represent the existing conditions as well as the conservation efforts being undertaken to protect the premises from further deterioration and provide better environment for the public. The set of papers that follows is the first publication to discuss in broad terms the issues and challenges associated with conserving Mughal gardens. Rafique Mughal compares the theory and practice of garden conservation in South Asia. Abdul Rehman focuses on the rich resources available in historical texts. Michael Brand describes how the Mughal Gardens Project approached the documentation of the Shahdara gardens in Lahore. Masud Khokhar focuses on the conservation of gardens in Lahore Fort, and Sajjad Kausar retraces the fascinating history of garden conservation at Shalamar Garden, Lahore. Yousaf Awan then helps us understand how gardens fit within the broader situation of conservation patterns, trends and policies in Pakistan. These perspectives remind us that it is the conserved gardens that we experience today, and the gardens we conserve, will be experienced by others tomorrow.



(I)a: Baradari of Fatehgarh Garden (Southern Facade) at Lahore needs Urgent Repair.



(II) Mahabat Khan Grave at Lahore - Once located in a garden. Presently in a State of Neglect.



(I)b: Baradari of Fatehgarh Garden (Interior view) at Lahore needs Urgent Repair.



(III)a: Kamran's Baradari - An example of bureaucratic attitude towards total reconstruction in the name of conservation.



(III)b: Kamran's Baradari - Original Feature.



(III)c: Kamran's Baradari - Structural Consolidation and Reconstruction is in progress.



(III)d: Kamran's Baradari - Work in progress.



(IV): Encroachments around the Tomb of Ali Mardan Khan, completely surrounded by Railway Workshops.



(V)a: Deterioration of Garden of Hasan Abdal.



(V)b: Deterioration of Garden of Hasan Abdal.



(VI): Jahangir's Tomb. Southern Facade in dilapidated condition and Western Facade after conservation.



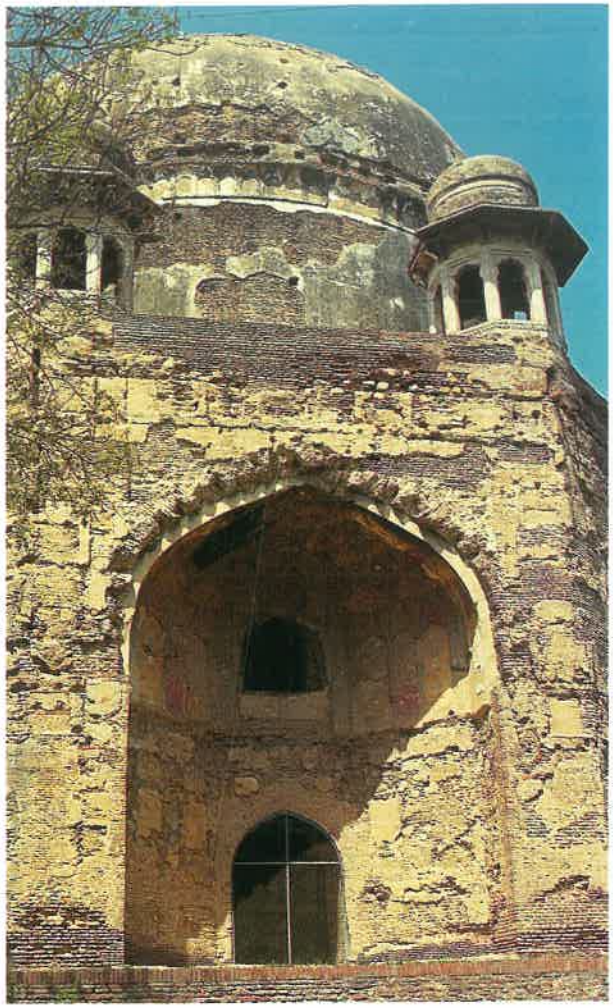
(VII): Dilapidated Condition of Asif Khan's Tomb.



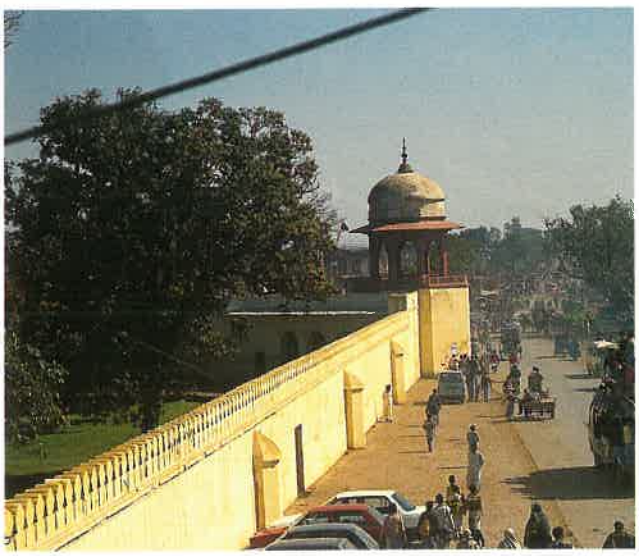
(VIII): Suri Period Mosque and Garden in Akbari Sarai.



(IX): Nawankot Gateway, completely surrounded by residential buildings.



(XI): Dilapidated Condition of Ali Mardan's Tomb.



(X): Transportation pattern outside the southern wall of Shalamar Garden.



(XII): Dilapidated Mughal Period Baradari at Kunjah.

THEORY AND PRACTICE IN GARDEN CONSERVATION

M. RAFIQUE MUGHAL
Director-General,
Pakistan Department of Archaeology
and Museums

The erstwhile Archaeological Survey of British India inherited a large number of Mughal gardens and their remains, some of which were listed and classified as "monuments" like standing monuments and sites. A series of annual reports produced by Sir Alexander Cunningham and Sir John Marshall on the monuments also include descriptions of gardens. The conservation works which were initiated at that time dealt mostly with the restoration and repairs of structures like pavilions, walkways, water channels and tanks, tombs, gateways, etc. The gardens within and around the monuments to which they were an integral part, somehow were not considered to be equally important. The conservation of a historical garden involved only plantation of trees and laying of lawns and turfing. The approach was generally archaeological by which gardens were regarded as antiquities like other structural remains. Since the historical gardens were never viewed in the context of their physical environment, the principles and procedures specifically applicable to the conservation of gardens were never formulated separately. Sir John Marshall's *Conservation Manual*, still regarded sacred by all the Archaeological Conservators in South Asia, contains eleven numbered paragraphs (among a total of 273) for historical gardens.

Marshall had no horticulturist with him. He says that the layout and conservation of ancient gardens "calls for special knowledge and experience" but adds that "questions regarding them should ordinarily be referred to the Director General of Archaeology" (para. 118). He advised the archaeological conservators to prefer planting of trees which were indigenous in the area where the garden was situated instead of "exotic" ones but warned against planting of thick foliage trees such as Mimusops (*Khirni*), *Nim* and trees of ficus family for example, the *pipal* and *banyan*. In his opinion, such trees were threat to the vegetation or monuments and should be "cut down and eradicated", if practicable. He however insisted that it was "important to preserve the essential character of the originals ..... but it is not necessary to attempt to reproduce with pedantic accuracy the original appearance of the garden in all its particulars by banishing from it any trees, flowers or fruits, etc. which were not grown by the ancients" (para. 138).

The tradition of Marshall's days for garden conservation was maintained in Pakistan much after independence in 1947. The conservation reports on monuments published since 1947 clearly reflect our approach towards historical gardens and their conservation. The garden part of a monument complex is generally thought to involve plantation of trees, shrubs and maintenance of grassy lawns only. The gardens do not figure separately in the conservation history of South Asian monuments although excellent accounts on Mughal Gardens in South Asia (Bhagwat 1993; Stuart 1913) and in Lahore (Dar 1982) are available. In archaeological literature, however, the main emphasis has always been on the structural elements of the Mughal gardens.

This trend is best illustrated by the conservation and restoration schemes (called PC-I or Development Schemes in official language) which were formulated for Shalamar Garden and Lahore Fort. These conservation schemes were launched in 1974 by the Federal Department of Archaeology. The one for Shalamar Garden was implemented with a cost of Rs. 16.582 million between 1974 and 1989. For the improvement of lawns and water supply, less than 6 lacs (0.6 million) were spent. The remaining amount of Rs. 16 million was spent on the restoration and repair of structures on the two terraces. The scheme for Lahore Fort was launched at the capital cost of 10 million in which only 0.28 million were earmarked

for the improvement of gardens in front of Diwan-e-Aam, in Jahangir's quadrangle, *Charbagh* in front of Diwan-e-Khas and the Hazuri Bagh lawns. During the last five years, eleven schemes for the conservation of monuments in the Punjab Province have been operative. Among these four schemes relate to Jahangir's tomb, four belong to Lahore Fort, and one each for Rohtas Fort, Harappa and Mughal Garden at Wah. In the four schemes for Lahore Fort, nothing has been provided for the development or improvement of gardens. No special funds are provided for the extensive gardens around Jahangir's tomb. Two of the schemes pertain to the restoration of walkways and water channels and the perimeter wall (destroyed by floods prior to 1860), respectively with the capital cost of 7 and 13.5 million. Still, there was no provision for landscaping within the walled area of Jahangir's tomb.

It should be added that neither proper investigations were conducted in the Mughal gardens before drawing up these schemes until 1990, nor technical support was available from the concerned institutions who had carried out research on the Mughal gardens in Pakistan. The technical research and conservation measures therefore, remained exclusive of each other for all practical purposes.

Recently, a very significant change has occurred in the conservation of gardens. Deprived of access to relevant research data gathered by other agencies, the Federal Department of Archaeology itself undertook detailed studies and investigations at Wah Garden under the leadership of M. A. Halim, Deputy Director before drawing up a comprehensive scheme for the conservation and restoration of this unique Mughal garden. The results achieved so far are in fact a model of garden conservation research and heralds a new approach to the subject. The scheme for Wah Garden when implemented will cost Rs. 23.740 million. Yet another major development took place only a couple of months ago. Four schemes pertaining exclusively to the restoration and conservation of gardens were prepared for funding which are as follows:–

		Cost (million)
1.	Landscaping and development of Shalamar Garden, Lahore	Rs. 12.80
2.	Lahore Fort Gardens	Rs. 9.60
3.	Jahangir's Tomb Garden	Rs. 17.70
4.	Akbari Sarai and Asif Jah's Tomb Gardens	Rs. 7.90
5.	Noor Jahan's Tomb Garden	In preparation

This change in the concept of garden conservation is very new in Pakistan and certainly is of potential significance. The new approach is a major departure from the traditional view point which stressed conservation of structures but very little landscaping.

In conclusion, it may be re-stated that in the conservation of gardens, a clear distinction rather separation between architectural elements and landscaping existed since long. Having been grouped as monuments, the restoration and preservation of gardens essentially involved conservation of extant architectural remains. The landscaping part of the garden covered only a fraction of the total funding for garden conservation. The most recent trend indicates a clear departure from the old concepts and procedures of garden conservation. Separate proposals aimed at landscaping and development of gardens have been prepared which are being accepted for funding. Moreover, new schemes are being formulated based on factual data collected through detailed investigations of the garden sites. These schemes are first of its kind to be prepared for the development of historical gardens in Pakistan.

In recent years, tremendous interest in the Mughal garden architecture is indicated by the research initiated by Dr. James L. Wescoat Jr. with the support of Smithsonian Institution. These are excellent studies which enhance our understanding of the ancient garden landscape. Almost all the known surviving gardens in and around Lahore have been documented with remarkable care. However, it remains to be seen how much intellectual and academic exercise carried out during the past five years or so would be applicable for the conservation of gardens.

It seems that there has not been sufficient feed back to the garden conservators from the scholars on garden history and geography. At present, there seems to be two parallel efforts on gardens; one related to intellectual and academic interest and the other dealing with actual conservation and preservation of gardens and their architecture. It is hoped that some day, both the conservators and garden art historians will pool their expertise and knowledge and come up with solid suggestions for the conservation of gardens in Pakistan.

The function or use of the historic gardens in our times has changed from being an exclusive resort of the royalty and nobility to public recreation places. The changing role of historical gardens calls for reconsideration of our old policies and practices. Cer-

tain facilities have to be provided to the visiting public and in doing so, a few new elements will have to be introduced which may be inconsistent with the original environment. This has been one of the points of debate among the conservators, engineers and scholars of garden architecture. It is admitted that it is now impossible to recreate ancient environment around the gardens specially those which are located near or in the cities. Whatever the argument, the changing public needs have to be accommodated to some extent without sacrificing the original character of the gardens.

Not all the studies and documentation of the extant gardens in Pakistan have been fully supported by actual investigations on the site. Information available in the shape of visible remains and in the literary sources is relied upon for understanding of architectural elements and other details. At Jahangir's tomb, a limited investigation was carried out a few years ago but it was restricted to the walkways and water channels (Mughal 1990) Extensive investigations have recently been carried out at Wah Garden. It is necessary that such investigations should be extended to reconstruct also ancient plant species through soil analysis. In fact, collective and collaborative efforts of the archaeologists, art historians, architects and engineers are needed to resurrect extinct gardens and to conserve and maintain them for posterity.

REFERENCES

Bhagwat, Prabhakar B. 1993, *The Gardens of India, Historic Gardens and Sites.* Colombo: ICOMOS: 54–62.

Dar, S. R. 1985, *Historical Gardens of Lahore*, Lahore: Aziz Publishers.

Marshall, Sir John, 1923, *Conservation Manual*, Calcutta: Superintendent, Government Printing.

Mughal, M. Rafique, 1990, Preliminary Investigation of the Conservation and Restoration of Brick Pavement at Jahangir's Tomb, Lahore, *Lahore Museum Bulletin*, III(i): 79–83.

Stuart, C. M. Villiers, 1913, *Gardens of the Great Mughals* (Reprinted in 1983). New Dehli: Cosmo Publications.



Gateway of Nawankot Garden, Lahore

THE MUGHAL CONCEPT OF GARDENS: AN ENQUIRY INTO SHAH JAHANI SOURCES

ABDUL REHMAN
Department of Architecture,
University of Engineering and Technology, Lahore

The tradition of formal gardens in the Indian subcontinent started with the arrival of the Mughals. The Mughals were justifiably known as some of the history's greatest patrons of gardens. Before the establishment of Mughal rule, the sites for recreation and pleasure activities were mostly informal and situated in the suburbs of residential settlements or near a source of water. Planned landscape features existed in and around the major towns where rituals and festivals were held. These were mainly around shrines, temples, and water bodies. The objective of such formal and informal spaces was to bring the human mind and soul closer to nature. The Mughals gave a new image of landscape to areas occupied by them. Gardens were built within towns, in suburbs, and along major highways.

The arena in which the garden operates, and the physical form of gardens within specific cultures, provide a useful basis for understanding the meaning and concepts of garden design. Similarly, the symbolic meaning of gardens has a significant relationship with the specific cultural and geographical context in which they are built. The time dimension is also an important factor in the cultural context of gardens. Ideas and concepts may change or improve with time due to the interacting forces and developments within the society. It is, therefore, important that Mughal gardens, be viewed and understood in the light of cultural traditions of Mughal times. This paper examines the concept, meaning and form of Mughal gardens as described in Shah Jahani sources. During the reign of Shah Jahan a number of important historical works appeared. These works throw light on the physical form and meaning of Mughal Gardens.

The concept of Mughal gardens is easily traceable to Central Asia, after which it matured in the Indo-Pakistan subcontinent over a relatively long period of time. This is evidenced in the remarkable similarity of garden layout and planning over a vast geographical territory and time period, despite wide variations in local cultural and technological contexts. These similarities were due to the migration of literary figures, patrons, craftsmen, artists, and master builders who transported ideas and technical expertise from one place to another.[1] At the same time variations did occur in physical design due to the local influences of physical and cultural context.

These similarities and variations can be examined from original textual sources. The vocabulary and etymology of landscape features and garden design, used in these sources, best depict the historical meaning and form of gardens. During Shah Jahan's reign a number of scholars from India and Central Asia produced scholarly works. The way they perceived gardens differs from one scholar to another because of their educational and cultural background, though many of the basic facts remained the same throughout their works. These scholarly works are of two types, i.e., officially supported and personal efforts. The following narrative begins with the officially written narratives of Shah Jahan's reign.

Initially, Shah Jahan had decided that each decade of his reign was to be treated in a separate volume. For this task, a number of distinguished scholars including Hakim Haziq Gilani and Mulla Abdul Latif Gujrati were appointed in the initial years but no trace of writings by either author has survived.[2] In the seventh and eighth regnal years two other important writers became directly involved in this project. The first of these was Mirza Jalal Tabatabai who arrived in India from Isfahan. He was commissioned to write an account of five years of the reign. The author could not continue further for unknown reasons. At the same time Mirza Amin Qazwini appeared in the picture.[3] Shah Jahan

wanted to have an account of his reign which surpassed his predecessors in elegance and coherency. The work of Qazwini was famous for lucidity and excellence in style. He was fortunate enough to complete the history of the first ten years.

By the close of the first decade, Shah Jahan decided that instead of following the solar reckoning, the regnal years would be calculated according to the lunar calendar. Thus the work of tenth year covered only seven months instead of twelve, as the eleventh regional year had now been recalculated to begin in 15 Jamadi-ul-Aakhir 1047 (Oct 21, 1637). The precise date of Qazwini's removal from office is not known, but it is certain he was relieved from duties sometime in the eleventh year (1047-1048 AD).

Abdul Hameed Lahori[4] was much honored in the literary circle for his prose style which was originated by Abul Faz'l. He was living in obscurity in Patna[5] to spend his retired life. He was brought to the emperor who interviewed and appointed him as court historian. He was asked to revise the first volume prepared by his predecessor according to the lunar calendar and start work on the second. By the middle of the fourteenth year of Shah Jahan's reign he made a substantial progress, for which he was heavily rewarded by being weighed against gold and presented with an additional 3000 rupees.[6] The author started work on the third volume. Because of his age, his health did not permit him to do more work. He retired from service after completing his coverage up through the twenty-sixth year.

The *Shah Jahan Nama* of Lahori contains a wide range of information including important public activity of the emperor, day-to-day affairs, military campaigns, civil works, transcripts of important state documents, and letters exchanged with other rulers. At the end of each volume he has given short biographies of notable personalities. The style of narrating events remained simple and straightforward but comprehensive. He also wrote about the involvement of the emperor in architectural activities in the following words:

> "A part of the time he spent in seeing the works of exalted magical artists such as lapidaries, enamellers, etc. The superintendent of the work of royal buildings in consultation with the wonder working rare masters, lay before the critical (royal) eye design of edifices. The royal mind, which is illustrious like the sun, pays meticulous attention to the planning and construction of these lofty and imposing buildings, which, in accordance with the saying "verily our relics tells of us", speak with mute eloquence of His Majesty's God-given high aspiration and sublime fortune.... and for ages to come will serve as memorials to his abiding love of constructiveness, ornamentation and purity."[7]

Abdul Hameed Lahori was succeeded by his pupil and assistant Muhammad Waris.[8] He was asked to complete the task for the remaining years. Less than 9 months after the 30th regnal years he completed the third volume and placed it in the Royal Library. This work is available only in manuscript form.

The works of Lahori and Waris were specially valuable for architecture since most of the imperial projects are described in great detail. They also discussed the following subjects related to gardens in the three volumes of the *Badshah Nama:*

- The description of significant gardens of Lahore, Agra, Kashmir and at smaller places such as Wah etc.
- Important landscape features including water system, nature and qualities of soft landscape elements, e.g., they have discussed at length the significant architectural features, different terraces, and important dimensions of Shalamar Garden at Lahore.[8]
- The design concept has been briefly described, including its landscape features.
- The actual dimensions of gardens and landscape elements have also been given for a few places and the cost of construction of major projects has generally been given.

Abdul Hameed Lahori termed Mughal gardens as *bagh-i-bahisht, firdaus, bustan* and *gulistan* but did not give any further explanations to these terms.

The next important book of the Shah Jahani period is *Shah Jahan Nama* by Inaiat Khan. Soon after the completion of *Badshah Nama,* he was given the post of superintendent of Royal Library (*Darogha-i-Kitub Khana* at the age of 30 on 4 Rabi ul Awwal 1068 (10 December 1657). He had gone through the entire work of the *Badshah Nama* and concluded that it had reached unmanageable length. Therefore, either on the instruction of Shah Jahan or on his own initiative, he undertook to prepare a short abridged version in a simplified manner in lucid language.[9] The basic objective was to make it accessible to an ordinary reader. The places where the language was simple he reproduced it word for word; since he says, "to rewrite them would merely be to obtain

what had already been obtained." The coverage of events from the 4th to 10th regnal years were based upon the *Badshah Nama* of Qazwini. He wrote that the work was completed within a short time. He further stated that Shah Jahan was still on the throne when the manuscript was finished which means that he took four to five months to complete the task, which was in any event before 1658 AD.

The main thrust of the content matter was on political events. He has also given some coverage to gardens and events associated with them, but less attention was given to architecture The *Shah Jahan Nama* provides a clear picture of the landscape features and gardens of Shah Jahan's period. For example, the description of Shalamar Garden Lahore is narrated in the following words:

> As the architectural embellishment of the superb and delightful gardens, Bagh-i-Faiz Bakhsh and Bagh-i-Farah Bakhsh had been completed at about this time, in a chosen moment during the early part of Shaban 1052 AH (31 October 1642 AD). His majesty made a pleasure excursion to those paradise like terraces. And the gardens and the agreeable pavilions which had been erected about the grounds, which all vied with heavens in grandeur, were now found suitable to the royal taste. In fact, never before had a garden of such a magnificent description been seen or heard of, for the buildings alone of this earthly paradise had been erected at an outlay of six lac of rupees.[10]

In the case of Wah garden he states that, "during the concluding ten days of Rabi-ul-Awwal 1056 (May 1646), His Majesty alighted at his apartments in the verdant garden of Hasan Abdal, where the water is so clear in the sparkling fountains, and the avenues of chenar trees all towering to the same height are so exquisitely lovely that there is no spot equal to it on the road, nor indeed in the whole territory of Kabul.[11]

These descriptions of garden sites provide the following information,

- the visual quality of the landscaped environment.
- the names of different parts of gardens.
- date of completion of significant structures.
- comparison with other garden sites.
- landscape features and their significance in a broader geographical region.

The book does not give dimensions of buildings and landscape features. It also lacks information on horticulture and floriculture.

The next important contribution in the history of the subcontinent was made by Aal Muhammad Saleh commonly known as Muhammad Saleh Kamboh by writing two books namely *Aml-i-Salih* or *Shah Jahan Nama* and *Bahar-e-Sukhan.*[12] (The Spring of Prose). Kamboh was brought up by Sheikh Anaiyat Ullah, a prominent literary figure and historian of the time. He, therefore, had access to the court of the king, where he performed his services as the "Diwan" of the province of Lahore.[13]

Muhammad Saleh Kamboh composed an unofficial history of Shah Jahan's entire reign which was highly reliable. He wrote extensively on the day to day affairs of Shah Jahan's reign. His two books are of significant value and deserve special mention. *Aml-e-Saleh* or *Shah Jahan Nama* was written on the traditional model, based upon the description of significant events in chronological order. The history covers the period of 31 years from Shah Jahan's birth to his imprisonment and death in 1076 AH (1665 AD). Each chapter begins with the beginning of the regnal year. The book briefly describes the gardens built during the Shah Jahan period. Gardens built by his ancestors and contributions made by Shah Jahan have also been discussed. The events are recorded realistically, objectively and without apparent bias.

The second book *Bahar-e-Sukhan* or the 'spring of prose' provides a clear understanding of the concept, meaning and form of Mughal gardens. This book for the first time discusses in detail the meaning of the garden environment. It discussed garden-city relationships and the design philosophy of significant sites of architecture and landscape importance. The manuscript has remained neglected by our contemporary historians. The book is comprised of four parts. The third part is the most significant for architects and landscape architectural historians. It describes for the first time in detail the building of Shah Jahanabad, Lahore and Agra. Although the content of *Aml-e-Saleh* has been adequately discussed by modern historian, little attention is given to *Bahar-e-Sukhan.* The book gives a philosophical explanation of various elements of landscape in local context. The text frequently incorporates poetic asides of his own composition.

Saleh Kamboh also wrote quite lengthy narratives about Shalamar Garden. The most interesting aspect of Shalamar as revealed from the text is the quality of its spatial design and physical environment, which is referred to as paradise. Wheeler has reproduced the feeling of Shalamar garden by a court poet in the

following terms.

"When Shah Jahan the King Defender of the Faith, Laid out the Shalamar, in becoming style, I asked the date of the foundation from the doorkeeper of Paradise. He answered saying, "This is the example of the highest Paradise".[14]

The same feeling of the paradise garden has also been expressed by Anaiat Khan as well as Saleh Kamboh, mentioned earlier. What is a paradise? Saleh Kamboh himself has given its explanation in the *Bahar-e-Sukhan*. It is interesting to note that the description of Lahore and Bagh-e-Farah Bakhsh and Faiz Bakhsh was written in the month of Zil Haj 1055 AH. (Feb. 1646) or four years after the completion of Shalamar garden. The description, for the first time, gives information about the concept and meaning of the Mughal garden. It is described in the following words.

"I am paying tribute to the dust of this garden so that I could give a new life to my writings. The beauty of this garden is heavenly. It has given freshness to each and every thing with the help of spring. This freshness has given bounty and liberality to its greenery. One can find fate, happiness and success in its dust. The nightingale has also started scattering melodies there. Its fragrant air takes off the veil from the beauty of the garden".

Briefly describing the nature of the environment the author gave a description of different flowers and their feeling in the garden. Chandar Bhan has also mentioned the freshness of air due to the abundance of flowers and trees in the garden.

"The plant of life is being raised at the bank of its stream because God has nurtured this flowered earth with the mercury water of heaven. The sun flower is being washed with rose water. God has filtered its dust with heavenly sieve. Its beds are full of flowers and give an impression that galaxy of stars are knit together".[15]

"This fragrance seems like the soul of pious people. Its lawns are full of tulip flowers. The gardens of paradise feel depressed to see the greenery of its grassy plots. The nightingale is surprised at this perception. The intoxication of its narcissus has worked in such a way that morning breeze is being distressed in search of this condition. Due to the beauty and quality of its atmosphere, the rose bud has taken off the veil from itself without the help of morning breeze".[16]

"Its plants are themselves rooted in each heart due to their well balanced, symmetrical and rhythmical beauty and elegance. The hyacinth flower has flawless fragrance and its gilly flower has lowered down the value of perfume. God has put a black mole on the face of its tulip to keep it away from an evil eye. The gardener of the wild rose has won the competition of flower arrangement from the galaxies of stars. The breeze of heaven comes to make circuit of its garden before the sun rises. These qualities are so strong that it is justified to be called Farah Bakhsh".[17]

"Its Urdi Bahist (flower) garden is like a bouquet because of its excellent variety of flowers. Due to the freshness of its fragrant atmosphere, its surroundings are like a branch of hyacinth. This fascinating adventure is written perfectly by the order of the magician of the land. This unique garden (Bagh-e-Badey) is unusual and curious, which has become elegance on this earth. The blue sky feels contemptible due to its flawless beauty".[18]

After the description of these flowers, the author describe the water system and the symbolic meaning of its various effects.

"In the center of this earthly paradise a sacred stream is flowing gently with its full elegance and



Fig. 1: Shalamar garden Lahore : Water Channel.

sweetness (Fig. 1). This stream flows with its charming, fascinating and exhilarating nature and passes through the garden by irrigating the flower beds. Its smile is like the smile of the sun. It gives so much freshness that the ringlet of its waves, in order to deceive the bridle of the garden, has tightened the bouquet with the string of the sun in an elegant manner. The moon which is the source of illumination in the dark gets light for its sword from the water of this stream. Its water is beautiful like greenery. The divine mercy is clearly apparent from its existence. The vast stream is just like clouds pouring rain and opens the doors of divine mercy. Its chevron patterns are like an institution of worship where the hearts of believers are enlightened".[19]

One of the significant features of Mughal gardens is that they are mostly used during the evenings rather than day time. That is why the extensive use of lamps and moonlight has special significance in the design of gardens.

"Its fountains are apparent like opportune meanings. Thousands of camphorated lamps are burning face to face to light the sky. The garden has permanent light due to their luster. They have opened their lips in the praise of Almighty Allah".[20]

"This stream, which has a quality of freshness and dampness, has fountains in its surroundings. These fountains always emit beads from their mouth. The vast greenery is like the color of emerald. The abundance of red roses which are blooming there has brought the meaning closer to the reader".[21]

"In the center of this garden extraordinary, curious and tall trees of cypress are decorating the beauty of garden. On one side the cypress trees with their luster have increased its charm in the courtyard, and on the other side fountains with their musical sound have awakened the dead people without the trumpet of Israfil".[22]



Fig. 2: Shalamar garden, Lahore Aiwan in the upper terrace.

"Sometimes tears come out of the eyes of fountain because of the scene of the cypress trees. Sometimes sweet melodies of fountains surprise the cypress trees. It seems as though two deep lovers in this beautiful courtyard are picking the flower of love and relationship. Glory be to Allah! What a fascinating scene is this. The rose is twisting and twining due to the beauty of this scene. Its courtyard is clean from every darkness and impurity like the heart of pious people. Its door is scattering unlimited happiness and love like the door of heaven".[23]

After mentioning the flowers, stream and fountains Saleh Kamboh describes the importance of a pavilion in the yard. The following paragraph shows that the pavilion was once decorated by beautiful fresco painting. Chandar Bhan also supports Saleh Kamboh in the concept that these decorations on buildings depict the image of paradise.

"What a beautiful pavilion is this (Fig. 2). The eye concentrates on its walls portraying the painting of gardens. Its door is like the door of heaven which spreads unlimited happiness. The floral decorations on the walls and ceilings are like the pleasant atmosphere. The pious people feel extremely satisfied with the culmination of water and color. Its coloured pillars become closer to the heart like the beloved. The palace of heaven provides an opportunity to people to see the unlimited beauties of paradise on the earth. Its high pavilion is a place from which the divine light rises every morning. It is like the residence of heaven which is willingly spreading eternal generosity. Its high jharoka is the place of the rising sun and opens the doors of fortune and happiness on the world like the breaking of dawn. We feel proud of its crystal clear tank (Fig. 3). God's blessings are lying in its heart as beads in the hollow of a shell. Generosity has been contained in its nature like sweetness in a cup of sugar candy. The sky has its face enlightened with the reflection of its tank".[24] "In this tank thousands of delicate fish are mingled and composed as suitable lines in a verse".[25]

As mentioned earlier these gardens were designed for use in the evening hours. Therefore the existence of moon and candle light is inevitable and relevant in the physical design.

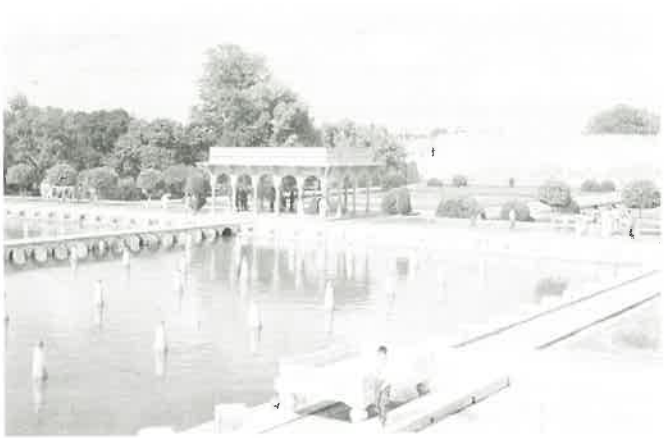


Fig. 3: Shalamar garden, Lahore, Main Tank.

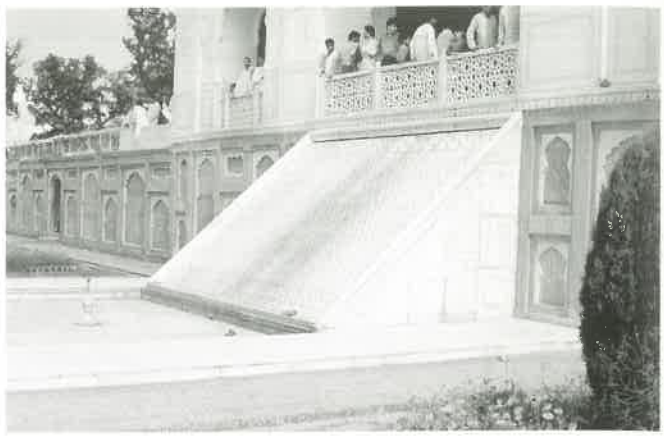


Fig. 5: Shalamar Garden, Lahore : Cascade.

"The moon is keeping an eye on it for light and coolness. Intelligent and enlightened people who are fond of the light of devotion can learn from the clarity of water. The niches can be seen on its sacred bank which have lamps in them. Each lamp is like a divine light which gives the light of leisure to the world, and makes this land a wonder place in the eyes of sky. In flowing water the reflection of lamps looks like the stars are dancing with happiness on the blue sky (Fig. 4). The presence of camphorated lamps on the banks of the ponds seems like thousands of moons are standing in the stream of the sky".[26]

"The *chadar* (chute) under the surface of crystal clear water, along with lighting niches or springs of bounty, are glittering like happy faces (Fig. 5). The lamps are burning face to face, eliminating darkness and bringing clarity like the heart of pious people. These lamps are so much involved in themselves like innocent people they sometimes get lost in a deeper sea of realities. The chute of water and lamps appear to be spreading beads and arches along cascades shining like scholarly people. Especially the night of 21th Zil Haj 1055 AH (Feb. 1646) appears to be a symbol of bounty in this condition."[27]

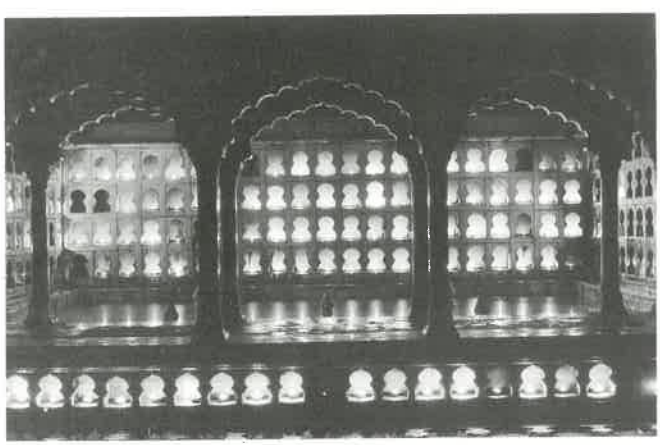


Fig. 4: Shalamar Garden, Lahore : Lamps in Sawan Bhadon
Courtesy: Sajjad Kausar.

The above description is quite useful for understanding the concept and meaning of gardens from a person who had witnessed its construction and seen it soon after its completion. The description thoroughly illustrates the different elements of landscape design and their symbolic meaning. The description of Saleh Kamboh may be understood in the Sufi tradition since he was a Sufi philosopher and historian. It is similar in a way to when one sees a monumental building and appreciates its scale, proportion and inherent qualities of design. In a similar way the Mughal garden may be understood by the sensory qualities of its landscape elements which make up its ambience. To understand the Mughal gardens, there are many levels for acquiring knowledge. In the first stage one can observe landscape elements very carefully, which bring surprises and motivate one to acquire more knowledge. As a result one gets involved in ways that unfold in new dimensions. This stage brings curiousity where one tries to get more and more knowledge, which leads to an ultimate stage of satisfaction. The description given in the *Bahar-e-Sukhan* best represents Saleh Kamboh's profound involvement in understanding the meaning of Mughal gardens.

The last important source of Shah Jahan's reign is the *Chahar Chaman* or Four Gardens by Chandar Bhan Brahman Lahori.[28] This manuscript has also remained unattended by modern historians. It was written between 1057 and 1064 AH, though according to one source it was written around 1070 AH. The book described the culture of important cities and socio-cultural environments of spaces and buildings of cultural importance. The following description of the

gardens of Agra and Lahore best represents the narrative given in the text. In the case of Agra the author wrote:

"Many gardens have developed in the town because of the proximity of the river. The most notable are Bagh-i-Jahanara, Moti Mahal and Bagh-e-Mahtab. There are many tree gardens. The Bagh-e-Nur Manzil belonging to the Badshah is very spacious. It has freshness because of its greenery and fine buildings. It has many pools, tanks, and a canal. There are many qualities and good characteristics of this garden. There is no other garden compared with this. The mausoleum of Fatima Daurani has been completed under the supervision of Mukarmat Khan and Mir Abdul Karim. It is an excellent building of the time. The money spent on it is more than the revenue of one year".[29]

The author has made complimentary remarks for Shalamar Garden Lahore like many other historians mentioned earlier. He has described the city life and important gardens of Lahore in the following words.

"The city of Lahore is a paradise on earth. There are so many evergreen and rose gardens like Bagh-e-Dilkusha, Bagh-e-Dil Aamez, Bagh-e-Namoos ul Aalemeen Begum Saheb, Bagh Mirza Kamran, Bagh-e-Naulakha and many more. The construction of Bagh Faiz Baksh and Farah Bakhsh completed in the recent years in the reign of Sahib-e-Qaran Sani Khuldullah Malik. It has freshness in the air due to the abundance and variety of flowers in a vast area. It has moderate climate, beautiful landscape and good quality buildings. The decorations on buildings depict the image of paradise. Clean flowing water, a pool, large tank and long and wide canal increase its importance. It is far better than the other gardens. If one can see this place he will forget all worries. In spring when flowers blossom, officials and relatives of the king of the time visit this place which increases its importance and significance".[30]

CONCLUSIONS

The above mentioned textual sources provide a useful basis for understanding the design philosophy of Mughal Gardens. Especially the *Bahar-e-Sukhan* and *Chahar Chaman* give a fresh light on traditional culture and its relevance for the three dimensional physical design envisioned by the Mughals. There are several design issues which have not been adequately discussed by our modern historians. It is evident for example that Mughal gardens were highly functional and aesthetically coherent. The gardens are not merely compositions of structures and landscape spaces but also provide a complete environment including light and sound. These concepts can be applied even today for the design of planned landscape environments.

The sources mentioned above vary in terms of style and content. *Badshah Nama* of Lahori provides factual information about gardens. It clearly narrates the layout, planning, and physical forms of spaces and structures along with their measurements. The *Shah Jahan Nama* of Inayat Khan describes visual and aesthetic qualities of garden environments. *Bahar-e-Sukhan* of Muhammad Saleh Kamboh elaborates the philosophical meaning of gardens and their physical environments. It explains the relevence of individual elements and of the whole in its psychological and philosophical context. Finally Chandar Bhan Brahman discusses the socio-cultural dimensions of gardens and culturally significant buildings. It is therefore important that the physical design and meaning of the Mughal gardens be read in conjunction with one another.

The most significant aspect of Mughal Gardens as revealed from 17th century descriptions, especially the *Bahar-e-Sukhan,* is that the built environment remained very closely wedded with the natural environment. The human ambience was always in harmony with nature. Therefore, natural elements such as trees, shrubs, flowers, water, the light of sun and moon, the songs of birds and movements of air pervade the garden environment. Man-made structures were organised in such a way that one felt to be in an idealised natural environment. The built environment captured the harmony which existed within nature. Similarly, man made elements such as *Aiwans,* streams, fountains, walkways and lamps coexisted simultaneously with natural elements. The individual elements formed a whole, and the whole was always subordinate to nature. Therefore, gardens were actually used as a places of enlightenment, meditation, and revelation. They were and still are visited by people from all walks of life to witness their changing color and odour.

The description in these texts tell us that the purpose of horticulture, floriculture, hard landscape, water and light was not just limited to aesthetics, but, the through their elements and the physical qualities one can praise the Creator of all these

creations. The gardens were not only built for recreational purposes but also designed as an environments where wise and intelligent people go and appraise the endless varieties of plant material flowers, birds and appreciate the creation of Allah, the Almighty. In this way they remain close to nature and, thus, give a feeling of satisfaction.

REFERENCES

1. Mirza Jalal Tabatabai and Mirza Amin Qazwini, famous historians of Shah Jahan's court belong to Isfahan and Qazwin respectively. Abdul Hamid Lahori and Muhammad Saleh Kamboh were natives of Lahore. The famous canal engineer Ali Mardan Khan belonged to Qandahar. He dug canals for irrigation of a number of gardens and served in various parts of the Indian subcontinent in this capacity.
2. W. E. Begley, and Z. A. Desai "The Shah Jahan Nama of Inaiyat Khan", Delhi, Oxford University Press, 1990 page vi–xvii. Also M. H. Hosain, "Contemporary historians during the reign of Shah Jahan" *Islamic Culture* No 15, (1941 page 64–79.
3. *Ibid.*, page xvii.
4. Abdul Hameed Lahori was born in Lahore. He got his early education from Abul Faz'l Allami, a famous historian of Akbar's reign. Therefore his prose style is similar to that of his teachers. He used the same idioms and proverbs Abul Faz'l used in his writings. Lahori wrote about the day to day engagements of the emperor and his reign. Two basic subjects were clearly described in the *Badshah Nama*. The first one illustrates the busy life of a Mughal emperor. They remained busy all the time while they were travelling or stationed. Secondly the *Badshah Nama* frequently describes in very eloquent manner the buildings and gardens constructed during the Mughal period. In the case of Lahore, it describes the physical planning of Shalamar garden and its division into different terraces. The author wrote a very elaborate description of its structures and landscape character. He has also described the royal buildings and additions and alterations made in Lahore Fort. In addition, the author has given a detailed account of mosques and *Khanqahs* built in the same period.
5. According to some sources, it was Thatta instead of Patna. The published specimen indicated Patna, but according to the cataloger the word Patna is a typographical error. See Catalogue 7, page 68.
6. Mohammad Tufail, "Naqoosh Lahore Number",Vol. II, Idara Farogh-e-Urdu, Lahore, Page 957–59.
7. Abdul Hamid Lahori, *Badshah Nama* Vol. 1, ed by Molvi Kabir ud Din and Molvi Abdur Rahim, Biblioteca India, page 148-149, Calcutta, 1860–74, 1909–25. Also quoted by Martin Hurlimann, *Delhi, Agra, Fatehpur Sikri* London, Thames and Hudson. page 43.
8. Abdul Hamid Lahori, as quoted in M.Shafi. "The Shalamar Garden of Lahore". *Islamic Culture* No. 1, 1927, (reprint Lahore, Al-Jedda printers) page 514-15. Muhammad Waris received the title of Waris Khan, author of the third volume. It was corrected by Nawab Saad Ullah Khan Allami and Nawab Ata-ul Malk Tuni commonly known as Fazil Khan. Waris Khan was a very intelligent scholar. He was a notable calligrapher and prose writer. He was killed by his student during Aurangzeb reign on 10th Rabi ul Awwal 1090 AH.
9. W. E. Begley, Z. A. Desai,. *ibid.*, page xxiii.
10. *Ibid.*, page 298.
11. *Ibid.*, page 338.
12. Tufail, Mohammad, op.cit, page 967–72.
    Bahar-e Sukhan was written in the 29th regnal year of Shah Jahan and compiled in Shah Jahanabad. There are 224 folios of the book. The folios are numbered instead of page numbers. The manuscript lies in the Punjab Public Library Lahore. It is an excellent literary work of Persian prose. The book is divided into four sections. The first section introduces the book and emperor Shah Jahan. The second section gives the author's own letters addressed to Mughal nobility and high officials such as Aurangzeb, Shah Jahan, Asif Khan, Qalij Khan and Khan-e Dauran. Section three is very important for urban designers and architectural historians. It describes at length for the first time the important architectural landmarks of three major cities of Indian Subcontinent, i.e., Shah Jahanabad, Lahore and Agra. The last and final section deals with the commentary on important writings of Shah Jahan's reign. Owing to its philosophical approach, adequate benefit has not been taken from this important literary work.
13. Muhammad Tufail, op.cit., page 967–72.
14. R. E. M. Wheeler, *Five thousand years of Pakistan* London (Royal India and Pakistan Society 1950 page 87.
15. Muhammad Saleh Kamboh, *Bahar-e-Sukhan* (manuscript No. 876.9 Punjab Public Library Lahore, Folio No. 118.
16. *Ibid.*, folio 119.
17 *Ibid.*, folio 119.
18. *Ibid.*, folio 119.
19. *Ibid.*, folio 119.
20. *Ibid.*, folio 119.
21. *Ibid.*, folio 120.
22. *Ibid.*, folio 120.
23. *Ibid.*, folio 120.
24. *Ibid.*, folio 121.
25. *Ibid.*, folio 121.
26. *Ibid.*, folio 121.
27. *Ibid.*, folio 121.
28. Chandar Bhan Brahman, *Chahar Chaman* edited by Muhammad Rafiq unpublished M.Sc thesis. Punjab University Library Lahore. 1970. Chandar Bhan Brahman was a famous literary figure of Shah Jahan's reign. He was son of Munshi Dharam Das Lahori. He received his early education from Mulla Abdul Karim Lahori. He soon attained a good command over the Persian Language. Chandar Bhan started his professional carrier in Lahore under the service of Mir Abdul Karim, superintendent of works. He also worked under Allami Afzal Khan and Islam Khan. He gained access to Shah Jahan's court through his brother. Shah Jahan appointed him *Waqai-e-Nawis* (reporter of news). He was always proud of this position. He was very frequently attending the royal court and reporting to the emperor the affairs and news of his kingdom. He received awards on a number of occasions including an elephant. He also worked as superintendent at Jahangir's tomb. He also patronized the construction of a tank and garden at Agra. The garden (*Bagh-e-Brahman*) was located on the Agra-Sikandra Road and remained in the custody of Britishers till 1857. It was then sold to a renowned businessman Suraj Bhan. He wrote several books in Persian prose and poetry. The most famous among these were *Manshaat, Diwan* and *Chahar Chaman*. Chahar Chaman was written in simple language mainly during Shah Jahan's reign and completed during Aurangzeb's period.

    There are six copies of this manuscript lying in different libraries. These include one in the India Office Library (MSS No. 2093) written in 1183 AH, two in the British Museum written in 1123 AH and 1149 AH (Ref. Index MSS. Page No. 838 and 935), Cambridge University Library supplement 376. The oldest two among these are lying in Punjab University Library Lahore. These first was written in the 48th year of Aurangzeb's reign (1116 AH) The manuscript has 73 pages. Each page is 8.25 inches by 6 inches and has 15 lines. The second was written on 27 regnal years of the Emperor (1094 AH) These manuscripts were compared and edited by Muhammad Rafiq (Ref TPE II3) Punjab University Library.

    The book is divided into four *chamans* (chapters). The first chaman deals with the short stories describing the events and ceremonies held on different occasions and different places. The second *chaman* is important from a historical and geographical point of view. Here the author described briefly the 22 provinces of Shah Jahan's reign including their important towns, their gardens, royal buildings, forts, havelis of the elite, tombs of emperors and saints, mosques, and mandirs. The third chapter deals with author's own biography while the last chapter deals with the essays related to the realities of life.
29 *Ibid.*, page 84.
30. *Ibid.*, page 88.

SURVEYING SHAHDARA

MICHAEL BRAND
National Gallery of Australia, Canberra

LOCATION AND CONTEXT

Shahdara lies along the western bank of the Ravi river opposite the city of Lahore. It became a site of Mughal architectural and political activity almost as soon as Babur conquered India in 1526. Approximately a year later, Babur's son Mirza Kamran (brother of the second Mughal emperor, Humayun) is known to have constructed a garden in this region somewhere along the banks of the Ravi. However, the first textual reference to the name 'Shahdara' does not appear until the mid-1590s, in a description of a visit by the emperor Akbar in 1589 on his way from Lahore to Kashmir. The exact original extent of Shahdara is difficult to determine – apart from the river to the east, it is not defined or constrained by any physical boundaries. Textual sources from the sixteenth and seventeenth centuries suggest that Shahdara featured many gardens and *serais* built for both imperial and noble patrons. The large number of garden sites at Shahdara is confirmed in British maps of Lahore dating from the 1830s. Regrettably, little has survived of this once luxuriant garden zone.

Shahdara served two purposes in early Mughal Lahore. One was as a recreation zone across the river from the Lahore citadel. The other was as a halting place for the Mughal camp after crossing the Ravi along the road from Lahore towards Peshawar and Kabul to the north-east, and the hunting grounds of Sheikhupura to the west. Between 1627 and 1645, the imperial core of Shahdara experienced an extraordinary transformation with the construction of three royal tombs; those of the fourth Mughal emperor, Jahangir (d. 1627), his brother-in-law, Asif Khan (d. 1641), and his wife, Nur Jahan (d. 1645). Although there was no further imperial garden development at Shahdara after the construction of Nur Jahan's tomb in 1645, the gardens there have continued to play an important role in the life of Lahore.

SIGNIFICANCE OF THE SITE

As the location of some of the earliest Mughal gardens on the Indian subcontinent and, subsequently, of a series of major imperial tombs, Shahdara is a key site for the study of Mughal architecture and landscape design. Along with the fortified palace in Lahore, it also ranks as one of the most important Mughal sites in Pakistan. It is only recently that Shahdara has received the attention it deserves from art historians, archaeologists and conservators. This interest is timely, for the study of the gardens and monuments of Shahdara raises a number of highly significant issues regarding both the history of Lahore and its future development. Among the most important of these are the following:

The Role of Gardens in the Development of Mughal Lahore

The spatial separation between the gardens of Shahdara and the walled city is a distinguishing feature of Lahore's urban development. As an example of the functional differentiation of royal space in Mughal Lahore, especially of that between the zones of politics and pleasure, such a separation sheds light on some of the social divisions within the urban population of Mughal India. The city itself, adjoining the fortified palace, was not considered a fit place for a Mughal emperor. The development of Shahdara also highlights the way in which processional movement linked the Mughal citadel with the surrounding countryside and the great trans-continental land routes.

The use of Landscape in Mughal India

The transformation of Shahdara into a commemorative zone during the second quarter of the seventeenth century is important evidence of the flexibility of landscape usage within Mughal urban

planning. The evolution of Shahdara is a particularly significant example of the power of Mughal garden projects to transform the character of the landscapes in which they were built. The imperial tomb gardens at Shahdara articulate developments in both Mughal social history and theories of kingship, particularly the continuing attempt to construct a Mughal dynastic aura (in this case, closely tied with the commemoration of the bonds of family loyalty).

Mughal Design and Technology

The gardens at Shahdara and the monuments they contain shed new light on the theories that guided Mughal architects and landscape designers, and on the technical practices that allowed them to develop their ideas into concrete form. Of special interest is the way in which the proportions of the individual tomb gardens were continually related to each other at Shahdara as the site was transformed into a funerary complex over a period of almost two decades. While the water system in the Shahdara gardens did not require the same engineering challenges as Shalamar garden on the other side of Lahore (for which Mughal engineers had to construct a 150 kilometer-long canal to bring water from the Himalayan foothills), it provides additional information on Mughal technical mastery over the principles of hydraulic engineering.

The Conservation and Preservation of Mughal Garden Environments

Shahdara is both a model case study for the complex history of conservation practices on the subcontinent and a site in need of urgent attention. Over 180 years have now passed since the first *recorded* restoration work was carried out at Jahangir's tomb (by Sikh officers at the command of Maharaja Ranjit Singh). The first British restoration efforts at Shahdara followed the 1849 annexation of the Punjab by barely two years, and preceded by a decade the establishment of the Archaeological survey of India (ASI) in 1862. Like all other Mughal gardens, those at Shahdara were adversely affected by the ASI's subsequent decision to treat gardens and the monuments they contained as separate entities rather than as single architectural creations. The continuing encroachment of housing around Jahangir's tomb, and the recent disaster at "Kamran's Baradari" (where the construction of a modern recreation area has eradicated almost all traces of the site's historical past), highlight the problems faced by Pakistan's Department of Archaeology and Museums in protecting important cultural sites within a rapidly developing metropolis such as Lahore.

Landscape design in Pakistan

The significance of Mughal landscape design is not restricted to the medieval period or to modern scholarly interests. Mughal gardens continue to influence the spatial structure of Lahore; and it may still be possible to maintain Lahore's reputation as a 'garden city'. The issue raised by the study of the Shahdara gardens are of great relevance to future architectural, landscape and urban design practices in Pakistan. Institutions and organizations such as the University of Engineering and Technology, the National College of Arts and the recently formed Anjuman-i-Mimaran (the Society of Architects) are already playing leading roles in the crucial dialogue between scholars of the Mughal period and practicing architects, landscape designers and urban planners.

HISTORICAL DEVELOPMENTS

The four surviving garden sites at Shahdara are related to historical developments in the years immediately following both the Mughal conquest of northern India in 1526 and the death of the emperor Jahangir a century later in 1627. These are:

Kamran's Baradari

In 1988 a half-ruined pavilion known popularly as 'Kamran's Baradari' was still standing amidst traces of a formal garden on what had become an island in the Ravi river adjacent to the bridge leading from Lahore to Shahdara. Tragically, heavy-handed 'restoration' work during the following years almost entirely destroyed its status as an historical site. This garden would originally have been part of Shahdara on the western banks of the river, but became detached during one of the major changes in the course of the Ravi. If it could be securely identified as the garden constructed by Mirza Kamran in *c.* 1527 this site would be the earliest Mughal garden site in Lahore.

Jahangir's Tomb

Set into a garden previously laid out by his wife, the empress Nur Jahan, Jahangir's tomb (Fig. 1) was constructed on the orders of Shah Jahan after his father's death in Kashmir in late 1627. It took ten

years to complete. The walled tomb garden is entered from the west, through a monumental gateway in the eastern wall of a forecourt (*chauk-i-jilau khana*) that also featured external gates on the north and south and a mosque on the west. At the center of the approximately 500 meters square garden (600 *gaz* square) is the stone-clad tomb itself, surmounted at each corner by a minaret reaching heights of approximately 30 meters. Inside, Jahangir's sarcophagus is decorated with vegetal *pietra dura* designs and the 99 names of God. Water for the tomb garden was lifted from eight large wells located immediately outside the enclosure into aqueducts running along the tops of the walls, and then into terracotta pipes feeding various fountains and tanks.



Fig. 1: Jahangir's Tomb.

Asaf Khan's Tomb

Asaf Khan was Jahangir's brother-in-law and the Governor of the Punjab (of which Lahore was the provincial capital) at the time of the emperor's death in 1627. When Asaf Khan died in 1641, he held the rank of Commander-in-Chief under the new emperor Shah Jahan, who ordered his burial in a garden tomb immediately to the west of the forecourt of Jahangir's tomb. The extent of Asaf Khan's square tomb garden (Fig. 2) was set by the forecourt's 300 *gaz*-long western wall. It is therefore, exactly one quarter of size of Jahangir's tomb garden, but the ratio of the size of the tomb platform to the size of the surrounding garden is the same in both cases (1 : 36). The walls of his octagonal tomb structure were once covered by glazed tiles, and the dome by white marble. The unusual profile of the dome is most likely the result of later repairs, with the upper portion replaced by new brickwork at a 1 : 1 slope.

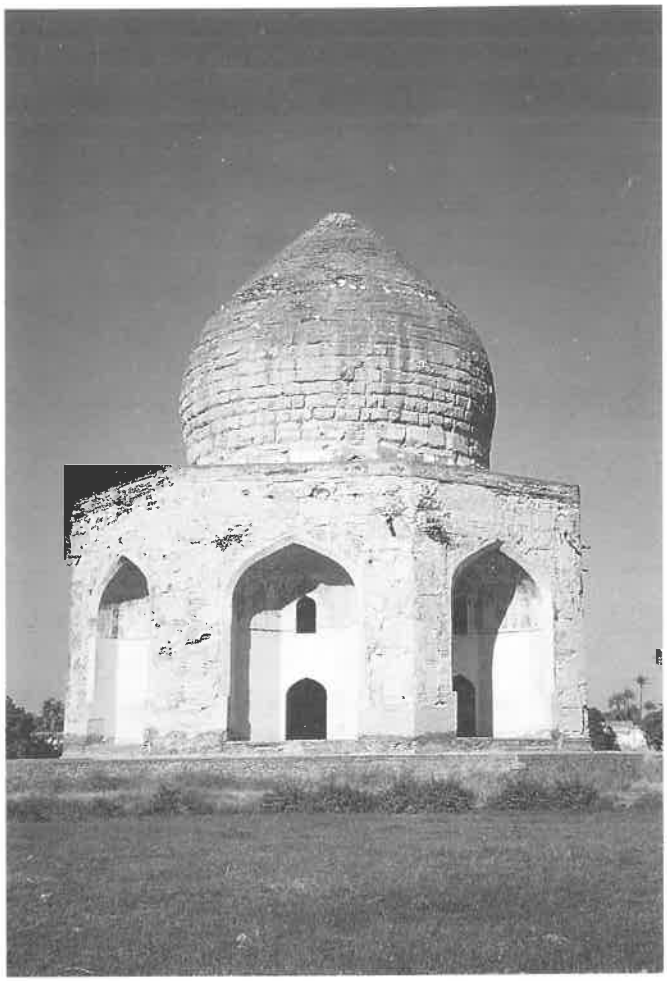


Fig. 2: Asaf Khan's Tomb.

Nur Jahan's Tomb

Jahangir's widow, Nur Jahan, died in 1645 and was buried to the west of her brother, Asaf Khan, in a tomb (Fig. 3) she is said to have commissioned during her lifetime. The tomb structure has since been stripped of its stone cladding and whatever had survived of the garden was irreparably damaged when the British cut a railway line late last century between the tombs of the two siblings. A new garden (smaller than the original one, which



Fig. 3: Nur Jahan's Tomb.

was probably 300 *gaz* square like that of Asaf Khan's tomb) was created by the Archaeological Survey of India in 1911. More recently, some of the walls of the central tomb structure have been re-surfaced with red sandstone.

DOCUMENTATION PROBLEMS AND FINDINGS

Over a period of five years between 1988 and 1993 the Smithsonian Institution's Mughal Garden Research Project studied the evolving relationship between urbanism and garden design in medieval Lahore. Research was carried out under the auspices of the Smithsonian's Arthur M. Sackler Gallery in collaboration with the Pakistan Department of Archaeology and Museums. At the broadest regional level, the Project focused on the central Indus Valley basin and, more particularly, on the stretch of the ancient road between Lahore in the Punjab and Peshawar in Pakistan's North West Frontier Province. On the urban level the Project concentrated on the city of Lahore and the relationship between the fort and suburban garden complexes such as Shahdara and Shalamar. Finally, Shahdara itself was research and documented as one of a number of individual sites in the region.

Research at Shahdara proceeded in two directions. The first involved an intense program of site documentation carried out in collaboration with Lahore's University of Engineering and Technology. the overall siting of each garden was surveyed and documented along with the internal spatial arrangements of individual design elements such as the buildings, water works and plantings contained within the garden walls. The second avenue of research involved the analysis of textual sources relating to the Shahdara gardens. These included contemporary Mughal texts, the accounts of European travellers from the early seventeenth century onwards, documents housed in the Punjab Archives in Lahore (dating almost exclusively to the post-Mughal period and, in particular, the early British administration of Lahore and the Punjab) and Archaeological Survey of India reports on conservation work carried out at the sites. The Project also pursued a less orthodox investigation into the local traditions that connect Shahdara with other sites in Lahore via a network of legendary tunnels. It must be noted that the study of any Mughal garden site is severely hampered by the paucity of primary evidence; for example, no contemporary plans (or indeed any other type of graphic evidence) relating to a Mughal garden has yet been uncovered.

FUTURE RESEARCH NEEDS

Among important issues concerning the history and development of Shahdara that deserve further investigation (primary evidence permitting) are the following:

'Kamran's Baradari'

Excavations are required to help determine the origin of the so-called Kamran's Baradari. Now isolated on an island in the middle of the Ravi between Lahore and Shahdara, this pavilion has been popularly connected with Mirza Kamran for at least a century, but no primary evidence exists to confirm this relationship. Traces of a garden surveyed by the Project before they were covered over during the post-1988 reconstruction work appear to have been laid out on a grid based on the *gaz-i-ilahi* unit of measurement, as modified by Akbar in 1586-87. Furthermore, the form of the arches in the pavilion owes more to the mid-seventeenth century than the early-sixteenth. Neither of these points, however, rules out the possibility that 'Kamran's Baradari' might indeed be located on the *site* of Mirza Kamran's first garden.

Patronage and Design

While the emperor Shah Jahan ordered the construction of the tombs of his father, Jahangir, and his Commander-in-Chief, Asaf Khan, it is uncertain who supervised their design. Nur Jahan is said to have commissioned the construction of her own tomb. Did the out-of-favour former empress perhaps also play an important role in the construction of the two earlier tombs, although the official Shah Jahani sources do not credit her with any input? Lacking other evidence, further mathematical analysis of the various geometric patterns and architectural features incorporated within the Shahdara complex might provide further important insights into the relationship between the designs of the tombs.

Land Ownership

While it is known that Jahangir's tomb was constructed in a well-established garden *zone*, it is not known whether it was built within an actual established garden (and, if so, who owned it). According to one relatively ambiguous Shah Jahani source, Jahangir was buried in a garden laid out by Nur

Jahan. The name of the garden is not given. A later claim that the emperor was buried in a 'Dilkusha' garden is supported by primary evidence. An Akbari source mentions a Dilamiz garden having been built shortly before 1595, and an Aurangzeb period source later in the seventeenth century discusses a major reception at a Dilkusha garden in Shahdara, without describing it as the site of Jahangir's tomb. While the name of Nur Jahan's garden might not be terribly important, Jahangir's burial raises interesting questions about sub-imperial land ownership. It is not difficult to imagine that Nur Jahan and Asaf Khan could have controlled considerable land holdings in and around Shahdara, given their family's long political connections with the Punjab (both Asaf Khan and his father, I'timad ad-Dawla, served as governors of the province). Unfortunately, no concrete documentary evidence to support this hypothesis has yet been found.

The Forecourt of Jahangir's Tomb

Further excavations are also warranted in the structure described by a Shah Jahani source as the *chauki-i jilau khana* or ceremonial forecourt of Jahangir's tomb. This rectangular enclosure is still known popularly as the 'Akbari serai' even though there is no evidence to suggest that it either functioned primarily as a *serai* or that it pre-dates the construction of Jahangir's tomb. The mosque on the west of the enclosure is curiously anachronistic in style, and somewhat crudely constructed, but is obviously an entirely appropriate component of an imperial tomb complex. An 1867 map of Lahore shows the main road out of Shahdara passing right through the forecourt's north and south gates.

Garden Plantings at Shahdara

As a consequence of the long history of conservation and restoration at Shahdara, the nature of the original plantings of these gardens remains elusive. Many layers of destruction, re-interpretation and reconstruction await further excavation. No contemporary lists or descriptions of planting details have survived, and there is no contemporary graphic evidence to assist in the formation of specific hypotheses for specific sites. Ironically, it would appear that it is the very question of the identity of trees and plants that will remain one of the hardest to answer with respect to this major Mughal garden site.

The Preservation of Shahdara

Perhaps the most important question for future discussion is how the role of the Pakistan Department of Archaeology in protecting and researching Shahdara can best be balanced with the roles of other authorities, such as the Lahore Development Authority (LDA) and the provincial government own Department of Archaeology. What sort of Shahdara will survive into future? Its status as recreational zone appears to be secure. What remains to be seen is how appropriate any future developments are to Shahdara's earlier history.

EARLY CHRONOLOGY OF SHAHDARA

c. 1527	Mirza Kamran (son of Babur and brother of the future emperor Humayun) lays out a garden in Lahore, apparently on the banks of the Ravi.
1589	Akbar makes his first visit to Kashmir, after departing Lahore and crossing the Ravi river he encamps first at the *serai* of Madhu Singh (whereabouts unknown) and then at Shahdara.
1591–95	While resident in Lahore, Akbar makes recorded visits to gardens across the Ravi river named as Mirza Kamran's garden (1591), the garden of Ram Das (1592), Dilamiz garden and Rambari (1595).
1606	Jahangir takes up residence in Mirza Kamran's garden in Lahore while putting down the rebellion of his son, Khusrau.
1627	Jahangir dies in Kashmir and his corpse is brought to Lahore for burial; construction of his tomb begins at Shahdara.
1637	Work completed on Jahangir's tomb at Shahdara in Lahore
1641	Asaf Khan dies and is buried at Shahdara to the west of the forecourt in front of Jahangir's tomb.
1645	Nur Jahan dies and is buried at Shahdara to the west of Asaf Khan's tomb.
1814	Ranjit Singh orders the repair of Jahangir's tomb and its garden.
1839	Lt. William Barr visits Shahdara, from his description it is evident that the grounds of the so-called Kamran's baradari (not connected with Kamran's name by Barr) were still attached to the far bank of the Ravi (i.e. not yet an island).
1847	The 'estate of Shahdara' resumed from local ownership by Colonel (later Sir) Henry Lawrence.
c. 1851	Jahangir's tomb 'partially restored' by Major Macgregor on behalf of the Board of Administration.
1854	Lieutenant-Colonel Robert Napier (Civil Engineer to the Board of Administration) obtains funding to divert the flood-prone Ravi river away from Jahangir's tomb and the 'Baradari at the Bridge of Boats' (by now known as 'Kamran's Baradari').
1905-06	Earthquake damages minarets of Jahangir's tomb.

1906-07	Skylight removed from the roof of Jahangir's tomb.
1911-12	Garden at Nur Jahan's tomb laid out by the Archaeological Survey of India; paths and causeways at Jahangir's tomb repaired.
1924	Palm groves removed from the garden at Asaf Khan's tomb.
1931-32	Pathways at Shahdara repaved.

BIBLIOGRAPHY

General

1. Aijazuddin, F. S. *Lahore Illustrated Views of the 19th Century*, Lahore: Vanguard Books, 1991.
2. Archaeological Survey of India. *Annual Reports* (1906/07, pt. 2; 1907/08, pt, 2; 1911/12, pt, 1; 1925/26).
3. Barr, William, *Journal of A March from Delhi to Peshawar with the Mission of Col. Wade, including Travels in the Punjab, A Visit to the City of Lahore, and a Narrative of Operations in the Khyber Pass in 1939*. London: James Madden & Co., 1844.
4. Brand, Michael. 'Orthodoxy, Innovation and Revival: Considerations of the Past in Imperial Mughal Tomb Architecture'. *Muqarnas*, vol. 10 (1993), pp. 323–34.
5. Brand, Michael. 'The Shahdara Gardens of Lahore'. In James L. Wescoat, Jr and Joachim Wolschke-Bulmahn (eds). *Mughal Gardens: Sources, Representations, and Prospects*. Washington, D. C: Dumbarton Oaks, forthcoming 1996.
6. Cole, Henry Hardy (ed). *Tomb of Jahangir at Shahdara near Lahore*. Calcutta: 1884.
7. Mahmud, Muhammad Khalid. 'The Mausoleum of Emperor Jahangir', *Arts of Asia*, vol. 13, no. 1 (1983), pp. 57–66.
8. *Master Plan for the Restoration and Preservation of Kamran's Baradari, Lahore*. Lahore: Department of Archaeology, Ministry of Culture, Tourism and Sports, Government of Pakistan, 1987.
9. Mughal, Muhammad Rafique. *Master Plan of the Tombs of Jahangir and Asif Khan and Akbari Sarai, Lahore (Preservation and Restoration)*. Karachi, Department of Archaeology, Ministry of Culture, Tourism and Sports, Government of Pakistan, 1986.
10. National Engineering Service Pakistan Ltd., (NESPAK). *Planning and Design Report on Protection of Kamran's Baradari*; Lahore: Sportsmen's National Defence Club, Lahore, 1975.
11. Rehmani, F. M. Anjum 'History and Architecture of Monuments at Shahdara'. M. A. Thesis, Department of History, Punjab University, Lahore.
12. Riazul Islam. *A Calendar of Documents on Indo-Persian Relations (1500–1750)*. Karachi: Institute of Central and West Asian Studies, 1982.
13. Thompson, J. P. 'The Tomb of Jahangir'. *Journal of the Punjab Historical Society*, vol. 1 (1911), pp. 12-13.
14. Thornton, T. H. *A Brief Account of the History and Antiquities of Lahore*, Lahore: Government Civil Secretariat Press, 1873.
15. Wescoat, James L. Jr, Michael Brand and M. Naeem Mir, 'Gardens, Roads and Legendary Tunnels: the Underground Memory of Mughal Lahore'. *Journal of Historical Geography*. vol. 17, no. 1 (1991), 1–17.
16. Wescoat, James L. Jr, Michael Brand and M. Naeem Mir, 'The Shahdara Gardens of Lahore" Site Documentation and Spatial Analysis". *Pakistan Archaeology*, no. 25, (1990), pp. 333–66.

Archival Material

1. Chaudhry, Nazir Ahmed (ed.) *Calendar of Persian Correspondence* vol. 1 Lahore. Superintendent, Government Printing, Punjab, 1967.
2. *Press List of Old Records in the Punjab Secretariat, Vol. IX: Lahore Agency and Residency, 1846-47*. Lahore: Superintendent, Government Printing, Punjab, 1915.
3. *Press List of Old Records in the Punjab Secretariat, Vol. XII: Board of Administration, Punjab 5th April 1849 to 10th February 1853: General Department*. Lahore: Superintendent, Government Printing, Punjab 1920.
4. *Press List of Old Records in the Punjab Secretariat, Vol. XV: Chief Commissioners Administration, Punjab, from 11th February 1853 to 31st December 1858; General Department*. Lahore: Superintendent, Government Printing, Punjab 1923.
5. *Press List of Old Records in the Punjab Civil Secretariat, Vol. XVIII: Board of Administration, Punjab, from 1859 to 1863, General Department* Lahore: Superintendent, Government Printing, Punjab, 1926.
6. *Press List of Old Records in the Punjab Civil Secretariat, Vol. XIX: Board of Administration, Punjab, from 1864 to 1868, General Department* Lahore: Superintendent, Government Printing, Punjab, 1927.
7. *Punjab Government Records Vol. III: Political Diaries of the Agent to the Governor-General, North-West Frontier and Resident at Lahore: From Ist January 1847 to 4th March 1848*. Allahabad: Pioneer Press, 1909.
8. Singh, Ganda (ed.). *The Punjab in 1839-40: Selections from the Punjab Akhbars, Punjab Intelligence, etc. preserved in the National Archives of India, New Delhi* Amritsar and Patiala: Sikh History Society, 1952.

CONSERVATION OF LAHORE FORT GARDENS

MASOOD-UL-HASSAN KHOKHAR
Pakistan Department of Archaeology and Museums

Babur, the founder of the Mughal dynasty in India, was fond of gardens and natural beauty. The garden *Chahar Bagh* (four-fold garden) or *Bagh-i-Hasht Bihisht* (garden of eight paradises) was laid out by him at Agra.[1] This pattern of garden design remained in practice during the Mughal rule. The Mughal Emperors Akbar, Jahangir, and Shah Jahan were not only the founders of the cities but were also architects (Shah Jahan) and recognized naturalists and horticulturists (Jahangir). The palaces built by the Mughals at Delhi, Agra and Lahore were full of gardens. Sylvia Crowe has quoted Manucci who wrote, "These palaces are full of gardens with running water which flows in channels into reservoirs of stone, jasper and marble. In all the rooms and halls of these palaces there are ordinarily fountains or reservoirs of the same stone of proportionate size. In the gardens of these palaces there are always flowers according to the season. There are no large fruit trees of any sort, in order not to hinder the delight of the open view. In these palaces are seats and private rooms, some of which are in the midst of the running water. In the water are many fish for delight".[2] Lahore Fort is one of these palaces (Fig. 1). Its construction during the Mughal period was started by Akbar (1566 A.D.). He built the Daulat Khana-e-Khas-o-Aam, to which a hall of forty pillars was added by Shah Jahan in 1631 A.D. (Fig. 2). The construction of buildings continued in the time of Jahangir who built a palace in 1617-18 including Jahangir's quadrangle (Fig. 3). Shah Jahan built the Shah Burj (1633), Diwan-e-Khas (1645), Khilwat Khana (1633 A.D.), Paien Bagh (Fig. 4). Hammams and Khawbgah; and lastly Aurangzeb added the massive Alamgiri Gate (1673-74 A.D.).

As already noted, all Mughal palaces were beau-

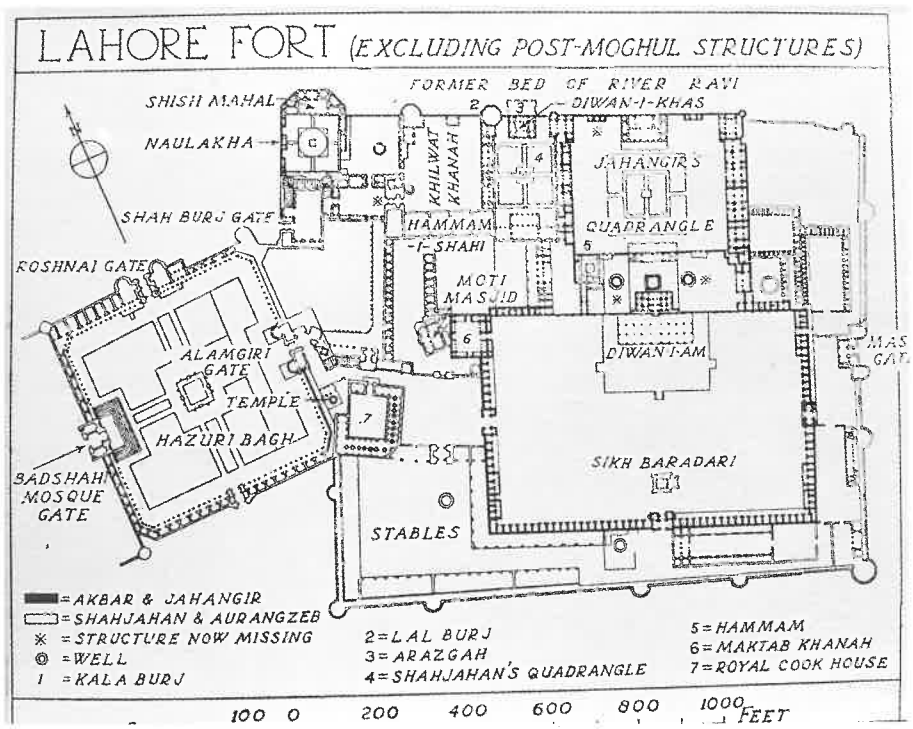


Fig. 1: Map of Lahore Fort.

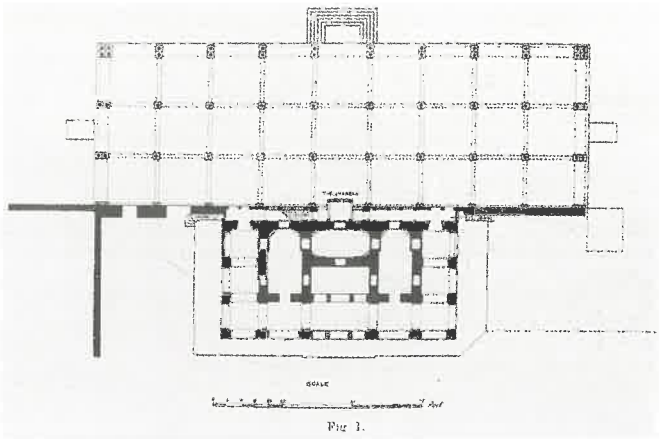


Fig. 2: Lahore Fort : Plan of Jharoka Daulat Khana Khas-o-Amm.

tified with gardens. Lahore Fort, which has been much changed by time, also had gardens. In the present fort there are gardens in front of the Diwan-e-Aam, in Jahangir's quadrangle, in front of the Shah Jahani Khawabgah, and Paien Bagh. But on the map of the Lahore Fort only two gardens, i.e. Jahangir's quadrangle and Paien Bagh, are recognizable. In this paper efforts have been made to examine these gardens in historic perspective and also their conservation and restoration.

The author starts from the oldest building of the fort, i.e. the Daulat Khana-e-Khas-o-Aam built by Akbar (Fig. 2). There is a huge quadrangle in front of the building measuring 730 feet by 460 feet. There were cells on the east, south and west sides with gates for entrance. The use of the courtyard suggested by Sanderson is that the viewing of the troops and elephants was done by the Emperor.[3] Traces of fountains of the Sikh period and a large tank were revealed along with ruined *hammams* and other structures when the military vacated the fort in 1924 and the Archaeological Survey of India took operations in hand to lay out the archaeological area of the fort in its original shape. In this way the courtyard of



Fig. 3: Lahore Fort : Jahangir quadrangle Lahore Fort.

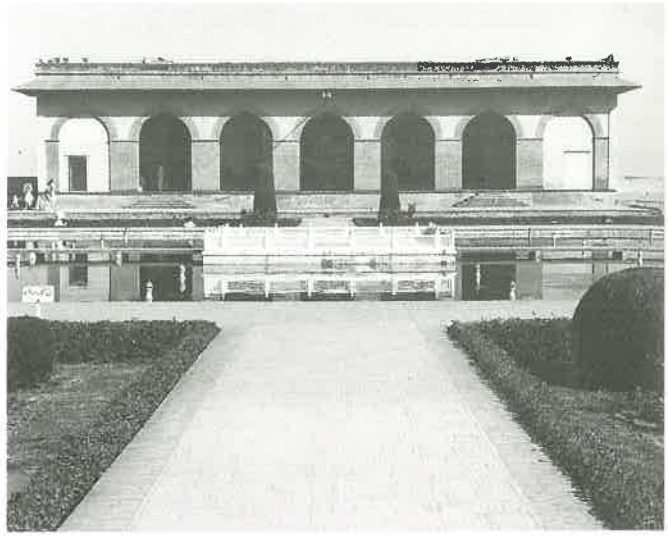


Fig. 4: Lahore Fort: Jahangir's quadrangle.

Diwan-e-Aam was cleared of modern buildings. Plans were made to arrange that the Diwan-e-Aam might stand in the midst of spacious lawns and thus become suitable for darbars and similar official functions.[4] This scheme materialized in 1929-30. To convert this area into gardens, estimates were prepared for raising the back and front walls of the ruined compartments surrounding the Diwan-e-Aam, for leveling and dressing the whole area of this enclosure, for trussing, and for making pathways in the courtyard and steps up to the level of the platform in front of the Diwan-e-Aam.[5] In this way the gardens came into existence which are now maintained by the Department of Archaeology. Since no garden of Mughal period was existing here, we can not say that it was conserved but rather than a lay out of a garden was made in the Mughal style.

The successor and son of Akbar, Jahangir, was fond of natural beauty and had a love of horticultural activities. He built a palace in the fort in 1617-18 A.D. Shah Jahan as a prince visited this palace on 30th Muharram A.H. 1029/12th October, 1619 A.D. In his *Tuzuk* Jahangir gave a description of this palace and the garden (Fig. 3 & 4). He wrote:

> On Monday the ninth of the month of Azar of the Ilahi era, corresponding with the 5th of Muharram, 1030 A.H. (September 6, 1620 A.D), I rode from the garden of Momin (on the Ravi) on an elephant called Indra, and, scattering money (as alms) went in the direction of the city. After the lapse of three pahars and two gharis (i.e. towards evening) of that day I entered the palace in an auspicious and approved hour, and found a joyful and blessed lodging in the buildings recently completed un-

der the superintendence of Ma'mur Khan. Without ceremony I may say that these are delightful buildings and charming abodes, extremely fine and faultless, and painted and sculptured, and embellished by the labour of rare masters. The smiling, green gardens with various kinds of flowers, and sweet scents are eye-captivating.

From head to foot how sweet,
turn where I please
Soft glances at my heart cry, 'Take the case,

In short, this building cost seven lacs of rupees which is equal to twenty three thousand tumans as current in Iran".[6]

The entrance of this palace, which is still existing, is now known as Makatib Khan. On the top of the entrance gate an inscription is fixed which reads, "In the twelfth year of blessed accession of His Imperial Majesty, the shadow of God, a Soloman in dignity, Kayomark in state, an Alexander in arms, the asylum of the caliphate, the Emperor Nur-ad-Din Jahangir, the son of the Emperor Jalaluddin Ghazi, corresponding with A.H 1027 (1617-18 A.D.) the building of this auspicious palace was completed under the superintendence of his most humble disciple and slave the devoted servant Mamur Khan."

The location of this palace is now difficult to determine. However, from the above passage it can perhaps be concluded that the so-called Jahangir's quadrangle is correctly ascribed to him. In this quadrangle was a garden which is also marked on the old map available in the Director's Office. Ebba Koch has also stated that this palace had undergone much alteration, but the greater part of the construction between Akbar's Diwan-e-Aam courtyard and the river front dates from Jahangir's time. The location of Jahangir's quadrangle is exactly the same. (She also designates it as the main Zanana). If it is of Jahangir's time, then the garden also belongs to this period[7] (Fig. 5).

The existence of this garden during the Sikh period is testified by the description of the German traveler Captain Leopold Von Orlich who along with his companions were invited to an evening feast in the Lahore palace on the 9th January, 1843 during the short reign of Sher Singh. The garden court where this fairy scene was laid was undoubtedly the quadrangle of Jahangir, as is evident from both its position north of the big quadrangle of the Diwan-e-Aam and from the mention of the square marble reservoir with numerous fountains.

They were escorted from the Hazuri Bagh to



Fig. 5: Lahore Fort: Paien Bagh.

Jahangir's quadrangle. He writes that a fairy scene burst upon their view. A square marble reservoir, containing numerous fountains in the center of which stood a colossal silver peacock with outspread tail and surrounded by parterres of the choicest flowers, formed the refrigeratory.[8] The British perhaps on this authority paid special attention to Jahangir's quadrangle. The quadrangle measures 375 feet by 246 feet. There were many cook houses in it which were demolished in 1925-26. The area was partially excavated, which revealed a square tank with 32 fountains in the center of an elaborate system of pathways, which divided the area into a series of garden plots. The whole area was completely excavated and all features of the garden were exposed.

Repairs of the floor and side walls of the tank were done and re-plastered. The red sandstone causeways approaching the central Mehtabi on the east and west were rebuilt on the evidence found during the excavations. The heads of the 32 fountains which had disappeared were restored. These fountains, including the fountain in front of Bari Khawabgah, were connected with new pipelines under heavy pressure from the reservoir which was placed 25 feet above the ground. Therefore, they were working with more pressure than in the former days.[9]

The son and successor of Jahangir, Shah Jahan, was more interested in architecture. He remodeled and demolished many of Jahangir's buildings and ordered the building of the Shah Burj under the superintendence of Asif Khan. The Shah Burj was a complex of buildings which included a gateway, Shish Mahal, the Paien Bagh etc. The Paien Bagh was an adjacent garden for the royal harem residing in the Shish Mahal. This small garden was

meant for the royal ladies to enjoy and walk in. The garden was enclosed by corridors on all sides. On the north side, the corridor is double to indicate the connection of the Paien Bagh with the Khilwat Khana. In the center are a brick platform and water tank with fountain. On either side were smaller water tanks enclosed by a red sand stone railing. Now these have been turned into grassy plots and the railing is vanished. The four plots on each side are 24 feet square which are intersected by a brick on edge pavement 7'–9" wide. There are three fountains, one in the center of the platform, and one each on its either side.

From its present position, it may be noticed that (except for the corridor) no major damage was done to the garden during the Sikh and British periods. The set up of the garden is intact. The fountains were, however, restored by the Department of Archaeology and Museums at the time of the Islamic Summit held in February 1974. The small orange trees were also planted to revive its past glory.

To sum up it may be stated that except for the Jahangir's quadrangle and the Paien Bagh, no traces of other gardens were found by the British who tried to conserve the whole fort on the original lay out between the years 1924-25 to 1929-30.

A question was put by a freelance art historian living in London named Parveen Momin whether the gardens of the Mughals had grassy lawns or whether this was an innovation of the British? The author of this paper searched the records and found that the latter view seems to be correct. Dr. Dar in his book, *Historical Gardens of Lahore* also ascribes the lay out of the gardens of Lahore Fort to Sir John Marshall.[10] These examples indicate the complex relations between garden conservation and "reconstruction" in the Lahore Fort during the 20th century.

NOTES AND REFERENCES

1. Ebba Koch, *Mughal Architecture* (Munich: Prestel-verlag, 1991), p. 35.
2. Sylvia Crowe et.al, *The Gardens of Mughal India. A History and Guide* (London: Thames and Hudson, 1972), pp. 153–155.
3. Gordon Sanderson, *Annual Report of Archaeological Survey of India 1909* (Calcutta: Government of India Central Publication Branch 1914), p. 33.
4. *Annual Report of Archaeological Survey of India, 1924-25*, ed. J. F Blakiston, (Calcutta, Government of India, Central Publication Branch, 1927), pp. 15-16.
5. *Ibid.*, 1929-30, p. 21.
6. M. Baqir *Lahore Past and Present.* (Lahore: The Punjabi Adabi Board, 1984) pp. 366-67; cf. *Tuzuk-i-Jahangiri*, p. 318.
7. Ebba Koch, *Mughal Architecture*, (Munich, Prestel-verlag, 1991) p. 84.
8. L. Von Orlich, *Travels in India including Sind and Punjab.* Tr. from the German. (London, 1845), Vol. I, p. 223.
9. *Annual Report of Archaeological Survey of India 1927-28*, (Calcutta: Government of India, *Central Publication* Branch, 1927-28) p. 16.
10. Saifur Rehman Dar, *Historical Gardens of Lahore* (Lahore. Aziz Publishers, 1982), p. 8.

SHALAMAR GARDEN, LAHORE

SAJJAD KAUSAR
National College of Arts, Lahore, Pakistan

This chapter explores the history of additions, alterations, conservation and restoration, of Shalamar Garden, Lahore after its construction in 1641, and upto 1993. Peace and stability which is vital for the development of any garden tradition, prevailed in many parts of the subcontinent during the 17th century. During this stable period of Mughal rule that lasted from 1526 to 1707 the province of Punjab thrived in general. Educational institutes were opened in various corners of Punjab, and educated people were given handsome rewards and grants, and with this patronage many philosophers and thinkers of high rank were produced during this period. Architectural and landscape traditions flourished.

It is in this perfect setting that Shalamar Garden, Lahore was conceived as a project by Ali Mardan Khan in 1641, the Persian governor of Punjab, and Shahjahan granted the permission to construct it. Shalamar garden is considered as one of Shahjahan's finest achievements after the Taj Mahal, and it is indeed a landmark in the history of Mughal garden architecture. In the opinion of many historians Shalamar Garden, Lahore is one of the most elegant achievements of Mughal culture at its peak. By the time Shalamar garden was constructed, Shahjahan had virtually 115 years of Mughal garden architecture history behind him. In a remarkably short period of one year 5 months and 4 days, Shalamar was constructed under the supervision of Khalil Ullah Khan.

Alterations during the Mughal Period

One of the earliest visitors of the garden to comment on its conservation needs was prince Aurangzeb who visited the garden nine years after its construction. In a letter addressed to Shahjahan, he described his impressions of the newly constructed garden in following manner.

> Walking in the garden was an enjoyable experience. I saw a recently constructed building and the pond. The truth is that it is a delightful place. The place would become a unique experience if Farasat Khan building should be removed and certain changes should be accommodated in the Aiwan in front. I am quite confident that after seeing the place, you will also suggest the same changes.[1]

Shalamar is unique for combining all the typical elements of the Mughal pleasure garden in a very elegant manner. *Chini Khanas* or niches in the walls, where flowers were kept during the daytime, which were replaced by oil lamps at night, and in front of which water was made to fall, was a fascinating feature of Mughal gardens. At Shalamar they were placed at a very commanding position between the open pavilions known as Sawan Bhadon, and they can still be seen.

According to the court historian Abdul Hamid there were similar *Chini Khanas* present within the central open pavilion–the Aiwan (Fig. 1). Removed within two decades of Shalamar's construction, this was a major alteration. A new floor was introduced where the *Chini Khanas* had existed and a *chadar* or water chute delicately carved in white marble with black stone inlay was introduced in front of open pavilion (Aiwan).[2] Zeb-un-Nisa, the eldest daughter of Aurangzeb, was a renowned poetess. Addressing the *chadar* under discussion, she composed the following memorable quatrain ex-tempore:

> Oh waterfall! for whose sake art thou weeping?
> In whose sorrowful recollection hast thou wrinkled thy brows?. What pain was it that impelled thee like myself the whole night. To strike thy head against stone and to shed tears?

At the end of the seventeenth century the garden

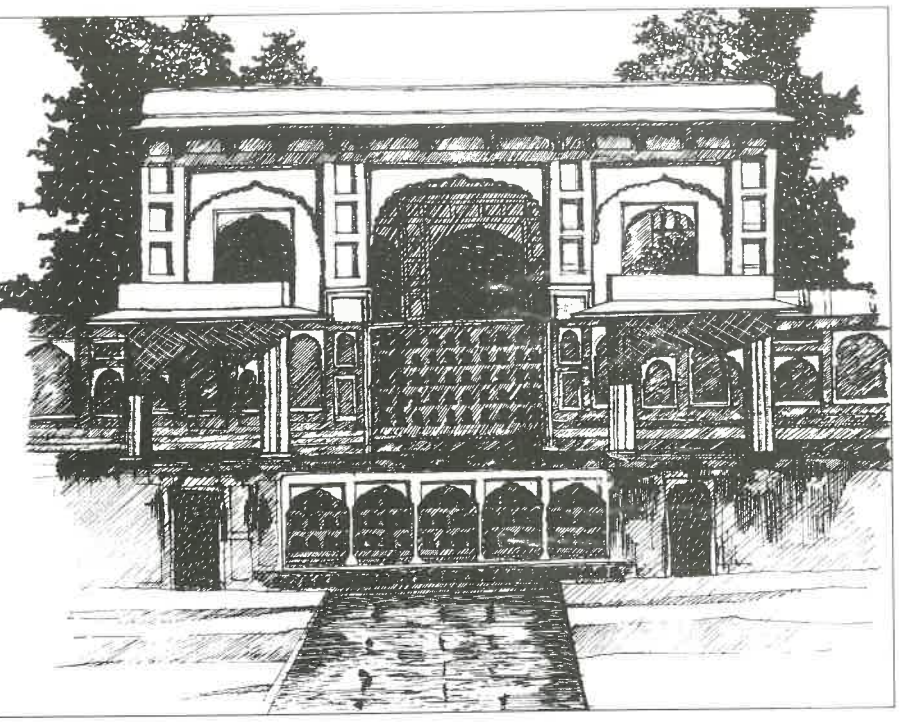


Fig. 1: The Chini Khana (a reconstruction drawing).

vas still in full bloom, as observed by Sujan Rai, one f the contemporaries of Aurangzeb.[3]

Alterations during the 18th and early 19th enturies

Aurangzeb died in 1707, and stable Mughal rule 1526–1707) which had lasted for almost two centuies was finally over. Anarchy spread all over the ubcontinent in the eighteenth century. Mughal garlens became camping grounds for the incoming rmies. Nadir Shah, a Persian, conquered Delhi in 739, staying at Shalamar on the way. Similarly, Ahmad Shah Durrani, an officer in Nadir Shah's rmy, invaded the subcontinent many times in the ighteenth century. The garden suffered much durng this period but the worst to befall it was when war was fought in its vicinity between the local uler Muin-ul-Mulk and Ahmed Shah Durrani. The destruction of the landscape is well narrated by Ganda Singh.

> The neighbourhood of Lahore was then full of beautiful gardens and orchards, reminding them of the old grandeur of the capital, but they were all cut down for the purpose of entrenchments..... and green gardens were converted into dry and dusty lands, studded with trenches all over.[4]

By the mid-eighteenth century, the Sikhs, who were by now an organized force, became the new rulers of Punjab. The buildings at Shalamar were robbed of their decorative works by the Sikhs during the troubled times of Ahmed Shah Durrani and later by the Sikh rulers of the eighteenth century. A costly pavilion of a gate was removed by Lahna Singh, one of the local Sikh rulers who sold it to stone polishers in the city.[5] In 1838, W. G. Osborne, a British officer, who visited Lahore during Ranjeet Singh's time (1799–1838), described the condition of late eighteenth century Shalamar:

> Faqueer Uzeezooden tells me that within his recollection they were so overgrown with jungle as to have become the haunts of tigers and wild beasts.[6]

Prior to the construction of the Shalamar Garden, wells were generally the only source of water supply. To Shahjahan the idea of constructing Shalamar garden came later than the Shah Nahr Canal, which was built earlier by Ali Mardan Khan, who had services of an eminent hydraulic engineer Mulla Allah ul Mulk Tuni, mainly to irrigate various gardens around the city of Lahore.[7] The device of supplying water through a canal at Shalamar was altogether an innovation for the plains. Only in the hilly areas of Kashmir was water available in such abundance.

Water from canals was mainly used to irrigate gardens and was not used for fountains since it carried silt. So, for fountains, clear water was needed. This additional water supply was provided from a hydraulic complex constructed on the southern side of the highest terrace. A well with a Persian wheel ensured the constant supply of clean water. The overhead reservoir was constructed at a height of approximately eight meters from the bed of the cen-

tral canal of the highest terrace. To the west of the latter, behind the building known as "Begum Ki Khawabgah", a huge twelve sided well still exists. Here, also, water was lifted by Persian wheels into tanks from whence it fed the fountains and channels of the lower terraces through aqueducts. Another such well existed behind the eastern wall of the middle terrace until the late nineteenth century. It fed water to the Royal Bath (*hammam*) and also to the lower terrace.[8]

The water supply to Shalamar had failed before Ranjit Singh came into power in 1799. But in 1806, Ranjit Singh ordered the restoration of Shah Jahan's Canal. Two years later the water supply became adequate. During Ranjit Singh's period, although the garden was generally restored, some buildings continued to be vandalized.

Charles Masson, a British traveller who visited Lahore in 1826 gives following comments:

> About three miles north-east of Lahore is the renowned and once delightful garden of Shalamar. There are still the marble tanks and fountains, with costly machinery, that once supplied the jet d'eaux. The gay pavilions and other buildings of the immense garden have suffered not so much from the dilapidation of time as from the depredation of the Maharaja, who has removed much of the marble and stone of which they were composed to employ them in his new constructions at the favourite religious capital of Amritsar, and the contiguous fortress of Govind Ghar. Still in its decline of splendour, Shalamar has sufficient beauties to interest and delight a visitor.[9]

A French traveller Monsieur Jacquemont who came to Lahore in 1831, visited Shalamar garden and made following observation:

> The Moghal emperor laid out, three miles from the city a magnificent garden called Shalamar. Ranjeet goes into camp there sometimes, but has done nothing to keep it up. It is planted with orange, cedar, lime and pomegranate trees which now form an impenetrable copse.[10]

A miniature of Shalamar garden is available at Lahore Museum. This miniature was made during early part of the 19th century[11] (Fig. 2). The famous 19th century writers like Kanhaya Lal and Syed Mohammad Latif provide details of the defacement of marble, sandstone and other precious stones from the buildings of Shalamar garden, but in this miniature they are very much intact.

Towards the end of Ranjit's rule in 1838, the water supply to Shalamar failed, but again it was restored in 1848. Punjab became part of the British empire in 1849.

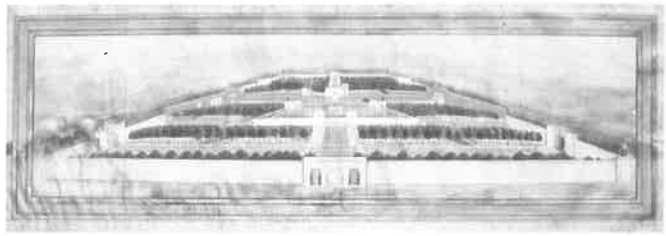


Fig. 2: A 19th century miniature painting of Shalamar Garden (Courtesy Lahore Museum).

Alterations during the British Period

In the early years of British rule, certain buildings continued to be vandalized. A complex comprising palaces for the royal ladies, *Khawaspura*, existed to the south of the *Aram Gah* (an open fronted summer house and a resting place of the king situated on the southern side of the highest terrace). The foundations of the *Khawaspura* were dug out and sold for bricks. Similarly, a new door was introduced on the southern wall of the *Aram Gah* by destroying a *Shahnashin* royal seat built inside the royal pavilion,[12] in 1888. According to Captain H. H. Cole, the first curator of Ancient Monuments in India, the eastern and western gates of Shalamar were damaged a good deal. Both the gates were originally decorated with *Kashi* or glazed tile mosaic which was not conserved; instead many *Kashi* panels were removed.[13] Captain Cole also informs us that, in 1883, the garden was let out on lease for the cultivation of fruit, which resulted in thick plantation of the upper and lower terraces.[14]

Shalamar was placed under the control of the Department of Archaeology in 1913. In 1922, a hundred mango trees were removed from the lower garden. The middle terrace was totally cleared out and a rose garden introduced there on the English pattern.[15] An interesting observation is made by Mrs. Constance Villers-Stuart a British lady in 1913.

> Wherever English influence has been strong, as in British India and in so-called "Progressive" Native States, the typical Indian gardens have been the first to go, and the old symbolic garden-craft the first of all the traditional art to disappear.[16]

The "conservation" traditions established at the beginning of the twentieth century have continued more or less up until the present. The rose garden is very much intact. In the upper and lower terraces, trees are generally planted in a very haphazard manner and the atmosphere of symbolic garden craft, the very soul of Mughal gardens, is missing.

During the British period, which lasted for almost a hundred years in Punjab, Shalamar was generally well looked after in terms of daily maintenance. Many memorable functions were held, and small repairs were also carried out from time to time. But by and large, major conservation works were not attempted.

Conservation of Shalamar since 1947

Pakistan came into existence in 1947. Like any developing country, it went through very difficult times in the initial stages. In the first two decades, lack of funds and trained personnel restricted conservation of historical buildings to a large extent. However, the first major restoration work was carried out at Shalamar in 1950 for the late Shah of Iran's visit. The original terra-cotta pipe line had choked and broken. The pipeline was not restored at the time, as specialists were in short supply. Instead, a cast iron pipeline was introduced and the terra-cotta pipeline was filled up with mud under pressure".[17]

In 1978, water was found to be seeping out of the northern wall of the middle terrace. PINSTECH was asked to trace the layout of the pipeline running under the floor of the tank and also to locate the leakage points.

According to the PINSTECH report published in 1979, "A terra-cotta line of 30 cm diameter supplied water to the fountains while a similar line of 19 cm diameter served the bath suites. The terra-cotta line was protected by laying brick in lime mortar about 30 cm underneath, 60 cm on the sides and 1.5 meters above."[18]

Nazir Ahmad, a civil engineer who was involved with the restoration of the pipeline of the highest terrace in 1951, provides valuable information. He informs us that:

> The mortars ... in strength it was found to be so perfect that pick axe and hammer and chisel could not effectively cut into it. ... In plaster work along with kankar lime and white lime urad, flour, hemp, black sugar etc. had been used and this plaster was found to be perfect also.[19]

The pipelines were located, but following the tradition of 1951, a galvanized iron pipeline was introduced hurriedly in 1980, in order to accommodate the ceremony of the Aga Khan's awards for architecture.

The brick floors of the highest and lowest terraces were well restored under the supervision of Mr. Wali Ullah Khan and later under Mr. Akbar Khan in the sixties and seventies. In the original design of Shalamar garden, the *char baghs* of the upper and the lower terraces were subdivided by secondary water channels and narrow walks, making sixteen plots in all (Fig. 3). The source of inspiration was the Royal Paradise carpet of Shah Abbas of Persia made in the seventeenth century for the Sefari Palace at Isfahan.

At the highest level, a reinforced cement concrete roof was introduced over the building called *Aram Gah* in 1968, and the present marble floor in that building was laid in 1975. The central roof of the *Aiwan* (from the Sikh period) was dismantled and restored in 1980-81) whereas the red sandstone floor was replaced by the present marble floor between 1983–85. The other two buildings of the highest terrace, namely the *Begum Ki Khawab Gah* and *Jharoka-e-Daulat Khana-e-Khas-o-Aam* are more or less in a state of ruin (Fig. 4). In the middle terrace, the red sand stone pavilion on the western side of the tank was restored between the year 1977–79 and the one on the eastern side between 1980–83.

As noted earlier, marble from *sawan bhadon* pavilion was removed by Ranjit Singh and minor repairs were carried out in 1921 and in 1936-37. Recently, a small repair was carried out in the Sikh period wooden roof of the eastern pavilion (Fig. 5).

The Royal Bath or *hammam* on the second terrace was decorated with beautiful mosaic work during Mughal times. During the Sikh period it was removed. This is the most neglected building of the whole garden, and building material is stacked usually here. The main entrance of the *hammam* serves as toilets for visitors. Covers over the skylights of the *hammam* were taken out at an early stage (Fig. 6). In the absence of covers, the skylights were left as mere holes in the roof allowing the free entrance of rainwater into the building. Finally, in 1986, concrete covers were introduced.

The lowest terrace has, by and large, suffered the most. Both lofty gates are in urgent need of conservation. In 1968, a minor attempt was made to conserve the *Kashi* work by applying binding mortar.

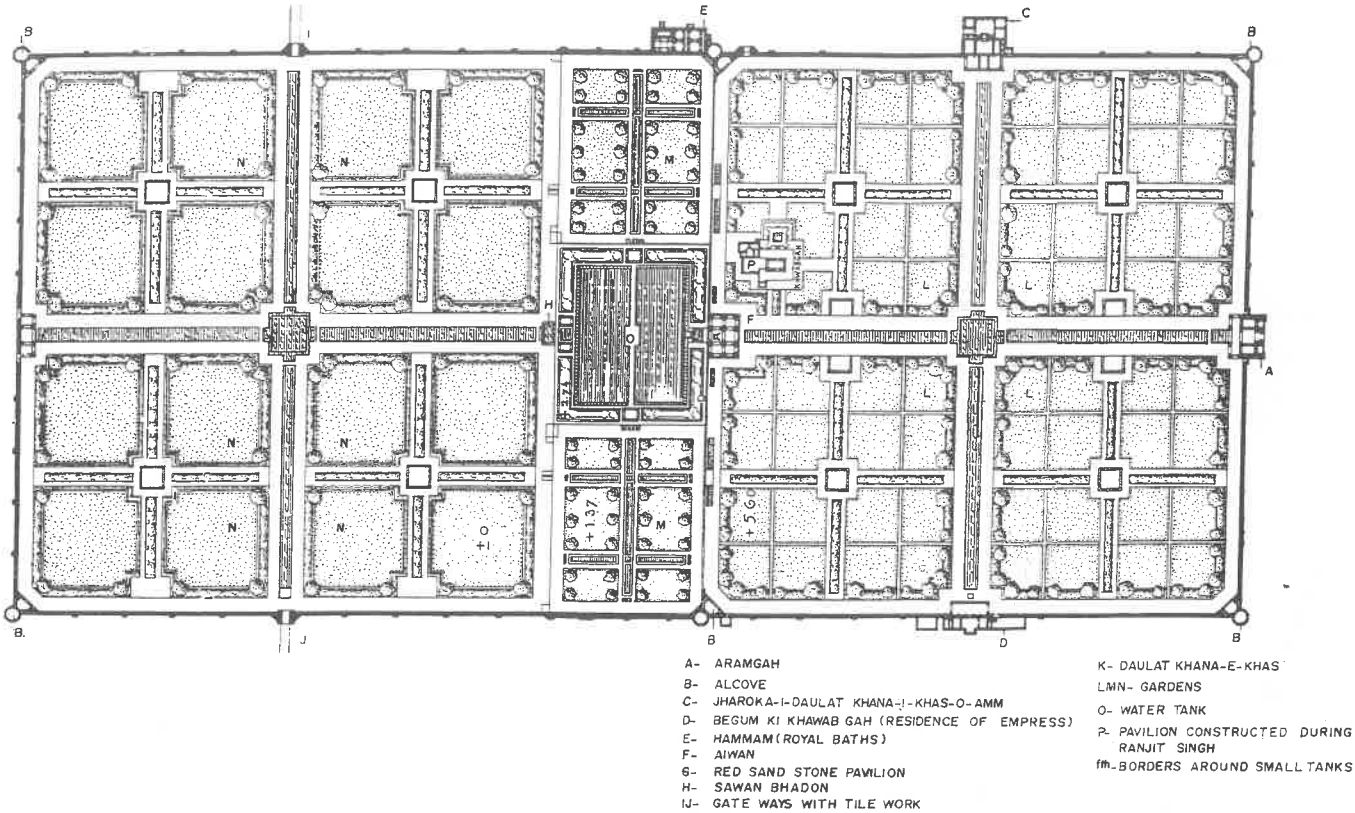


Fig. 3: Plan of Shalamar Garden.

Since then no conservation work has been attempted up until now. The *Daulat Khana-e-Khas* situated on the northern side was much praised by the official historian of Shahjahan. It was decorated with wainscotted work of marble. Today, there is no trace of any decoration of Mughal times. The present roof was introduced in 1978-79. Cracks have appeared, and dampness is observed.

Shalamar garden which was originally situated away from the city of Lahore remained pretty much the same till the late 1950's. However in later years the growing population engulfed the garden, and now it is surrounded by densely packed housing colonies. To the north there once existed a garden known as *Bagh-e-Mewa*. This land was parcelled into small lots and put up for sale under the name of the Madina colony in 1973 by the family of Mian Iftikhar (Fig. 7). To the east existed the *Bagh-e-Dara*. Maharaja Sher Singh (1807–1843), son of Ranjit Singh (1780–1839), gave Bagh-i-Dara to one of his courtiers whose son demolished the buildings and sold the bricks and the land.[20] This has also been converted



Fig. 4: Eastern side of Jharoka-e-Daulat Khana-e-Khas-o-Aam on the highest terrace.

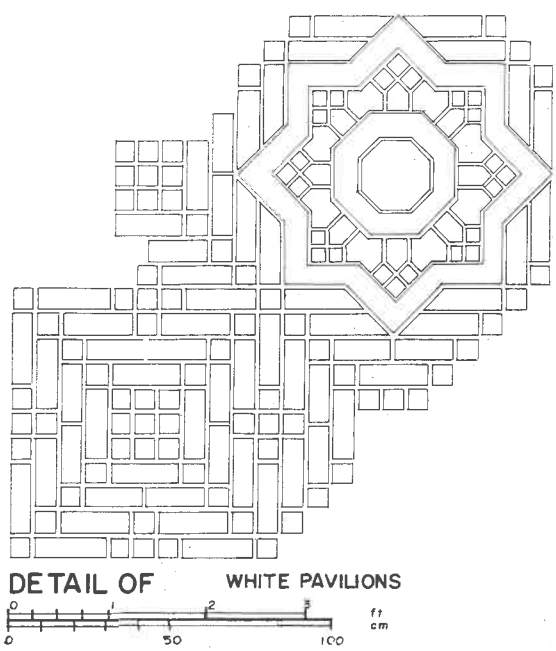


Fig. 5: Detail of Sikh period terseembandi roof (white pavilions).

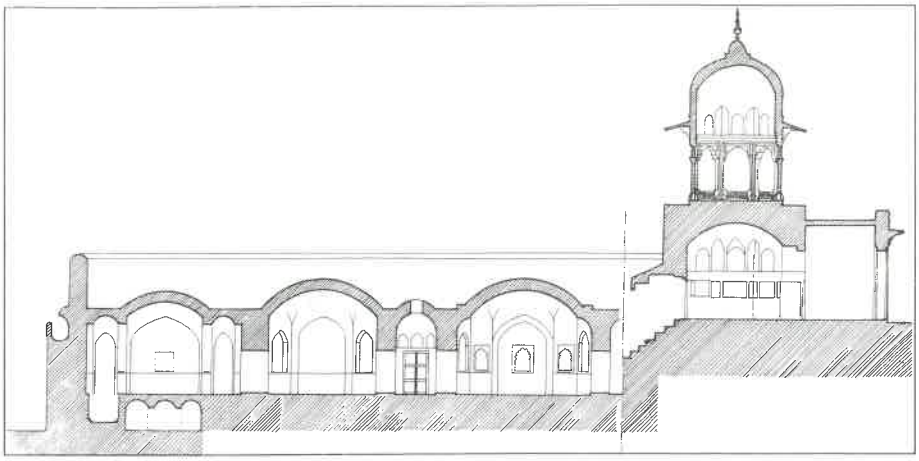


Fig. 6: Sectional elevation of hammam.

into a private housing scheme now. Towards the south existed the Inayat Bagh and Anguri Bagh. A low cost housing colony by the name of Anguri Bagh Housing Colony was developed there in 1973 on land owned by the government (Fig. 8).

In 1960 as a result of Indus Basin treaty with India the Shalamar distributary, which obtained water from Upper Bari Doab Canal, was closed.[21] Thus the charm of running water which was an essential feature of Mughal gardens was finally lost at Shalamar. Now water is supplied through a tube well which was constructed by WASA (Water and Sanitation Agency) in the western side of the highest terrace in the 1960s.

Today, Shalamar, once a pleasure garden at the farthest suburbs of Lahore, is surrounded by residential and commercial areas. Most of this development has taken place in the last three decades. With this urban development, wastewater began to stagnate near the gates. Finally, the streets had to be raised (Fig. 9). Now dampness is observed all along the wall from inside the garden. A water supply complex constructed on the southern side of the highest terrace, beyond the present Grand Trunk Road is in a ruinous state now, and very soon it will disappear if it is allowed to remain in its present state. In a different context, Donald Insall has very rightly said, "Buildings are mortal. It should be stressed that there must be a point in time when a building will collapse if maintenance is neglected and building is not repaired".[22]

The present buildings in Shalamar have very few original decorations from Mughal times. The factors responsible are the unsettled conditions of the eighteenth century, vandalism, neglect and poor or faulty restoration attempts carried out at various stages after its construction (Fig. 10).

Shalamar today is a mere shadow of its past. Each country goes through its own historical process. It is in this context that one must evaluate, gauge and observe the attitude of societies or of a particular society towards historical places. Shalamar is no longer just a property of Pakistan but rather it is part of the collective cultural heritage of the world. It is said that conservation is primarily a cultural activity. Shalamar demands our immediate attention both in Pakistan and internationally and should be saved for posterity at all costs.



Fig. 7: View of Madina colony.



Fig. 8: Corner burg (Turret) of Anguri Bagh.

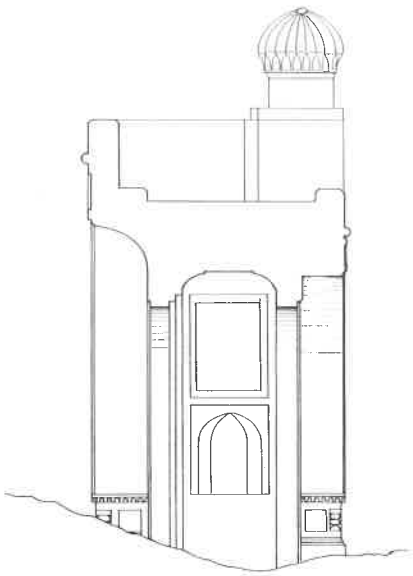


Fig. 9: Sectional elevation of eastern gate.

FOOTNOTES

1. Munshi Al-Mumalik Shaikh Abul Fath Qabil Khan; *Adab Alamgiri*, Volume Two, (Lahore) Zafar Sons Printers, 1971, p. 816.
2. Abdul Hamid Lahori, *Badshah Nama*, quoted in M. Shafi, *"The Shalamar Garden of Lahore"*, *Islamic Culture* Vol. No. 1, Deccani Government Central Press, 1927, p. 61.
3. M. Baqir, *"Shalamar"*, *Oriental College Magazine*, Lahore, Punjab University Press, February 1952, p. 26.
4. Ganda Singh. *Ahmed Shah Durrani*, Bombay, 1959, p. 108.
5. Latif, *Lahore Its History, Architectural Remains and Antiquities*, Lahore: New Imperial Press 1892, reprint Sandhu Printers Lahore, 1981, p. 144.
6. Qsborne, *The Court and Camp of Ranjit Singh* Karachi: Oxford University Press, 1840, reprint, 1973, pp. 140-141.
7. Kamboh *Shahjahan Nama*, Volume Two, Lahore: Zareen Art Press, 1974, p. 257.
8. S. M. Latif, *Lahore*, p. 247.
9. Charles Masson. *Narrative of Various Journeys in Baluchistan, Afghanistan and the Punjab* Karachi, Unique Printers (1842) 1974, pp. 415-416.
10. Gorret, *The Punjab A Hundred Years Ago*, Government of the Punjab, 1935, p. 59.
11. M. Shafi, *The Shalamar Garden of Lahore*, Islamic Culture, Vol. 1, Hyderabad, Deccan Government Central Press, 1927, pp. 65-66.
12. Latif, *Lahore*, pp. 248-249.
13. H. H. Cole, *Preservation of National Monuments*, first report, Simla: Government Central Branch Press, 1882, pp. CXC, CXI.
14. H. H. Cole, *Preservation of National Monuments*, third report, Calcutta: Superintendent, Government Printing India, 1885. p. CXXIV.
15. H. R. Goulding, *Old Lahore Reniniscences of a Resident* Lahore 1924, reprint Sind Saqar Printers, p. 6.
16. C. M. Villiers–Stuart, *Gardens of the Great Mughals* London 1913, p. 268.
17. N. A. Jiabajee, *"Water Supply Reorganization Shalamar Garden"*, *Pakistan Journal of Science*, Vol. 8 January 1956, p. 8.
18. S. Dildar, N. Mustafa, N. Ahmed, *Leakage Investigation at Shalamar Garden Lahore Using Radioisotopes* Rawalpindi 1979, p. 6.
19. N. A. Jiabajee, *"Water Supply Reorganization Shalamar Garden"*, p. 10
20. Latif, *Lahore*, p. 250.
21. Ihsan H. Nadiem, *"The Hydraulics of Shalamar Garden"*, *Journal of the Pakistan Historical Society*, Vol. XXXIV, 1986, p. 3.
22. Feildon *Conservation of Historic Building* London: Butter Worth and Co. Ltd., 1982, p. 19.

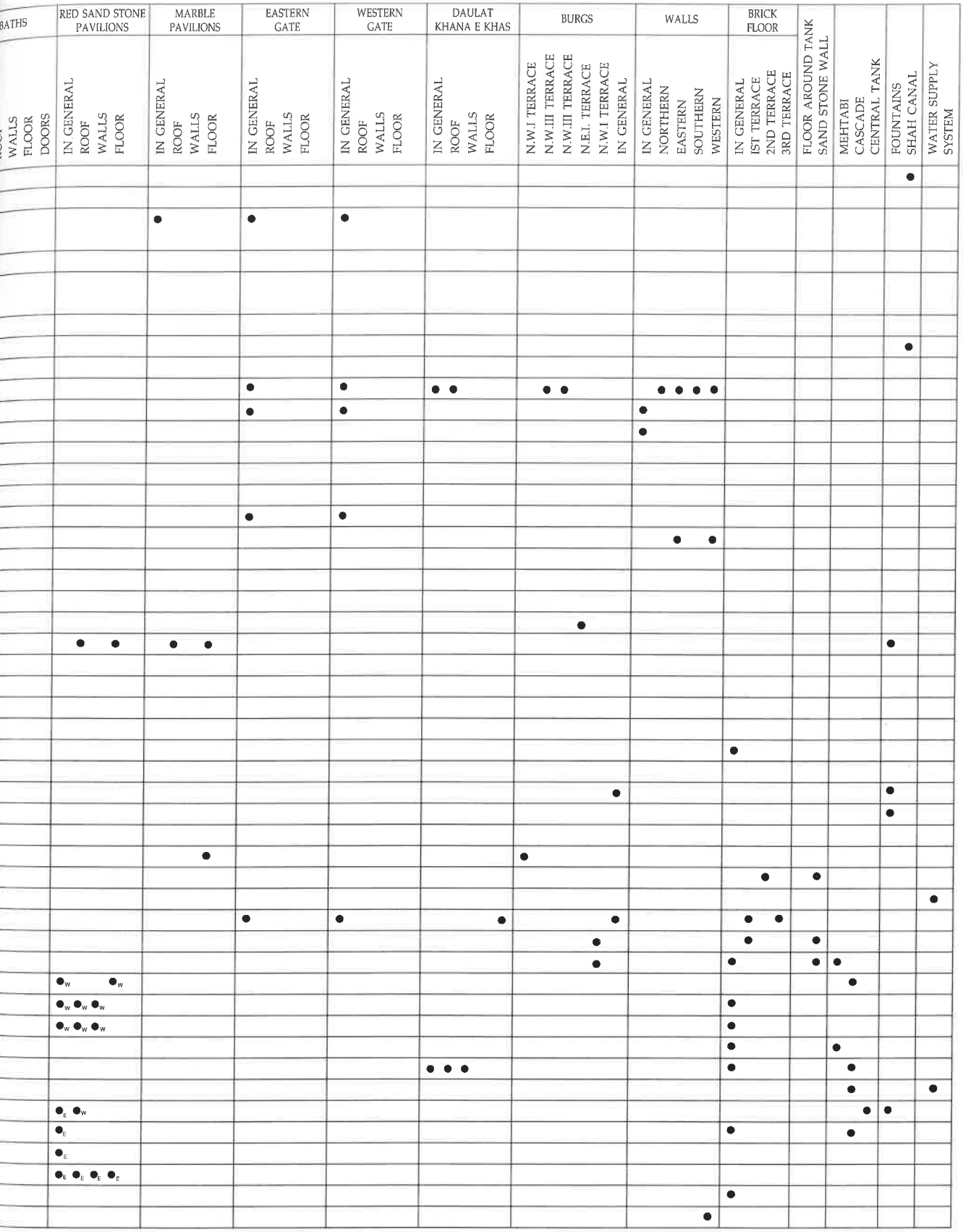
CHART SHOWING CHRONOLOGICAL HISTORY OF INTERVENTION OF SHALAMAR GARDEN LAHORE

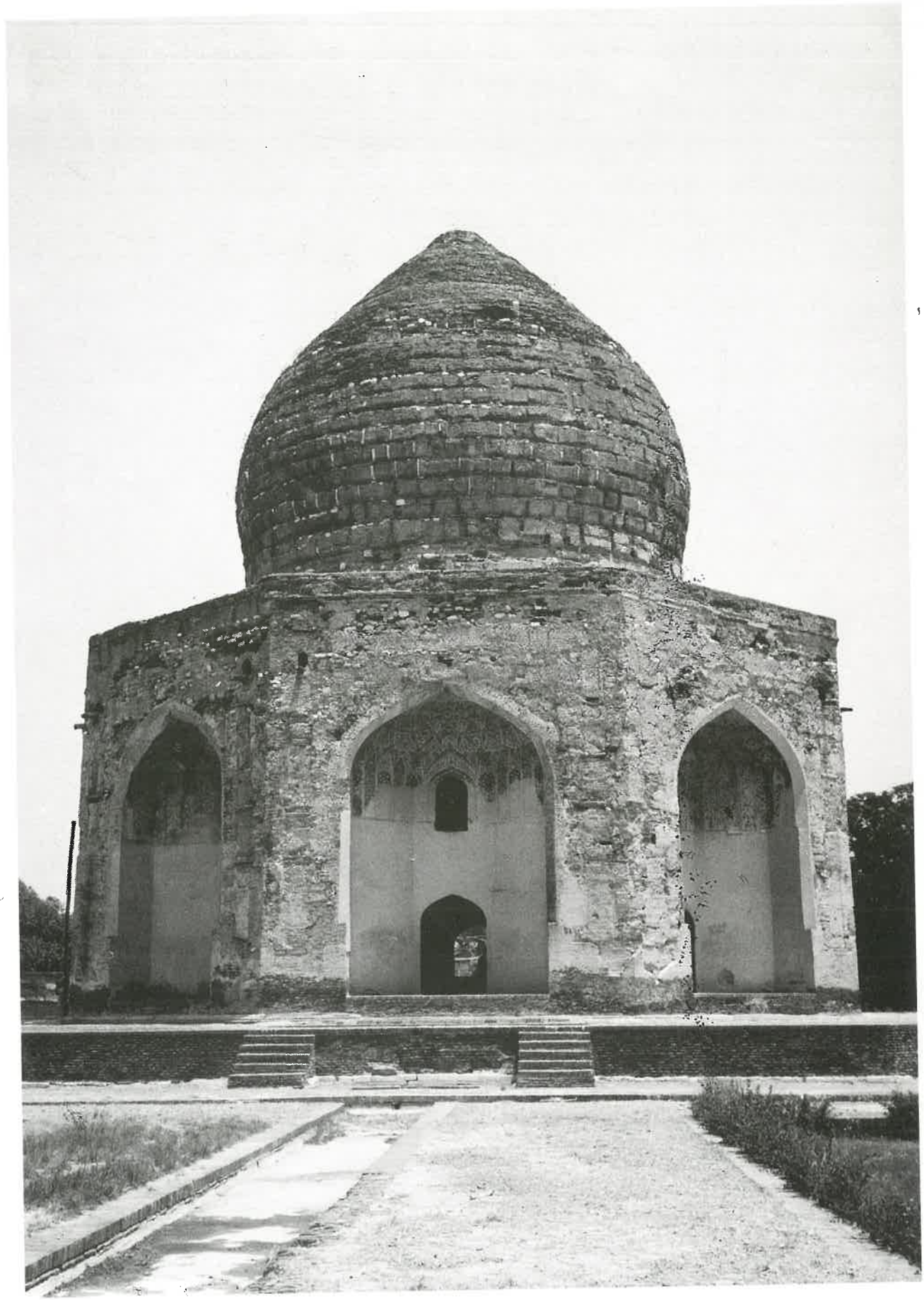
YEAR	SOURCE OF INFORMATION	SPACES / ASPECTS	LANDSCAPE	SHALAMAR GARDEN IN GENERAL	ARAM GAH IN GENERAL	ARAM GAH ROOF	ARAM GAH WALLS	ARAM GAH FLOOR	ARAM GAH DOORS	AIWAN IN GENERAL	AIWAN ROOF	AIWAN WALLS	AIWAN FLOOR	AIWAN BALUSTRADE	JHAROKA KHAS-O-AM IN GENERAL	JHAROKA KHAS-O-AM ROOF	JHAROKA KHAS-O-AM WALLS	JHAROKA KHAS-O-AM FLOOR	BEGUM KI KHAWAB GAH IN GENERAL	BEGUM KI KHAWAB GAH ROOF	BEGUM KI KHAWAB GAH WALLS	BEGUM KI KHAWAB GAH FLOOR	BATHS IN GENERAL	BATHS ROOF	BATHS WALLS	BATHS FLOOR	BATHS DOORS
1712	LAHORE AND THE PUNJAB BY ZULFIQAR AHMAD		●	●																							
1806	UMDAT-UT-TAWARIKH BY L. SOHAN LAL SURI																										
1820	TRAVELS IN THE HIMALYAN PROVINCE OF HINDUSTAN AND THE PUNJAB BY WILLIAM MOOR CRAFT AND GEORGE TRESACK									●									●				●				
1823-24	SHALAMAR GARDENS OF LAHORE - ISLAMIC CULTURE 1927 - BY MOHD. SHAZI			●																							
1831	THE PUNJAB A HUNDRED YEARS AGO AS DESCRIBED BY V. JACQUE MONT (83) SOLTYKOFF 1842 BY H.L.O. CARRETT.		●																								
1832	TRAVELS IN THE PUNJAB. AFGHANISTAN TURKISTAN BY MOHAN LAL		●																								
1838	UMDAT-UT-TAWARIKH BY L. SOHAN LAL SURI																										
1867	TEHQIQAT CHISTI BY NOOR AHMAD CHISTI			●																							
1881-82	PRESERVATION OF NATIONAL MONUMENTS FIRST REPORT BY H. H. COLE			●		●				●		●												●			
1882-83	PRESERVATION OF NATIONAL MONUMENTS SECOND REPORT BY H. H. COLE																		●								
1883-84	PRESERVATION OF NATIONAL MONUMENTS THIRD REPORT BY H. H. COLE		●																								
1884	TARIKH LAHORE BY KANUYA LAL		●	●																							
1892	LAHORE ITS HISTORY ARCHITECHTURAL REMAINS AND ANTIQUITIES BY S. MOHD. LATIF			●																							●
1892	WATER SUPPLY REORGANIZTION SHALAMAR GARDENS LAHORE BY N. A. JIABAWEE																										
1902	A. S. P. A. R.																										
1903	A. S. P. A. R.																										
1909-10	A. S. I. A. R.		●																								
1913	GARDENS OF THE GREAT MOGHALS BY C.M.V. STUART																										
1913-14	A. S. I. A. R.																										
1918-19	A. S. I. A. R.																										
1921-22	A. S. I. A. R.								●																		
1922-23	A. S. I. A. R.		●																								
1924	OLD LAHORE BY H. R. GOULDING		●	●																							
1924-25	A. S. I. A. R.													●													
1926-27	A. S. I. A. R.		●																								
1927-28	A. S. I. A. R.		●																								
1929-30	A. S. I. A. R.		●																								
1930-34	A. S. I. A. R.											●															
1934-55	A. S. I. A. R.																										
1935-36	A. S. I. A. R.												●														
1936-37	A. S. I. A. R.		●																								
1937-38	A. S. I. A. R.		●								●																
1950	WATER SUPPLY REORGANIZATION SHALAMAR GARDENS LAHORE BY N. A. JIABWEE																										
1968	PAKISTAN ARCHEOLOGY 68					●																					
1972	PAKISTAN ARCHEOLOGY 72																										
1973-74	P. P. S. G. C. R.							●					●														
1974-75	P. P. S. G. C. R.							●					●														
1975-76	P. P. S. G. C. R.																										
1976-77	P. P. S. G. C. R.					●			●																		
1977-78	P. P. S. G. C. R.												●														
1978-79	P. P. S. G. C. R.																										
1979	LEAKAGE INVESTIGATION AT SHALAMAR GARDEN USING RADIOISOTOPES BY S. O. HASAN																										
1979-80	P. P. S. G. C. R.																										
1980-81	P. P. S. G. C. R.										●																
1981-82	P. P. S. G. C. R.																										
1982-83	P. P. S. G. C. R.																										
1983-84	P. P. S. G. C. R.		●										●														
1984-85	P. P. S. G. C. R.		●										●														

SYMBOL	DESCRIPTION
	INFORMATION AVAILABLE
	INFORMATION AVAILABLE WESTERN PAVILION
	INFORMATION AVAILABLE EASTERN PAVILION

ABBREVIATION	DESCRIPTION
A. S. I. A. R.	ARCHEOLOGICAL SURVEY INDIA ANNUAL REPORT
A. S. P. A. R.	ARCHEOLOGICAL SURVEY PUNJAB ANNUAL REPORT
P P. S. G. C. R.	COMPLETION REPORT OF PRESERVATION AND PRESENTATION

Fig. 10: Chart showing history of intervention of Shalamar Garden, Lahore in a chronological sequence.


BATHS
WALLS
FLOOR
DOORS
RED SAND STONE PAVILIONS
IN GENERAL
ROOF
WALLS
FLOOR
MARBLE PAVILIONS
IN GENERAL
ROOF
WALLS
FLOOR
EASTERN GATE
IN GENERAL
ROOF
WALLS
FLOOR
WESTERN GATE
IN GENERAL
ROOF
WALLS
FLOOR
DAULAT KHANA E KHAS
IN GENERAL
ROOF
WALLS
FLOOR
BURGS
N.W.I TERRACE
N.W.III TERRACE
N.W.III TERRACE
N.E.I. TERRACE
N.W.I TERRACE
IN GENERAL
WALLS
IN GENERAL
NORTHERN
EASTERN
SOUTHERN
WESTERN
BRICK FLOOR
IN GENERAL
IST TERRACE
2ND TERRACE
3RD TERRACE
FLOOR AROUND TANK
SAND STONE WALL
MEHTABI
CASCADE
CENTRAL TANK
FOUNTAINS
SHAH CANAL
WATER SUPPLY
SYSTEM



Tomb of Asif Khan.

CONSERVATION OF HISTORIC BUILDINGS AND GARDENS IN LAHORE: IMPLICATIONS FOR A NATIONAL CONSERVATION POLICY FOR PAKISTAN

MUHAMMAD YUSUF AWAN
Department of Architecture,
University of Engineering and Technology, Lahore, Pakistan.

INTRODUCTION

Historic buildings are memorials of human activity and serve as a link with the past. They are a trust and it is the duty of the present generation to ensure that they are passed on to posterity without their authenticity being impaired or their essential scheme of aesthetics and setting being altered. Pakistan is a rich repository of historic buildings. Such buildings are to be found in a variety of states of repair. Basic infrastructure for conservation and protection of historic monuments and archaeological sites exists in the country and some 355 examples of sites and monuments are being protected (Fig. 1).

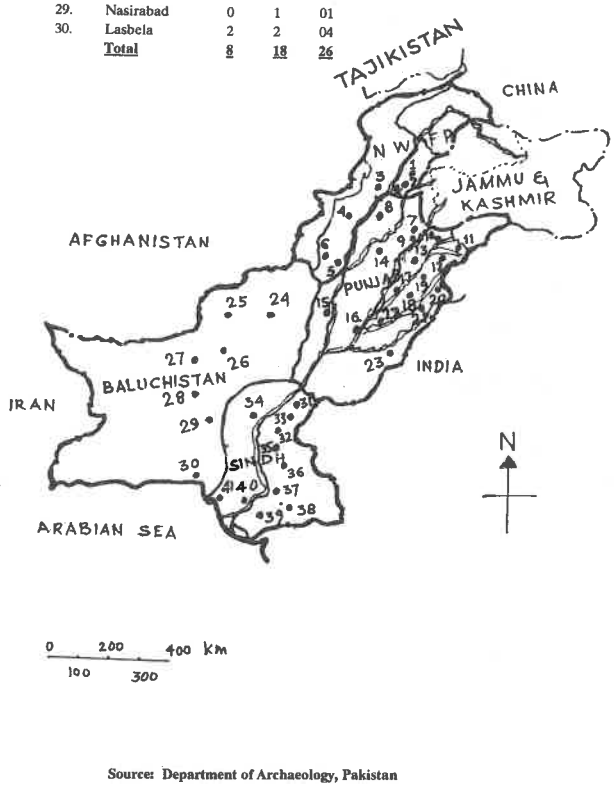
The objective of this study is to begin a systematic process of classifying the historic buildings and gardens in the country and to put forward an appropriate policy for the conservation of at least a reasonable proportion of them, bearing in mind the various constraints in the way of conservation.[1] To achieve the aims of the study a broad range of information was collected on the workings of the present organization for conservation in the country, the

PROVINCE :	North West Frontier			
KEY	DISTRICT	M	S	T
1.	Manschra	2	2	04
2.	Abbotabad	4	16	20
3.	Mardan	0	16	16
4.	Peshawar	3	9	12
5.	Dera Ismail Khan	3	2	05
6.	Bannu	2	2	04
	Total	14	47	61

PROVINCE :	Punjab			
7.	Rawalpindi	8	8	16
8.	Attock	11	2	13
9.	Jhelum	7	2	09
10.	Gujrat	3	0	03
11.	Sialkot	0	1	01
12.	Gujranwala	2	0	02
13.	Sargodha	2	2	04
14.	Mianwali	1	1	02
15.	Dera Ghazi Khan	1	1	02
16.	Muzaffargarh	2	0	02
17.	Jhang	2	0	02
18.	Faisalabad	0	1	01
19.	Sheikhupura	6	2	08
20.	Lahore	59	0	59
21.	Sahiwal	2	1	03
22.	Multan	9	3	12
23.	Bahawalpur	5	0	05
	Total	120	24	144

PROVINCE :	Sindh			
31	Sukkar	3	1	04
32.	Nawab Shah	3	1	04
33.	Khairpur	1	2	03
34.	Larkana	2	5	07
35.	Dadu	4	12	16
36.	Sanghar	0	3	03
37.	Hyderabad	16	0	16
38.	Tharparkar	26	2	28
39.	Badin	0	1	01
40.	Thatta	31	5	36
41	Karachi	4	2	06
	Total	90	34	124
	Grand Total	232	123	355

PROVINCE :	Baluchistan		
24.	Loralai	0	3	03
25.	Quetta	0	10	10
26.	Sibi	1	0	01
27.	Kalat	0	1	01
28.	Kharan	5	1	06
29.	Nasirabad	0	1	01
30.	Lasbela	2	2	04
	Total	8	18	26



M = Monument, S = Site, T = Total

Note: Out of 59 listed monuments of the District of Lahore 56 are situated within its present urban limits.

Source: Department of Archaeology, Pakistan

LISTED ANCIENT MONUMENTS AND ARCHAEOLOGICAL SITES IN PAKISTAN

Fig. 1: Listed Ancient Monuments and Archaeological Sites in Pakistan.

legislative system, other studies of a similar nature and the activities of professionals and voluntary bodies. A field survey was carried out with regard to certain historic buildings in one city, Lahore, and information, based on the criteria established for the purpose, was collected on nearly 300 significant buildings. This related to their listed status and to their relationship to the major historic periods and covered various building types. Virtually all these buildings were standing at the close of 19th century. The collected information is analyzed in detail and discussed critically with reference to the rate of loss of historic buildings during almost a century, various states of repair of the existing buildings, their architectural and historical values, present usage, ownership, responsibility for maintenance, sources of state finance for maintenance and possibilities of other sources of finance.

This analysis describes the broader context in which garden conservation occurs. That is, it is only possible to understand garden conservation by understanding the present arrangements of conservation in the country, the broader patterns, problems and policies for the conservation of the built heritage.

This analysis reveals that the present system of conservation is not fully adequate and needs to be improved. It is further identified that a better system could be established by involving the provincial and local governments and by encouraging the development of a proper building industry able to carry out the task of conservation. Detailed conclusions are drawn up and specific suggestions are made for the formulation of a national conservation policy for Pakistan.

SETTING IN LAHORE

The objective of this study was to consider aspects of the state of conservation of the built heritage in one major settlement, Lahore. A small area of the city had already been the subject of a conservation project, a detailed survey of the properties situated in the old walled city having been conducted through local consultants known as the Pakistan Environmental Planning and Architecture Consultants (PEPAC). The study was initiated in 1986 as an offspring of the Lahore Urban Development and Traffic Study (LUDTS), the terms of reference of which laid an emphasis on the "improvement of living conditions of the inhabitants of the walled city".[2] Of around 20,000 individual properties in the walled city, 17516 were visually inspected as part of the survey, about 220 architecturally valuable buildings were examined in somewhat greater depth and 25 areas and premises were selected for detailed documentation. It was recommended that 1405 buildings should be preserved and various conservation zones should be introduced. Emphasis was placed on the education and organization of the resident population and the value of their involvement in the conservation process. The Government implemented some of the recommendations of the report, including the repair of six buildings and upgrading of pavements and services.[3] The project created an increased awareness of the cultural heritage of the walled city but did not play any significant role in the development of the conservation process in the country as a whole, for reasons that will be discussed later in this paper.

A total of 283 significant historic buildings and gardens were examined in this study of conservation in historic Lahore and its suburbs, all of which, with the exception of three, had been standing in 1892. Of these 56 were listed buildings, representing 25 percent of total number of listed buildings in the country.

The survey revealed that 97 of the buildings, 34 percent of the total, had been lost during a period of roughly one century. Those lost included eight listed buildings.[4] The loss varied with reference to period of construction and building type. The number of significant buildings remaining from the Hindu, Pathan and Sikh periods, for example, is now very small. With the exception of Muslim religious tombs, existing buildings from the Early and Late Mughal periods are also few in number. A major loss of 87.5% has occurred to the gardens of the Mughal and Sikh periods. Many buildings with Hindu and Sikh religious associations have been lost because of human action or vandalism and there is an obvious need to protect the remaining existing buildings effectively (Fig. 2, 3, 4 & 5).

With regard to the condition of the remaining buildings, 70 out of 186 were found to be in a good state of repair and a further 52 had a sound original structure, though there was decay to some extent of their external surface treatment (Fig. 6, 7 & 8).

There were only 18 buildings with structural faults of various sorts, though a further three buildings had virtually collapsed, their few remains being found within new buildings which had been erected on the original sites. Two of the 18 build-

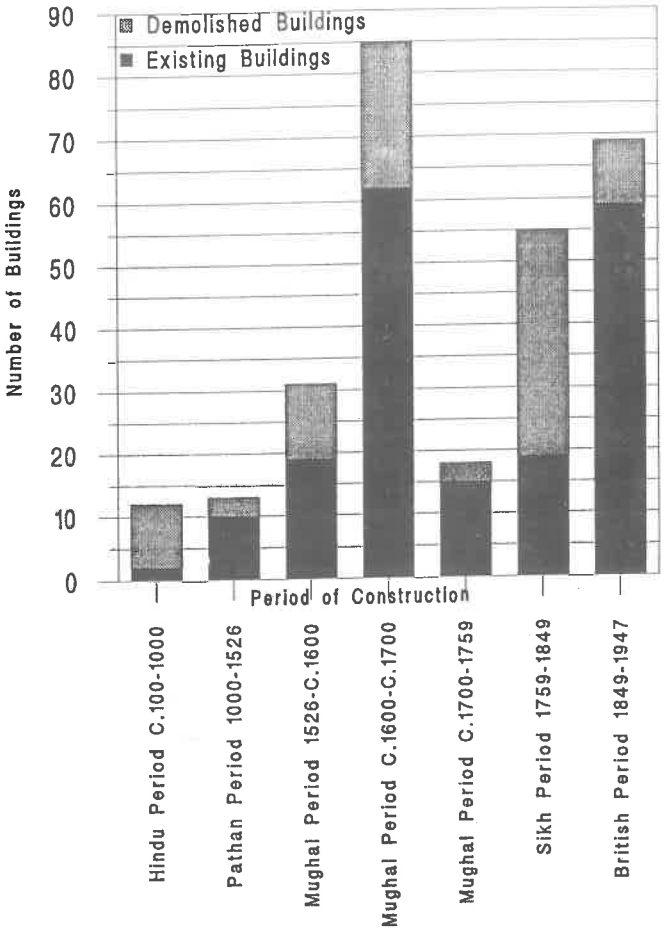


Fig. 2: Existing and Demolished Buildings with reference to their Period of Construction.

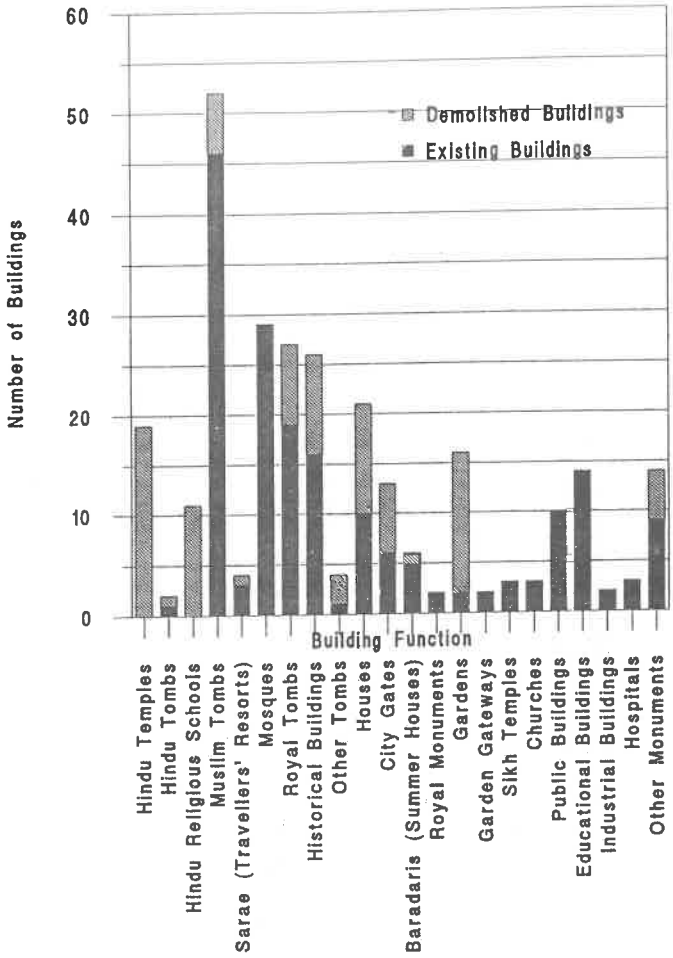


Fig. 4: Existing and Demolished Buildings with reference to their Building Function.

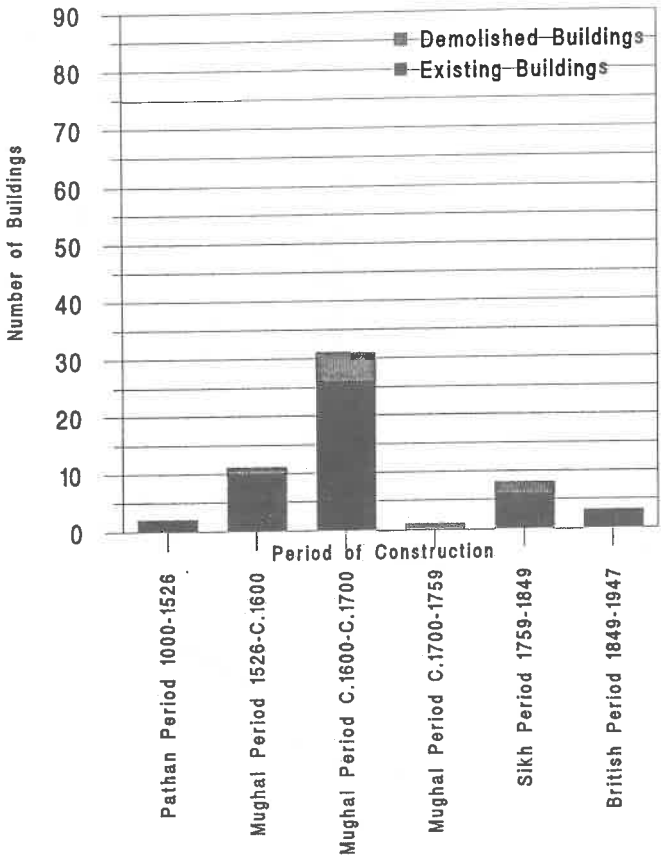


Fig. 3: Existing and Demolished Listed Buildings with reference to their Period of Construction.

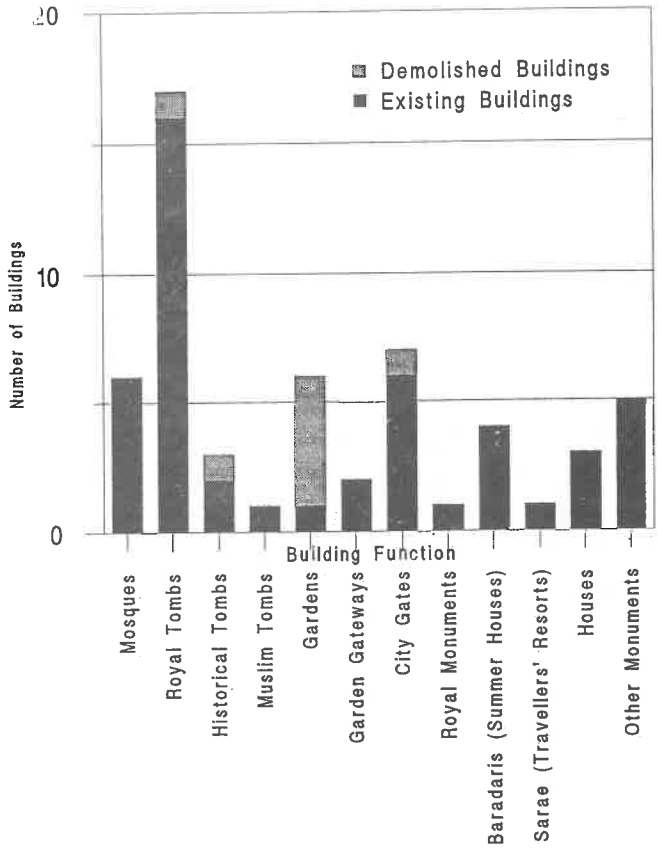
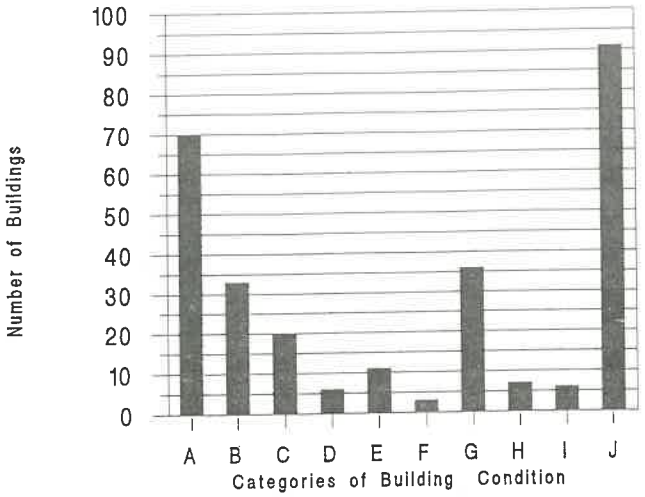


Fig. 5: Existing and Demolished Listed Buildings with reference to their Building Function.



A = A building with a sound structure, with most of the major elements and decoration intact and in a good condition.

B = A building with a sound structure and major elements intact, but with some of the decoration missing or suffering minor decay.

C = A building with a sound structure, though with major elemental decay and the decoration in a relatively poor state.

D = A building with minor structural faults and major elemental decay.

E = A building with major structural faults.

F = A building which has virtually collapsed.

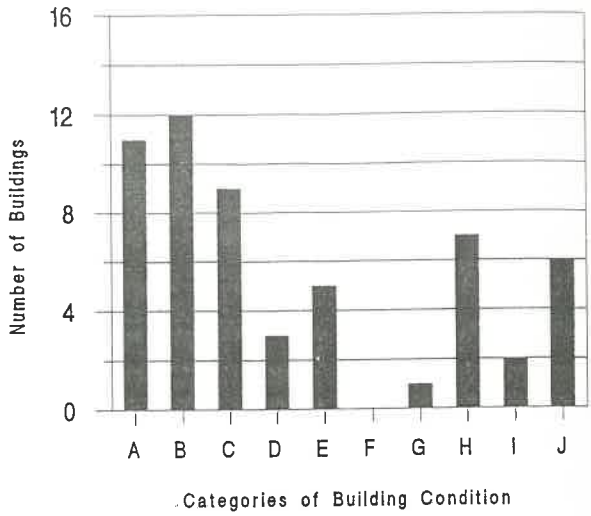
G = A building with a sound original structure, though with some of the decoration changed or additions made which do not relate to the original architectural style.

H = A case where the original building has been demolished but has been reconstructed as new on the same site.

I = A building which is virtually in a collapsed state, but with some remains present.

J = A building which has apparently been totally demolished with no remains.

Fig. 6: Condition of Buildings.



A = A building with a sound structure, with most of the major elements and decoration intact and in a good condition.

B = A building with a sound structure and major elements intact, but with some of the decoration missing or suffering minor decay.

C = A building with a sound structure, though with major elemental decay and the decoration in a relatively poor state.

D = A building with minor structural faults and major elemental decay.

E = A building with major structural faults.

F = A building which has virtually collapsed.

G = A building with a sound original structure, though with some of the decoration changed or additions made which do not relate to the original architectural style.

H = A case where the original building has been demolished but has been reconstructed as new on the same site.

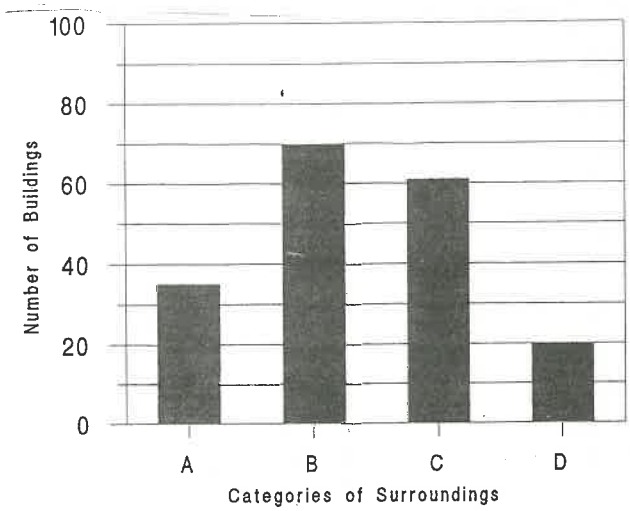
I = A building which is virtually in a collapsed state, but with some remains present.

J = A building which has apparently been totally demolished with no remains.

Fig. 7: Condition of the Listed Buildings.

ings were houses where part of the original structure was in good condition although other parts had virtually collapsed. The remaining 16 buildings are all repairable, though not without considerable expenditure. As many buildings have already been lost, a case could be made for repairing all these buildings. However, if a choice had to be made, priority should be given, it is suggested, to those which are examples of the few remaining buildings either of their period or of their building type. On this basis eight buildings have been identified in particular, as follows:–

- the historic tomb of Mir Mehdi from the Pathan period,
- the family tomb of Khawaja Saeed's daughter from the Late Mughal period,
- the sarai of Jahangir from the Middle Mughal period,
- the temple of Khuda Singh, the temple of Dhian Singh and the tomb of Maharaja Sher Singh, all from the Sikh period,
- the tomb of Rani Randhawi and the sarai of Muhammad Sultan from the British period.



A = The surroundings of the building are, as far as is known, virtually in their original state. Views of the building are not obstructed by any building or structure constructed later.

B = Views of the building are relatively good but there are minor obstructions such as electricity poles and wires.

C = Views of the building are obstructed by new structures or a multiplicity of objects such as electricity wires and poles.

D = Views of the building are almost totally obstructed by new structures occupying the surrounding area.

Fig. 8: Surroundings of the Buildings.



Fig. 9: The Inayat Garden
It was one of the important gardens of the Mughal period and is a listed monument. It has virtually collapsed, leaving very few remains, and has been abandoned. Most of its original site has been occupied by new houses.

From the point of view of their high architectural and historical value, two royal tombs from the Middle Mughal period, those of Prince Pervez and Nawab Bahadur Khan, should also receive particular attention. Both of these tombs were located in gardens that have been lost.

As many as 36 cases were identified where the original structures had survived in a reasonable state but problems had occurred either because newer structures, with a design unrelated to the original, had been added or repairs had been carried out without using the original pattern or type of material. Detailed examination indicated that in 21 cases it would be possible to remove the unrelated additions without detriment to the present use of the structure. In the remaining 15 cases, however, the later additions were found to be of a much more permanent nature and it would not be practicable to remove them, for example the garden-tomb of prince Pervaiz of the Mughal period.

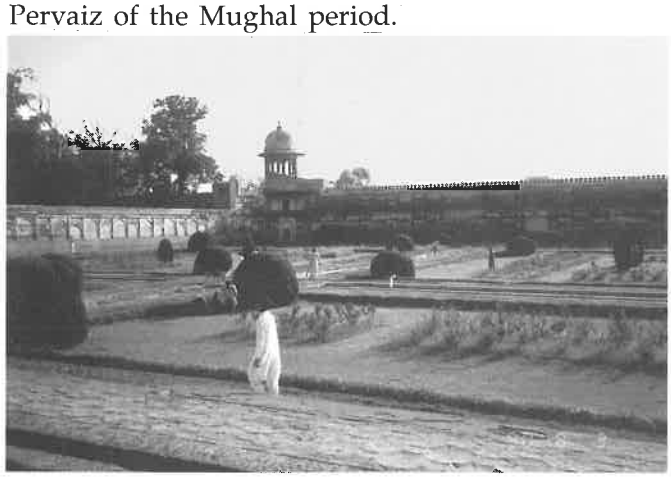


Fig. 10: The Shalamar Garden
This is a view of the third terrace of the famous royal Shalamar garden constructed by the Mughal emperor, Shahjahan, in 1634 A.D. It is a listed monument and receives special attention of the authorities and is mostly in good condition. However, a considerable deterioration has occurred to its pathways and external surface of its mighty enclosing wall.



Fig. 11: The Tomb of Asif Khan
It is a listed building, constructed in 1634 A.D. during the Mughal period and was situated in the Dilkusha garden. The main structure is in somewhat good condition but all the decorations are gone and major loss to the garden had occurred much earlier.

Finally, seven buildings were identified which had been reconstructed as new after demolition of the original structure. In the process of reconstruction original materials had not been used and the designs had been altered to a certain extent. It is important to note that all of these buildings are listed. Two of them were actually reconstructed after listing. The other five buildings, all city gates, were reconstructed during the British period and are, in fact, noteworthy buildings of that era. (Figs. 9–18 truly represent the conditions of historic buildings and gardens in Lahore).



Fig. 12: The Samadh of Bhai Wasti Ram
It is a listed tomb of the Sikh period and covered with white marble. Decay at the corner of its roof projection has commenced while the maintenance of its surrounding is being totally ignored.



Fig. 13: The Tomb of Nawab Bahadur Khan
It is a listed monument, a garden tomb of the Mughal period, constructed in 1601 A.D. and one of the oldest edifices of Lahore. Major structural faults are threatening its survival while the garden has totally been lost.

In brief, the loss of a significant number of buildings is serious, but the remaining buildings are, as a whole, in reasonably good condition. Gardens have been more vulnerable to change.

There is some evidence to indicate that the listed buildings in Lahore have sometimes been given their status on the basis of their connection with emperors and other people of high rank, though it has to be admitted that many of them also are of high architectural interest and have a "sense of wonder". However, fine examples of architecture which have not been constructed by people of high rank tend not to be listed. For example, the unremarkable grave of the Pathan Emperor Qutb-ud-Din Aibak is listed



Fig. 14: The Nila Gumbad (BLUE DOME)
This tomb was constructed in the Mughal emperor, Hamayun's time. The structure is in good condition but the views are almost totally obstructed by new structures.

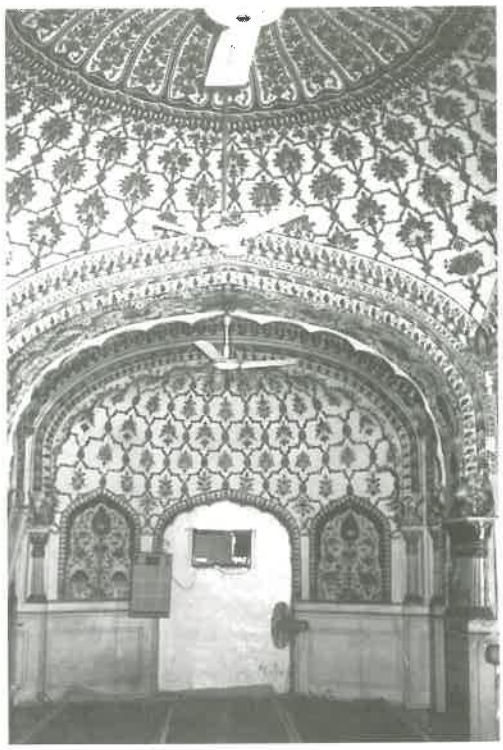


Fig. 15: The Sonehri (Golden) Mosque
This beautiful mosque was constructed in 1753 AD in the Kashmiri Bazar of the old walled city. An ugly addition of ceiling fans is harming view of its colourful floral decoration. This practice is common in many historic mosques of Lahore.



Fig. 16: The Mosque of Abdullah Khan
It was built during the Mughal emperor, Aurangzeb's time inside the Taxali gate of the walled city. An installation of iron pipes and electric fans in its courtyard has badly affected its view and architectural scheme. Colour wash at the facade has consealed the original colourful decoration and calligraphy. The green coloured wooden door and terrazzo flooring are also later additions. However, the main structure is original.



Fig. 17: The Lahore Museum
It is one of many monumental buildings constructed in the British period. It is in good condition. However, this and such other buildings are not yet listed. They are required to be maintained in good condition by providing them protection under the Act.



Fig. 18: The Lahore Railway Station
It is an important building of the British period and is in good condition. However, it is required to be saved from irrelevant additions inside its original architectural scheme and layout and also unplanned development in its surrounding be controlled by listing and applying provisions of the Act.

while fine examples of Pathan architecture, such as, the Sheranwali mosque and Niwin mosque, are not. It would seem that the Department of Archaeology has been inclined to list buildings with a high historical value and not necessarily a high architectural value. Similar biases have worked against the listing of historical gardens, which are commonly associated with the Mughal nobility, though they were constructed by others as well.

The system of grading the listed buildings developed by the Department of Archaeology is based on the condition of the buildings and not on their architectural and historical value. Buildings in category I are supposed to be maintained in "permanent good repair". However, the field survey revealed that some of the buildings in this category had been lost. Some of them had, in fact, disappeared before 1975, though they are still shown as listed in the Department's latest publication[5] of 1989-90. This indicates a regrettable lack of awareness on the part of the Department about the buildings in their own custody and shows that the requirements set for maintenance of buildings placed in the various categories have not strictly been followed.

The present grading system does not reflect the quality of the buildings and a new system should be developed, based on architectural and historical value of the buildings. A system of this type which could operate under the provisions of the existing legislation has been put forward and could apply even if the number of listed buildings was extended.

The survey indicated that the ownership and responsibility for maintenance of the existing buildings studied, listed and non-listed, fell into four categories. Of the total of 186 existing buildings, 26 listed buildings were owned and maintained by the Department of Archaeology; 97 buildings, 18 listed and 79 non-listed, were owned and maintained by other Government Departments; 53 buildings, four listed and 49 non-listed, were loosely owned by the Government and privately used and maintained; and only ten non-listed buildings were owned and maintained privately. The 53 buildings in the third category are mosques and Muslim religious tombs and their building condition tends, on the whole, to be markedly higher than those maintained by the Department of Archaeology and by other Government Departments. Some of these buildings, however, have been badly repaired and unfortunate additions have occasionally been made to them, though their original structures are generally sound. Many of the buildings in current usage, such as educational and public buildings, tend to be kept in good condition, while those which are not continually used are inclined to decay, unless enclosed by a continuous wall, garden sites tend not to be listed or maintained.

The available sources of finance for maintenance are of two types, state finance and private finance. State finance is provided to the Department of Archaeology for maintenance of the listed buildings in the Department's own ownership, which include 26 from Lahore. The overall situation with regard to availability of finance is reasonably satisfactory as far as the repair of the present listed buildings is concerned, but would not be if the number increased. Considerable amounts of money have been spent on the reconstruction of two listed buildings, newly constructed buildings of the tomb of emperor Qutub-

ud-Din Aibak and the baradari of Mirza Kamran, in Lahore without achieving the proper objectives of conservation. The money might well have provided funds for the repair of other listed buildings in Lahore. Gardens tend to receive fewer resources than buildings.

The buildings owned by other Government Departments are repaired and maintained from their Departmental funds, which are provided on demand to them by the Government.

There is also the availability of private finance. The public use and maintain numerous Muslim religious buildings, mosques and tombs, and generate funds on their own account which are often able to meet the requirements of repair, maintenance and appropriate additions.

A few groups of buildings of particular note have been identified, though it is not possible, under present legislation, to recognise them in any way. In any conservation policy, along with individual significant historic buildings, buildings with "group value" and areas with special architectural and historical interest including garden complexes should be given consideration as part of the built heritage. Some buildings and gardens may not have great individual importance but when they stand in close proximity to other significant buildings, they become part of a larger group and add to the overall quality of the setting. The preservation of such buildings and their historic setting should certainly be considered as part of any conservation policy.

Recommendations for National Conservation Policy for Pakistan

Although the detailed survey work in this study has been restricted to Lahore, it had always been intended that the investigations should lead towards suggestions for the development of conservation policy in the whole of Pakistan. The situation in Lahore is likely to be reasonably typical of that appertaining elsewhere in the country, and the detailed part of the present study has, of course, been set in the context of the prevailing national situation. It is appropriate therefore to turn to suggestions for conservation policy on a country-wide basis.

The state of conservation in Pakistan, if evidence from Lahore can be regarded as typical, is relatively similar to that in other developing countries such as India, Egypt and Malaysia. The major constraints on the conservation of the built environment in all these countries, other than financial matters, appear to be the absence of a detailed conservation policy, shortage of technical staff and lack of awareness about the value of the cultural heritage. Basic legislation exists but is rarely properly implemented. Only a small number of buildings have been listed, a circumstance due to a number of factors such as shortage of manpower and money and the general policy. The need for greater concern with regard to conservation has begun to be emphasised by voluntary organisations acting as pressure groups and they have already started playing an important part in spreading awareness among the public and governing bodies.

Legislation for preservation of archaeological sites and ancient monuments has its background in the British period. The first legislation was the Ancient Monuments Preservation Act of 1904, which was replaced by the Antiquities Act of 1947 after the establishment of Pakistan. The Act of 1947 was simply a change in the name of the 1904 Act, a provision considered necessary after establishment of a new country. In some documents the Act of 1904 is referred to instead of the Act of 1947. For example, in the Master Plan for Greater Lahore, prepared in 1966, it is stated that under the Act of 1904, 48 buildings and gardens from Lahore were listed for protection and a further 16 buildings were recommended for some degree of protection though not actually listed. The Antiquities Act of 1968 replaced the previous legislation. The list of 48 protected monuments from Lahore was maintained and another eight buildings from those previously recommended for protection were listed. Finally the Antiquities Act 1975 replaced the Antiquities Act of 1968 and the same 56 buildings from Lahore were maintained as listed and protected under the Act. Thus National Legislation is now contained within the Antiquities Act, 1975 and the Department of Archaeology and Museums functions under the provisions of the Act. As far as the provisions in the Act are concerned, they are quite comprehensive and cover all the necessary aspects of the conservation of important buildings and archaeological sites.

A more important point with regard to the Act is that buildings having "group value" and the concept of "conservation areas" have not been considered. Minor amendments to the Act could provide protection to such areas and building groups. Provisions with regard to the control of new construction in the vicinity of a protected monument are already in place: "no development plan or scheme or new construction on or within a distance of two hundred

feet of a protected building shall be undertaken or executed except with the approval of the Director of Archaeology".[6] By using such provisions, boundaries of areas around building groups could be demarcated fairly readily. This has special relevance for the conservation of historic gardens.

Conservation of the cultural heritage under the 1975 Act is the concern of the Federal Government, through the Department of Archaeology and Museums. The Department has a long history, with the establishment of an Archaeological Survey for northern parts of the subcontinent in 1860 during the British period. At present the Department can list any number of historical monuments and sites under the Act of 1975. So far it has listed only 355 antiquities, 232 monuments and 123 archaeological sites, in the whole of Pakistan. The number of listed antiquities may be somewhat similar to those in other developing countries, but is very small in relation to the wealth of historic buildings known to exist in Pakistan. A case can clearly be made for increasing substantially the number of listed buildings in the country. Although this cannot be accomplished without a corresponding financial commitment, steps should be taken to move towards a greater number of protected structures. The PEPAC study made this point with regard to Lahore's old walled city and a similar situation exists in many other localities.

In order to raise the number of listed and protected buildings, identification of the important historic buildings from various periods is an important task. In the present study the list of significant historic buildings in Lahore was drawn up with the help of old historic accounts. With regard to some other important historic settlements, such as Multan and Peshawar, similar historic accounts may well be available. In many other settlements, however, such would not be the case and a detailed survey would be the starting point rather than a subsequent stage of proceedings. Such surveys could be carried out by teams consisting of persons, perhaps acting voluntarily, aware of the historical and architectural heritage. The Department of Archaeology could provide guide-lines to the surveyors for the identification of important buildings.

Quite obviously, each and every old building cannot be listed. However, from the identified historic buildings, representatives should be selected for listing and preservation. With the help of the present study, the following guide-lines can be suggested with regard to the selection of representative buildings.

First, the great majority of the existing buildings from those historic periods, such as the Hindu, Pathan and Sikh, from which few structures have survived should be included. In some settlements important buildings from the Early and Late Mughal periods may also be few in number.
Second, good representatives of those buildings which are found in larger numbers should be identified. Overall, a list giving a broad coverage of building types and periods of construction should be the aim. Third, buildings having group-value or some specific interior or exterior features should be noted.

The selection of the buildings should take into account the criteria established in this study, such as historical association, quality of architectural design, the condition of the surroundings or setting, state of repair and current usage.

Some further remarks with regard to the Department of Archaeology and Museums are now appropriate. Since its emergence, the Department of Archaeology has tended to concentrate on the survey of archaeological sites and their excavation. Historic buildings have been seen as of secondary importance and gardens of still less importance. Among the professional and technical staff of the Department there are few architects or structural engineers, who are essential for the organisation and specification of conservation works on listed buildings. There are a few horticulturists but no landscape architect. The Department is run mainly by archaeologists, archaeological conservators and archaeological engineers. As an indication of its priorities, the Department has recently prepared a list of a further 26 antiquities to put forward to the Federal Government for declaration as listed and protected under the Act. Of these, there are 20 sites and only six monuments. For proper recognition of historic buildings and gardens and their conservation, the Department should ideally be divided into two sections, an Archaeology Section and a Monuments Section. The Department may continue to be headed by a single Director General but the name of the Department could well be changed to the Department of Archaeology and Ancient Monuments to acknowledge the importance of the latter.

The Department has classified the listed monuments and sites into three categories in which the criterion for conservation is based on the condition in which each monument is to be found. The individual quality of each building is thus disregarded, a situation which should clearly be rectified.

A major problem being faced in all conservation work is the absence of a permanent staff of craftsmen in the Department. At present, most of the labourers including gardeners and almost all craftsmen are on daily wages and there is no system of permanent recruitment. Apart from the maintenance work carried out by the Department of Archaeology, the Government occasionally undertakes certain more substantial conservation projects, notable of which is the project at the tomb of Shah Rukn-e-Alam at Multan. During the process of repair work on this project 33 craftsmen were trained in 14 various traditional crafts.[7] However, they could not be absorbed by the Department of Archaeology for carrying out works at other monuments, a situation which is most regrettable.

With regard to the present financial situation, there is a bureaucratic handicap in the "special repairs" programme, the funds for which are lapsable. Since the amount of funds which the Department will receive in any year for "special repairs" is not known in advance, it is difficult for the Department to prepare proper schemes of repair for many of the monuments which require programmes of work running beyond a single financial year. The most damaging effect of this way of running things is that continuity is lost. In particular, skilled artisans who have been hired may leave the Department's employment before the repairs on many monuments have been completed.

As already stated the Department of Archaeology has a significant lack of the staff necessary for building conservation work and is therefore not able to carry out such work in a fully adequate manner. Outside the Department the situation with regard to the growth in the number of architects and their commitment to conservation has developed favourably. Numerous architects have formed voluntary organisations as pressure groups and they have also assisted in spreading awareness of the need for conservation. In Lahore, the Lahore Conservation Society consists of various professionals, architects, planners, historians, engineers and lawyers. The Society of Builders (Anjuman-e-Mimaran) a joint voluntary organisation of architects and traditional craftsmen has also emerged. The conservation projects carried out by local architects, planners and consultants at Multan and Lahore and the nature of various professional organisations show that a proper building industry equipped with a trained staff could well be established if a national strategy for conservation of the built heritage were to be established.

The maintenance of the original setting of a historic building is an important matter. The present study has revealed that many buildings have suffered from later construction work nearby which has blocked or interfered with the desirable views of the building. This has happened just as much with listed buildings, even though legislative provisions do not allow new construction within a distance of 200 feet from the boundaries of these buildings without approval. Proper implementation of the Act should be possible with the active involvement of the provincial government and the local authorities.

Although conservation in Pakistan is largely the concern of national Government, there are other tiers of authority which might well become involved. The provincial Government of the Punjab, for example, has enacted laws related to conservation in the form of an Ordinance. Unfortunately, the Ordinance has not yet started functioning in practical terms mainly because the provincial Government is still asking the National Government to hand over responsibility for the listed buildings in the province and the funds allocated for their repair.[8]

There are various forms of local bodies in the provinces. In the largest settlements in terms of population, such as Karachi, Lahore, Faisalabad, Multan, Peshawar, Hyderabad and Islamabad, there are the Development Authorities. In the somewhat less large settlements such as Gujranwala, Sargodha and Sialkot, there are Municipal Corporations, while in smaller towns such as Gujrat, Sheikhupura and Larkana, there are Municipal Committees. In the rural areas, there are District Councils in each district and at a further level Town Councils and Union Councils. All the local bodies are involved in carrying out planning for the development and execution of works. However, they are not currently given any responsibility for the conservation of the cultural heritage in their areas of jurisdiction.[9]

The involvement of provincial and local governments in the process of heritage conservation is much to be recommended. In Britain, local authorities are in the front line of conservation and the various tiers of Government work in a coordinated way. Michael Ross in his *Planning and the Heritage* writes:[10]

> "Conservation in Britain is only possible at all because of the joint action of public, private and voluntary sector agencies. If that sounds like a cliche, it is none the less important for that. In broad terms, central Government provides the framework for conservation – the lists of historic

buildings, the schedules of ancient monuments and the controls that regulate them and conservation areas – while English Heritage and the voluntary groups provide the expertise and in many cases the actual physical labour that keeps the heritage together. The local authorities bring the work of Central Government and the voluntary groups together, decide the majority of consent cases and work to protect and enhance the heritage of their local communities."

In Pakistan, the involvement of provincial governments and local authorities should be encouraged.

Although Central Government may continue to carry out conservation work on the important sites and buildings of national importance, Provincial Governments might well become responsible for those buildings of slightly less importance. A proper system of grading might be useful in this respect. The role of the local authorities is very important since most development planning is carried out at this level and conservation planning should be considered together with it and in coordination with the departments of electricity, gas, water-supply and sanitation. Present legislation in the form of the Local Government Ordinance, 1979, provides a significant authority to the local bodies to prepare a Master Plan of their local areas which should, among other matters, provide for -

"a) a survey of the local area including its history, statistics, public services and other particulars;

"b) development, expansion and improvement of any area within the local area; and

"c) restrictions, regulations and prohibitions to be imposed with regard to the development of sites, and the erection and re-erection of buildings within the local area."[11]

All the local authorities are authorised to frame their own building bye-laws and regulations, for example in Lahore there are the Building Regulations of 1984 of the Lahore Development Authority.[12] The appropriate requirements for conservation could be accommodated in such building regulations.

Three further matters concerned with conservation are worthy of mention at this stage.

First, conservation of areas of historic and architectural interest as distinct from individual buildings should certainly now be an integral part of heritage conservation in Pakistan. Settlements should be surveyed so as to identify areas and building groups with special architectural and historical qualities. The task might well be assigned to the local authorities who should designate some of the areas from various historic periods as representative "conservation areas" on the recommendations of Advisory Committees.

Second, the present study of the significant historic buildings in Lahore revealed that 34 percent of them had been lost during a period of almost a century. There is no record of these buildings with reference to their history and architecture except that found in old accounts. It is proposed that a National Heritage Record should be established, which would be a collecting point for information on the historical and architectural qualities of buildings and gardens, preferably in the form of their plans, elevations and sections. The Department of Archaeology could initiate the establishment of such a body with the help of local authorities, voluntary groups and the educational institutions in the country. The Department should also publish information on the listed buildings and on the value of the cultural heritage as a part of general awareness campaign in the country.

Third, on the sites of the demolished buildings, and also on the existing ones, plaques giving a description of the architectural and historical importance and various developments with regard to the buildings should be introduced. The Government has powers under the Land Acquisition Act, 1954, to enable it to make such arrangements. However, responsibility for the installation and care of the plaques should be given to the local authorities.

If more buildings are listed, more funding will be required for maintenance and repair. The funds provided to the Department of Archaeology have progressively increased from 1947 onwards. In 1948, they were Rupees 360,000 and in 1989 they reached[13] Rupees 31,218,000. In addition to the normal annual budget, funds are also provided for special repairs which are sometimes higher than the annual budget. At present it is not the lack of funds, but rather other faults, such as the inadequate policy and insufficient manpower, which are major constraints in conservation work. However, it has already been admitted that if more buildings are to be protected more funds would be needed. Provision of special funds depends on the number of schemes prepared by the Department of Archaeology. It can reasonably be anticipated that if the Department is equipped with proper staff as suggested earlier more funds could be available for special repairs. There are some obvious ways in which to improve the situation with regard to

proper utilization of available funds. The huge amounts which were spent on complete reconstruction such as on the baradari of Mirza Kamran and the tomb of Qutb-ud-Din Aibak should, in future, be used for purposeful repairs. Monuments which have popular tourist appeal generate their own funds and these should be utilized for maintenance and preservation of these very monuments rather than being deposited into the Treasury. However, more money may simply have to be made available for conservation, at all levels, national government, provincial government and local authorities. It is recommended further that, due to the special nature of repair works for conservation, all the funds provided by various tiers of Government should be non-lapsable. In addition, awareness campaigns should be launched for education and involvement of various sections of society in the conservation process and funds should be generated for repair and maintenance of the valuable cultural heritage.

Finally, since any conservation policy can largely be judged on the basis of the degree to which the necessary buildings are actually preserved, it is appropriate to turn to the matter of responsibility for repair and maintenance. Muslim religious buildings form a significant proportion of the existing built heritage of Pakistan. In Lahore, they contributed more than 30 percent of the buildings examined. These buildings are being maintained by the public through their own funds and were found, on the whole, to be in better condition than those being maintained by the Government. A significant point with regard to these buildings, as investigated in this study, is that the public had sufficient commitment to maintain them and was able to generate required amounts of funds. However, a major problem with these buildings is that the repairs have not always been carried out in the proper manner, using original materials and designs, and also that some unrelated additions have been made to them. The repair work on these buildings should be assisted by the provision of proper technical guidance. This should be possible if the building industry is developed as recommended earlier and educational and training programmes are launched for public, craftsmen, professionals and Government.

The study revealed that the largest group of significant historic buildings in Lahore, more than 50 percent of the total existing, was being maintained by various Government Departments. Although the funding for repairs to these buildings comes from the Departments concerned, the repairs should be planned and guided by the Department of Archaeology so as to keep the buildings in their original form. For some encouragement towards maintenance in the proper manner, which admittedly can be expensive, a degree of subsidy might be made available. There were few buildings in the study which were being owned and maintained privately. However, there may be more buildings of this kind in other settlements. Any repairs or additions to such buildings should also be carried out in the proper manner. Guide-lines should be developed and provided to the private owners who might also be given some financial incentives for the proper care of their properties.

The existing arrangements for conservation of historic buildings in Pakistan have not been without their achievements. However, by implementing the recommendations set out in this study, the situation could be significantly improved and the scale of conservation work substantially enlarged. A serious commitment to these matters will not only serve the continued existence of the country's valuable architectural and garden heritage, but will also act as an instrument in terms of the country's identity, respect for its traditions and culture, the education of its citizens and the strengthening of its place and role amongst the developed nations of the world.

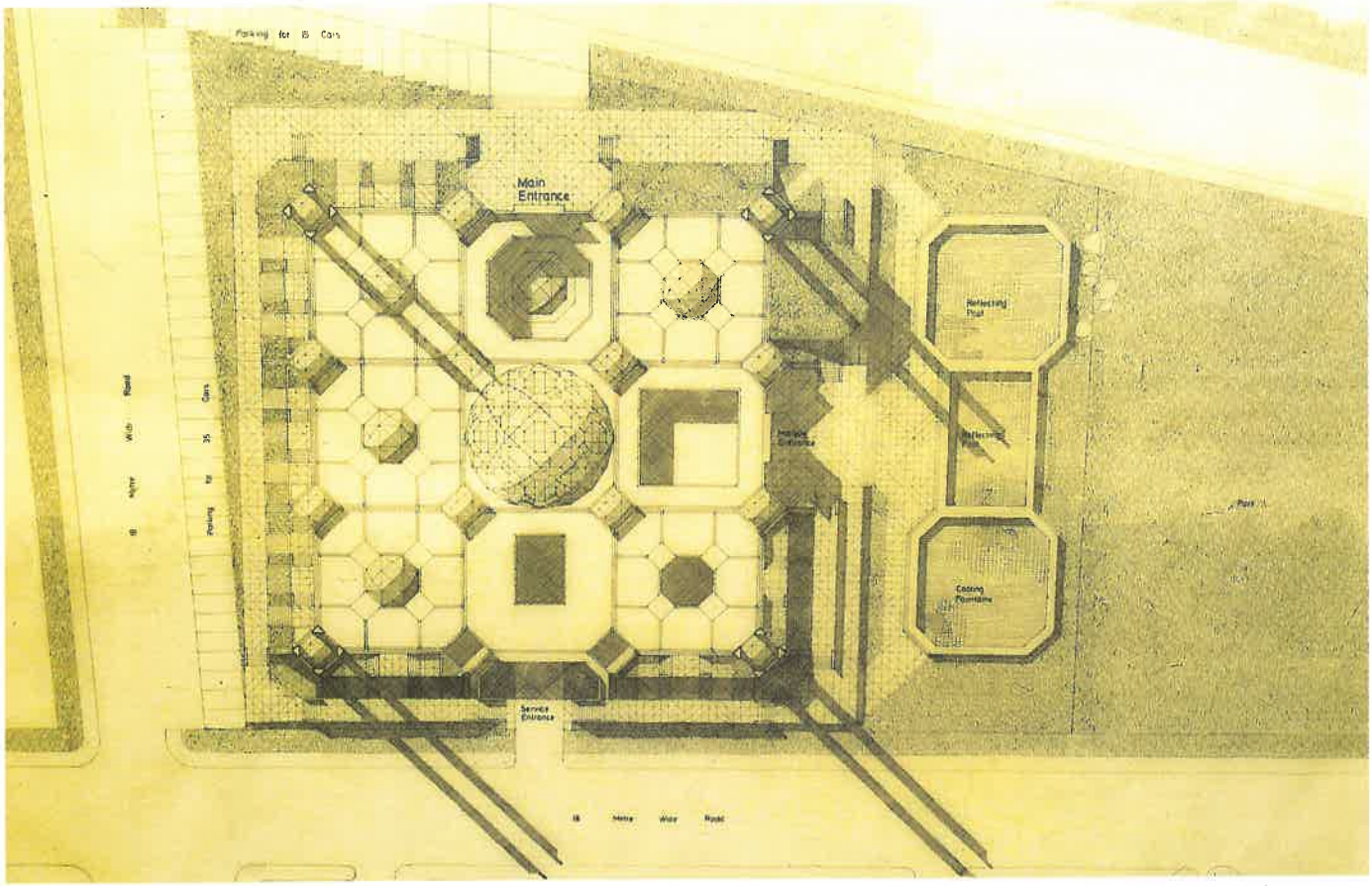
REFERENCES

1. M. Y. Awan, Ph.D. Thesis, *A Study of Significant Historic Buildings in Lahore Leading towards Formulation of a National Conservation Policy for Pakistan*, Sheffield, U. K. University of Sheffield, (1993). (This study is adapted from the author's doctoral thesis to indicate how gardens fit within the context of urban and national conservation policy).
2. B. B. Taylor, "The Walled City, Lahore", *MIMAR 24* (June 1987), pp. 36–39.
3. *Conservation Plan of the Walled City of Lahore* (Lahore), Lahore Development Authority, Government of the Punjab, Lahore, 1988.
4. The *listed monuments* and archaeological sites are those which are declared protected by the Federal Government under the Antiquities Act, 1975 and it is the responsibility of the Department of Archaeology and Museum for their repairs, maintenance and protection under the provisions of the Act.
5. A. N. Khan, Director General of Archaeology, *Archaeology in Pakistan* (Karachi, 1990).
6. *The Antiquities Act, 1975*, Section 22.
7. S. Cantacuzino, *Architecture in Continuity, Building in the Islamic World Today*, Geneva, Switzerland, A publication of the Aga Khan Award for Architecture 1985), pp. 170–177.
8. *The Daily Newspaper "Jang"*, London, 22 January 1992, p. 7.
9. M. A. Chaudhry, *New Local Government Laws in Punjab* (Lahore, 1989).
10. M. Ross, *Planning and the Heritage* (London, 1991), p. 50.
11. M. A. Chaudhry, *New Local Government Laws in Punjab*, op.cit., p. 329.
12. *Building Regulations 1984* (Lahore), Lahore Development Authority, 1984.
13. A. N. Khan, *Archaeology in Pakistan*, op.cit., pp. 59-60.

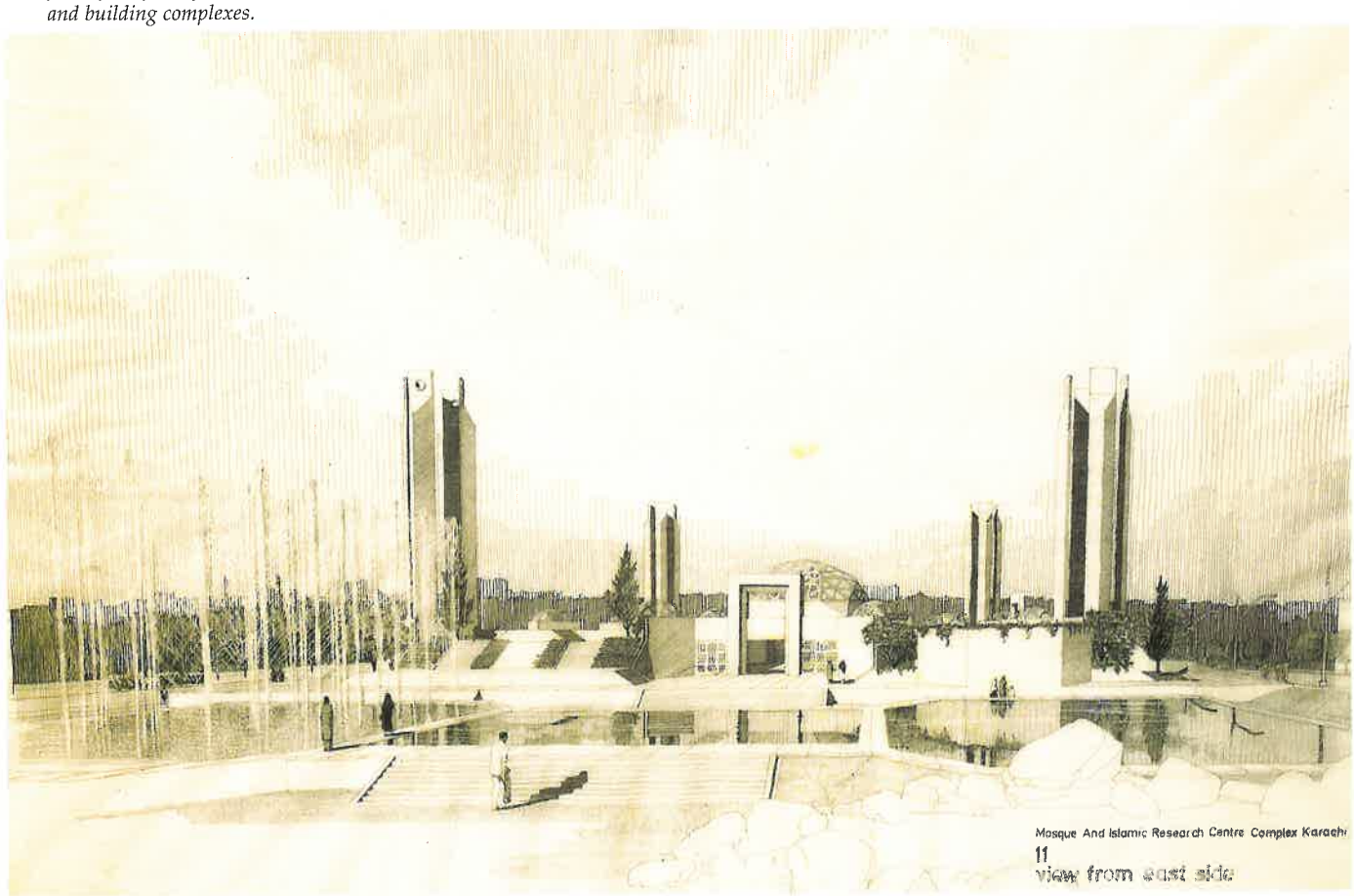
PART III:

IMPLICATIONS FOR PLANNING AND DESIGN

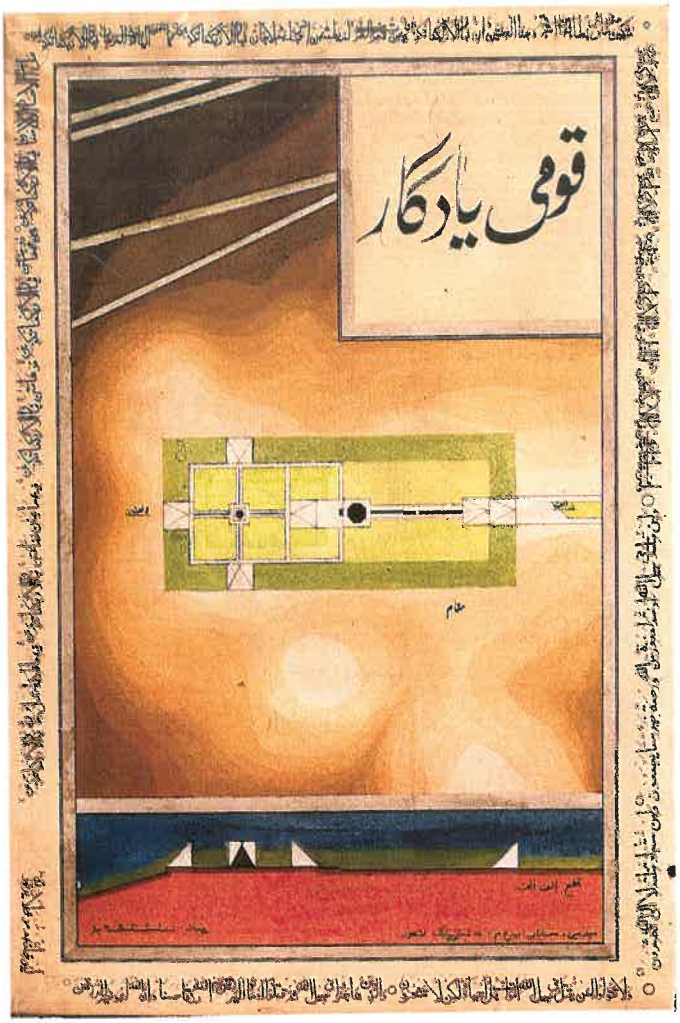
From its beginning, the Mughal garden project included architects, planners and landscape architects. These gardens still, are sources of inspiration for professionals as well as the general public. In addition to its scholarly aims, the project sought to understand the lessons of Mughal gardens, if any, for modern societies and designers. The photographs in the following pages indicate how these concepts can be successfully used in the present times. The architect Kamil Khan Mumtaz has drawn upon historical building and landscape traditions to inspire contemporary design practice – – From the scale of the individual residence to large-scale site planning for schools and urban design. Sajjad Kausar has used the ideas of Mughal gardens in the contemporary residential buildings in Lahore. Elizabeth Moynihan has designed a garden in Jaipur, India based upon her research and excavation of Babur's Lotus garden at Dholpur – to date the only detailed modern replica inspired by a Mughal garden. In the essays that follow, Mahmood Hussain assesses the implications of urban sprawl for the Mughal gardens of Lahore. Naeem Mir explores the geometrical techniques of garden design exemplified at Shalamar garden. Ikram Gelani also looks at Shalamar garden, which he compares with descriptions of Paradise gardens in Al-Qur'an, a method he also recommends for garden design today. Attilio Petruccioli explores issues and concepts of design typology in the relations between cities and gardens through history with an emphasis on the gardens of Kashmir. Finally, this volume ends with an inspiring presentation that was given by Annemarie Schimmel at the beginning of the Mughal gardens symposium on, "floral and garden in the Poetry of Allama Iqbal". These essays point toward future questions about the modern meanings and values of Mughal gardens.



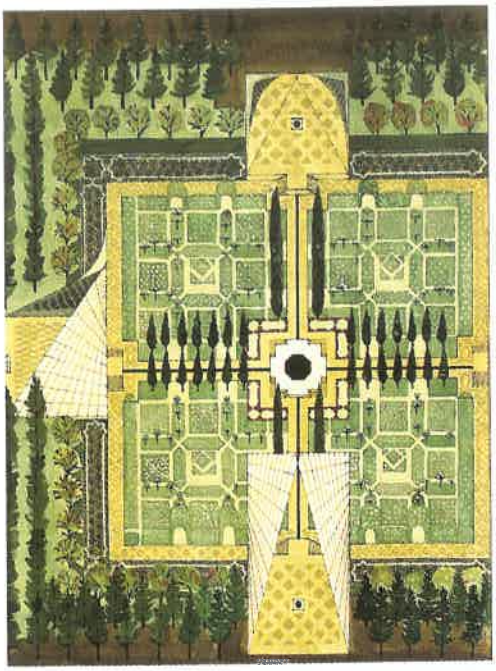
(I)a: Quaid-e-Azam Memorial Library and Mosque, Karachi, c. 1980. This competition design was the first attempt of Kamil Khan Mumtaz to apply the principles of our grand tradition. It suggests the indigenous design vocabulary and use of water as an integral element in the design of architectural spaces and building complexes.



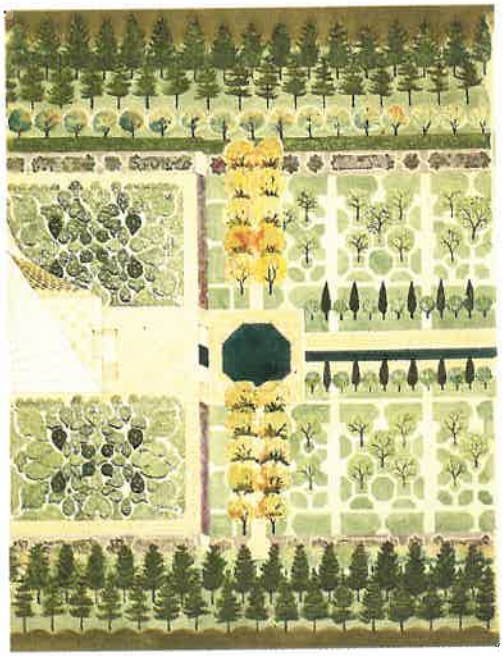
(I)b: Quaid-e-Azam Memorial Library and Mosque, Karachi, c. 1980. Water used for cooling, fountains are incorporated as Landscaping element.



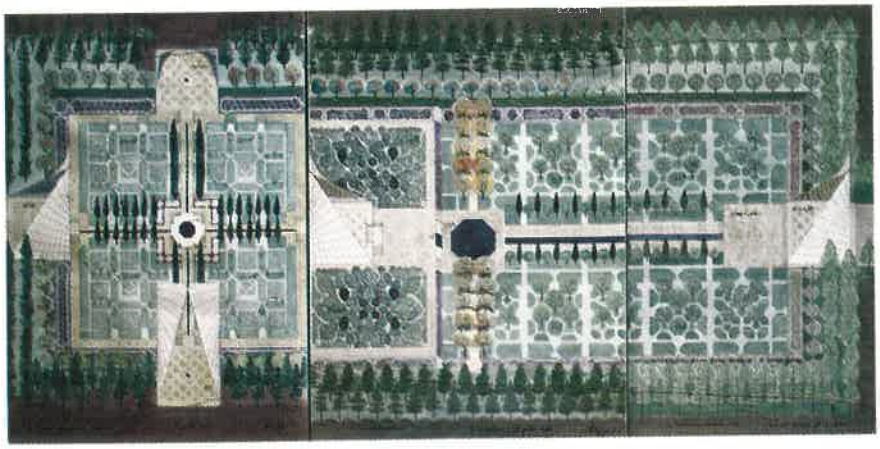
(II)a: National Monument, Islamabad, c. 1983. (Architect: Kamil Khan Mumtaz). This competition design was based upon the "Garden of Paradise".



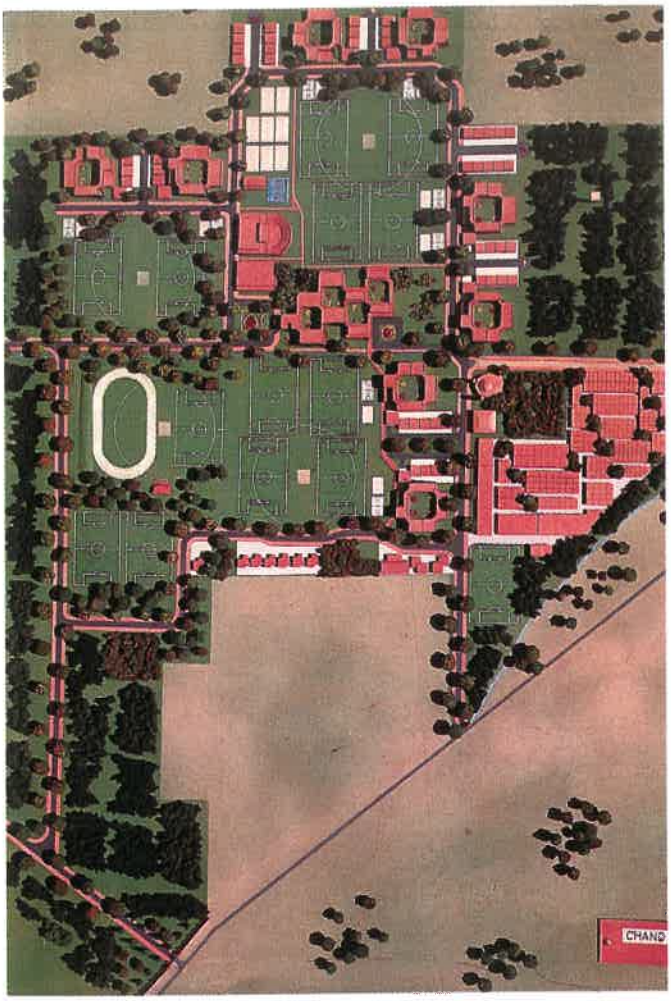
(II)b: National Monument, Islamabad, c. 1983. (Architect: Kamil Khan Mumtaz). Detail of upper terrace.



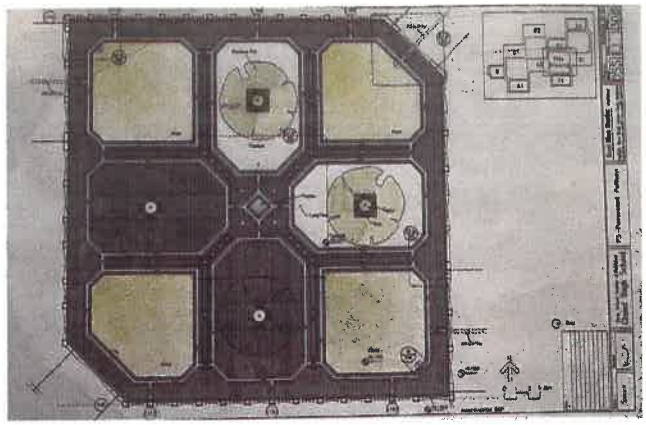
(II)d: National Monument, Islamabad, c. 1983. (Architect: Kamil Khan Mumtaz). Detail of lower terrace.



(II)c: National Monument, Islamabad, c. 1983. (Architect: Kamil Khan Mumtaz). Garden layout.



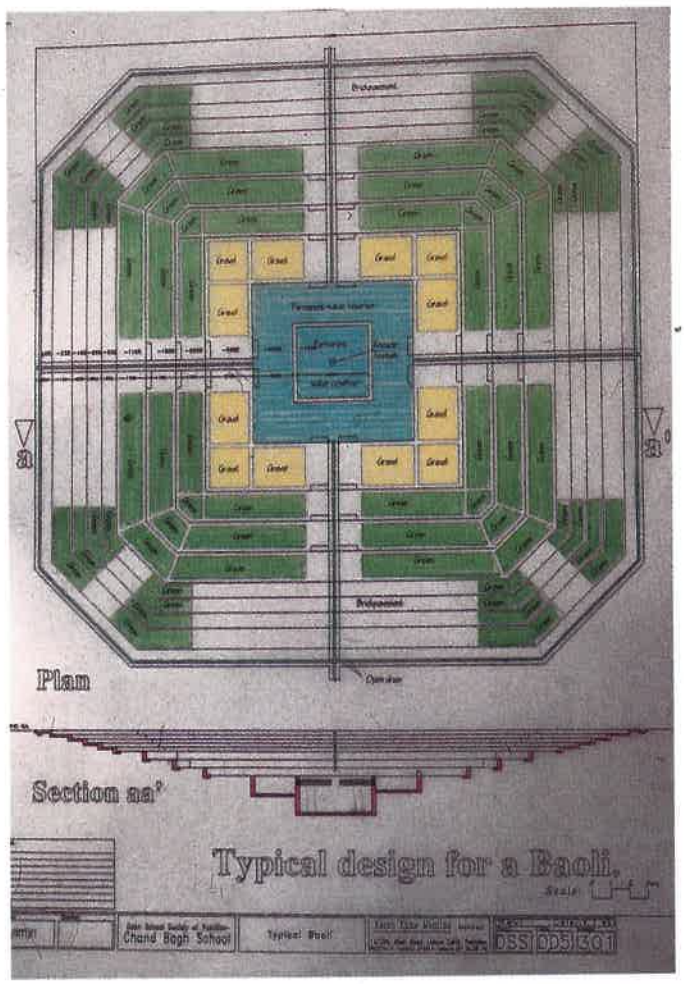
(III)a: Chand Bagh School, Muridke, 1993. (Architect: Kamil Khan Mumtaz). Water, plants, and garden courts form the essential elements of the design. Phase I construction completed.



(III)c: Chand Bagh School, Muridke, 1993. (Architect: Kamil Khan Mumtaz). Paving, planting and water courses in the layout of typical court.



(III)b: Chand Bagh School, Muridke, 1993. (Architect: Kamil Khan Mumtaz). Typical Boarding House.



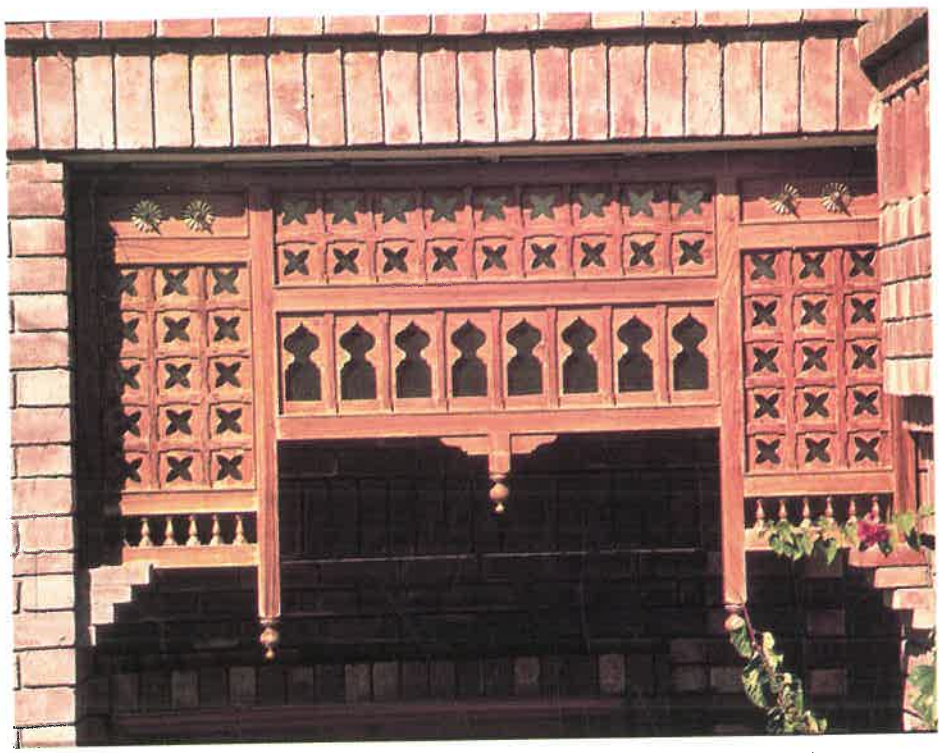
(III)d: Chand Bagh School, Muridke, 1993. (Architect: Kamil Khan Mumtaz). Plan of "Baoli" collection pond.



(IV)a: The Western Facade of Haji Majeed's House 1989. (Architect: Sajjad Kausar)



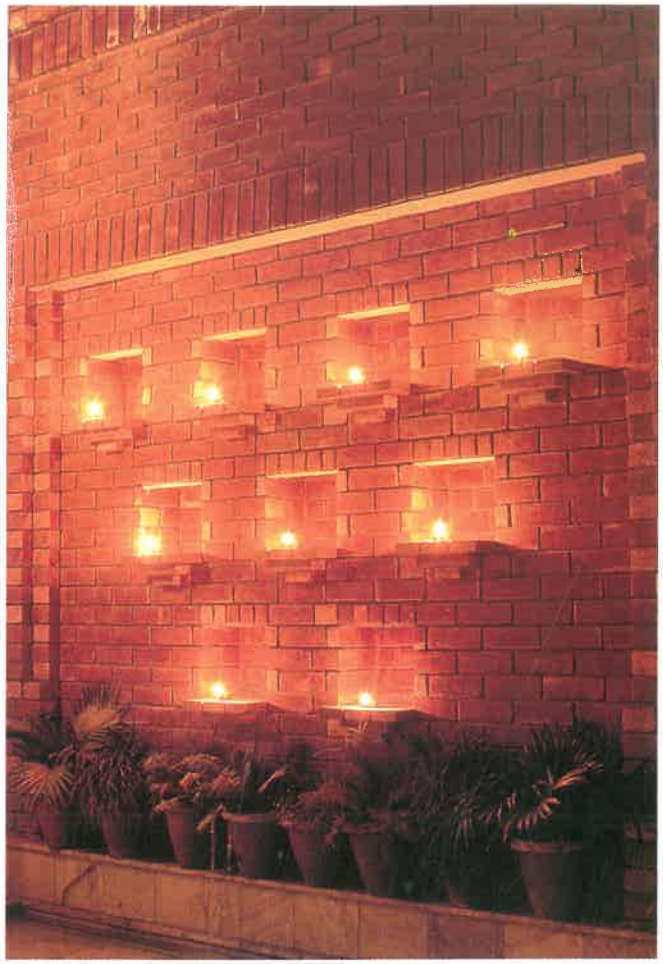
(IV)b: Haji Majeed's House 1989 - View of the Central Courtyard through the Verandah. (Architect: Sajjad Kausar)



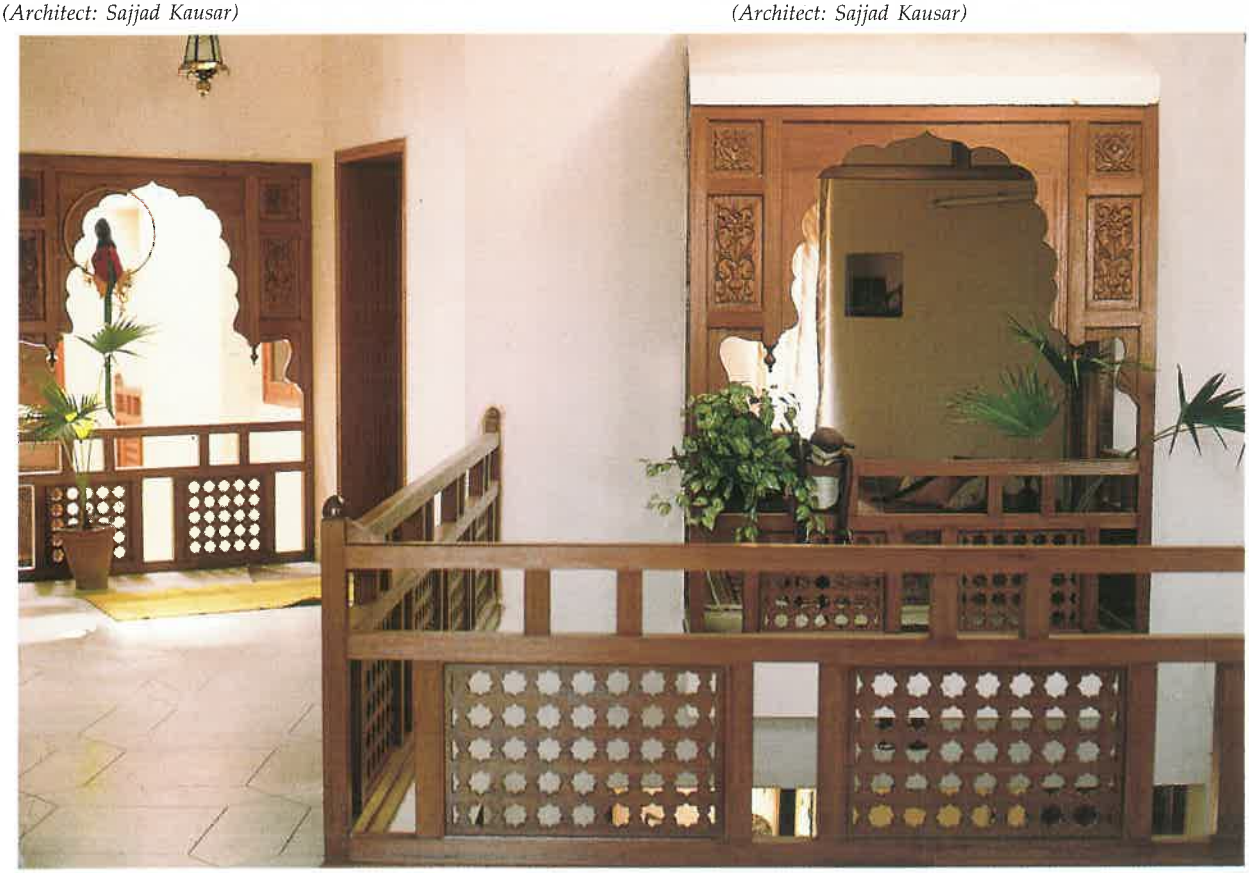
(IV)e: Haji Majeed's House 1989 - Detail of Wooden Screen. (Architect: Sajjad Kausar)



(IV)c: Haji Majeed's House 1989 - The Chini Khana in Daylight. (Architect: Sajjad Kausar)



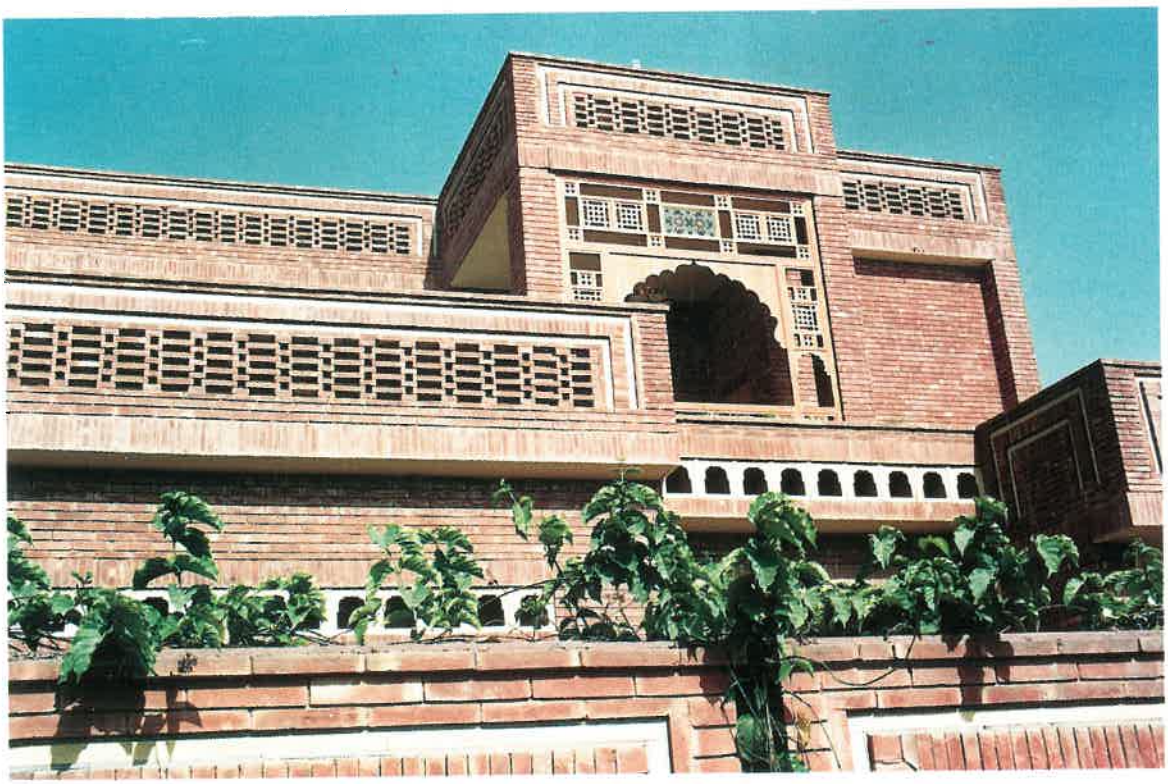
(IV)d: Haji Majeed's House 1989 - The Chini Khana at Night. (Architect: Sajjad Kausar)



(V)a: S. M. Rizvi's House 1989 - View of Wooden Jharokas and Railing. (Architect: Sajjad Kausar)



(V)b: S. M. Rizvi's House 1989 - View of Bubbling Fountains and Jharoka. (Architect: Sajjad Kausar)



(VI): Khalid Rafiq's House 1992 - The Western Facade. (Architect: Sajjad Kausar)



(VII)a: Lotus Garden: Central Lotas Pool, "Blossom".



(VII)b: Jai Mahal Palace: Central Pool, "Blossom". (Architect: E. Moynihan)



(VIII)a: Lotus Garden: Lotus Bud Pool.



(VIII)b: Jai Mahal Palace: Lotus Bud Pool. (Architect: E. Moynihan)



(IX)a: Lotus Garden: Double Water Chute.



(IX)b: Jai Mahal Palace: Water Chute. (Architect: E. Moynihan)

CONSERVATION OF GARDEN SITES AND URBAN SPRAWL IN LAHORE

MAHMOOD HUSSAIN
Department of Architecture,
University of Engineering and Technology, Lahore, Pakistan

INTRODUCTION

Throughout the history of mankind, human beings have contributed to nature in general and landscape in particular. The exploitation of nature by man started from the very initial stages of mankind. This is how many landscape sites were created in various parts of the world including the hanging gardens of Babylon, the Japanese gardens, and the Mughal garden in the sub-continent of India and Pakistan. The classic example of one such Mughal garden, Shalamar, still exists in Lahore.

The Islamic world is immensely rich in cultural and architectural heritage. It has a large number of archaeological sites, innumerable individual standing monuments and scores of garden sites. Some of these garden complexes are still in good condition and are being used as gardens while most others are in the process of deterioration, and many have disappeared with time.

LAHORE, THE CITY OF GARDENS

Lahore is one of the few cities where a large number of gardens were created during the Mughal and the Sikh period. These were either built by Mughal emperors or by their regional/provincial rulers. A few of these still exist today though most are in ruins or have disappeared.

The first of the Mughal gardens in Lahore was built by Kamran Mirza, the son of Babar, on the north-west of Lahore on the bank of river Ravi. A part of one of the structures within the garden still exists and is known as Kamran's Baradari. Chughtai (1963) writes that in the vicinity of this garden, there existed a number of other gardens known as Dilamez, Dilaram and Dilkusha which do not exist today. These garden sites, located towards the north-west of Lahore, were used as halting places before entering or leaving Lahore for north/north-west journeys. Similarly a complex of gardens towards the east of Lahore were used as halting places for journeys eastward, to or from Delhi. The garden complexes on the east of Lahore included the famous Shalamar Garden built in 1642. Two large gardens called Anguri Bagh and Inayat Bagh were built in the south and Mehtabi Bagh towards the north of Shalamar garden. Of this complex only Shalamar garden remains, the other three have disappeared.

The route from Shalamar garden to the Lahore Fort was a primary corridor of royal patronage and power in the Mughal period. The road passing through Faiz Bagh, Sultanpura, Ghorey Shah, Begumpura and Baghbanpura was all lined with gardens built either by Mughal emperors or other regional rulers under them. A 19th century map shows this road as a continuous strand of gardens. A look at the map (Fig. 1) will enable the readers to imagine this road of gardens as it may have existed in the Mughal days.

THE GULABI BAGH COMPLEX

The complex of gardens which existed somewhere in the middle of the route from Lahore Fort to the Shalamar garden is called the Gulabi Bagh complex. The various descriptions given by different historians reveal the dates of construction of these gardens as the mid 17th century, after Shalamar which was built in 1641. The three gardens and their structures were constructed as below:-

(i)	Gulabi Bagh	1655
(ii)	Ali Mardan Complex	1656
(iii)	Saruwala Maqbara	1745.

The Gulabi Bagh, like so many other gardens, has disappeared and only a gateway which was the entrance to a pleasure garden exists today. The garden was built by a Persian noble Mirza Sultan Beg who was the Amirul Bahr (Admiral of Fleet) in 1655. It has

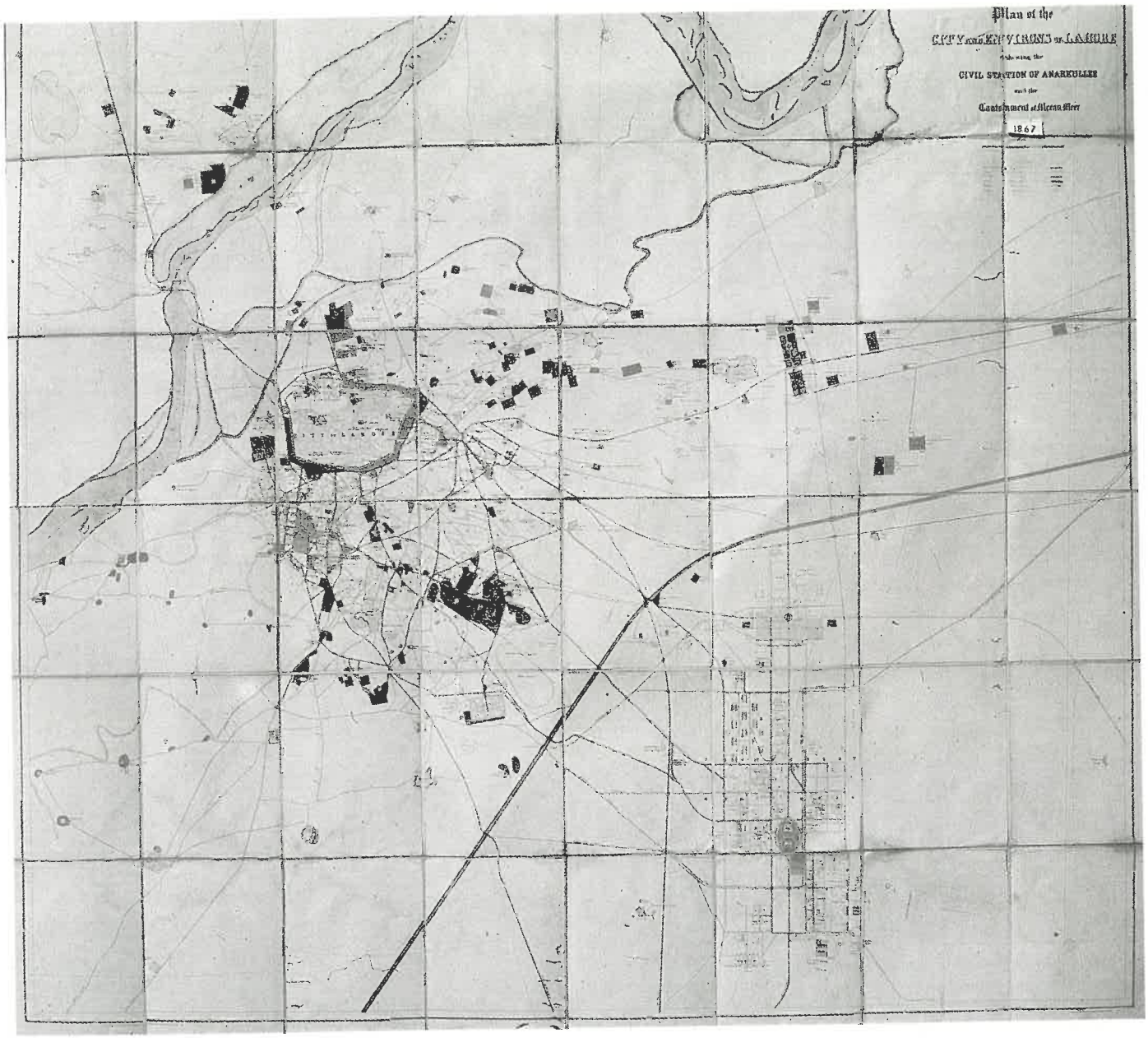


Fig. 1: Garden sites of Lahore as existed in 1867.

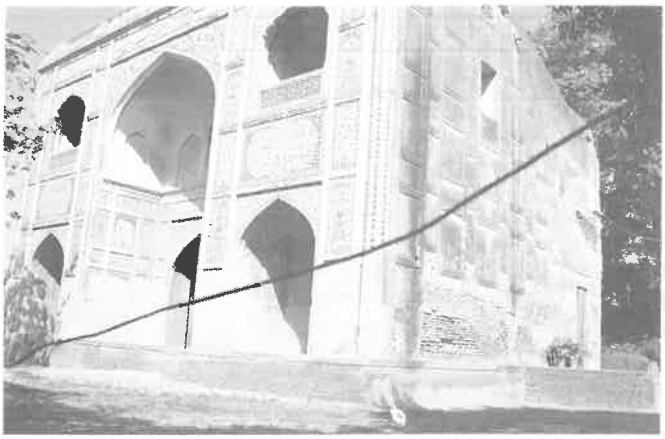


Fig. 2: The gateway to Gulabi Bagh (the only surviving structure).

been described by many historical writers as a big garden with beautifully decorated pavilions on all four sides and a baradari in the middle with a couple of wells for irrigation purposes and for fountains. These structures and the wells existed until 1900.

This gateway, (Fig. 2) the only surviving structure is notable for its excellence in rich and vivid mosaic tile work and superb calligraphy on a plaster

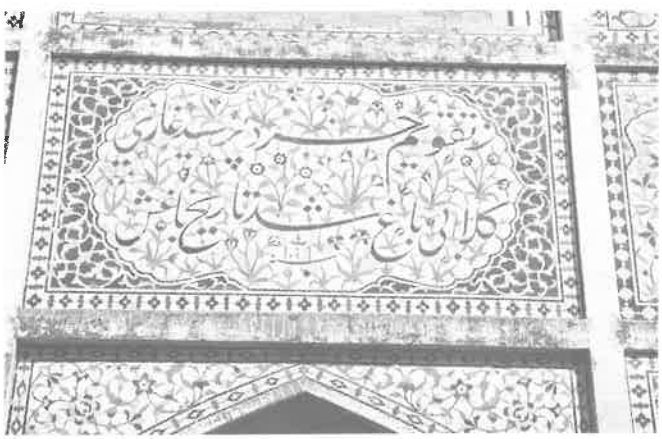


Fig. 3: The mosaic tile work and calligraphy.

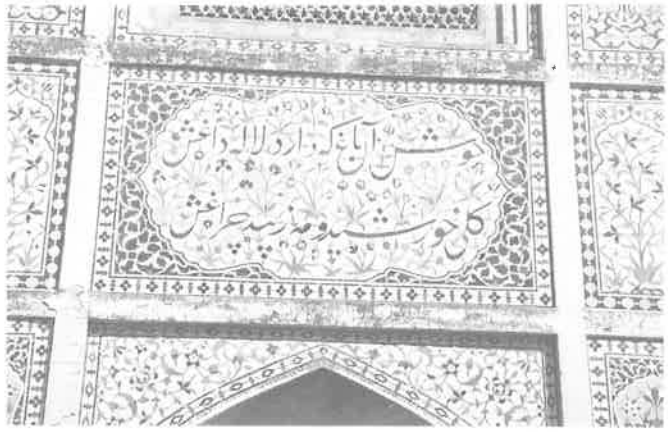


Fig. 4: Inscriptions on the gateway.

base. The title, "Gulabi Bagh" (Rose Water Garden) occurs in the last line of the inscription over the archway which not only describes the kind of the garden it was, but also gives the date of its construction as 1655 A.D. According to Wheeler (1950), the title inscriptions are translated as, "what a pleasant garden, a garden so beautiful that the poppy is marked with the black spot (spot of the envy), the flowers of the sun and the moon are fitted to adorn it as lamps." Lal (1884) has also described this garden as the one where roses and flowers were found all the year round. One can well imagine that the complex must have had all sorts of romantic associations for many people (Figs. 3 & 4).

The pavilions, the baradari and other buildings of Gulabi Bagh have disappeared except the tomb of Dai Anga, the wet nurse of Shah Jehan. This mausoleum lies behind the Gulabi Bagh gateway within the site of the former garden. The Quranic inscriptions on the walls of the tomb chamber give the date as 1671 A.D. which seems to be the year when the tomb was constructed (Fig. 5).

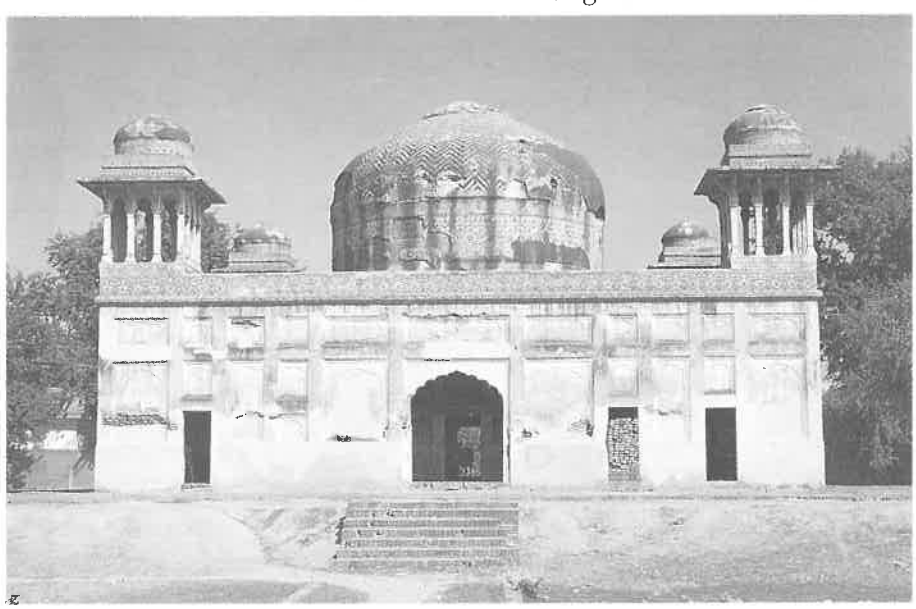


Fig. 5: The tomb of Dai Anga within the premises of Gulabi Bagh.

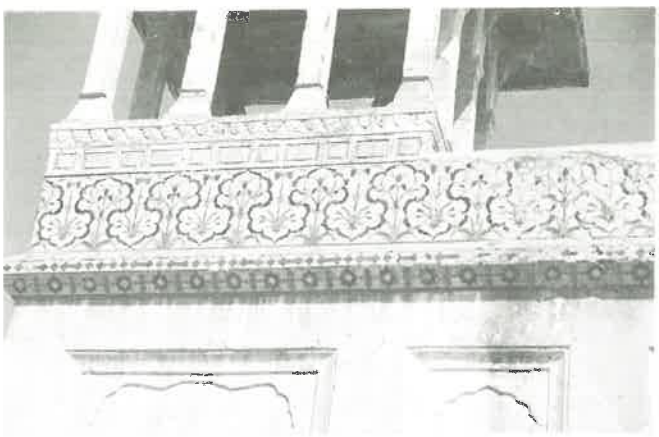


Fig. 6: Decorated mosaic work on the tomb of the Dai Anga.

Square in plan and built in brick, the tomb stands on a low platform under which lie the actual burials in a sub-terranean chamber. It consists of a central tomb chamber and eight rooms around it, which were once beautifully decorated with mosaic work. The roof bears a low pitched dome on a high neck and a square kiosk in each corner supported on slender brick pillars (Fig. 6). The main dome as well as the domes of the pavilions were tiled in a white and dark blue zig zag pattern which has now almost entirely disappeared.

Towards the south of Gulabi Bagh and lying on the same axis of the Gulabi Bagh gateway and the tomb of Dai Anga is another imposing monument called the tomb of Ali Mardan Khan (Fig. 7). According to Khan (1964), Ali Mardan Khan, the governor of Kashmir and Punjab during 1639, who will be remembered for the execution of engineering and public works including the Shah Nahr (canal) for Shalamar Garden, Lahore, died in 1656 and was buried by the side of his mother in her tomb which once stood in the midst of a garden. This garden has now totally disappeared with the exception of a northern gateway. This gateway gives an idea of the excellence of enameled tile work and its refined patterns.

The Mausoleum, octagonal in plan with massive brick construction and a high dome, stands on an eight sided podium. From what remains now, it appears that the dome was finished with white marble inlaid with floral design in black marble. The enameled tile mosaic work on this monument is missing now.

Lying towards the north of the Gulabi Bagh gateway and the tomb of Dai Anga but slightly displaced from the axis of the former three buildings is a solid tower-like tapering brick structure (Fig. 8). The structure, surmounted by a four sided pyramidal low dome carried over by a low neck is the tomb of Sharfun Nisa Begum, the sister of Nawab Zakariya Khan surnamed Khan Bahadur Khan. This tomb is generally known as "Saruwala" Maqbara (the cypress tomb - the names taken from its ornamentation of cypress, four on each side intercepted by smaller blooming flower plants all in enameled tile mosaic work on plaster base) (Fig. 9).

This tomb is one of the last of the monuments of the Mughal period built in Lahore in 1745 A.D. It is different from most other tombs because the burial chamber is on the top (instead of being in the basement) at a height of about 15 feet approached by a removable ladder. The idea appears to be, to keep the actual grave of the lady out of sight.

According to Latif (1892) the tomb was formerly surrounded by a beautiful garden and tank - now totally disappeared. Khokhar (1982) has also stated



Fig. 7: The tomb of Ali Mardan Khan within the railway workshops.
Only the dome is visible from a distance.



Fig. 8: The tower like structure of Saruwala Maqbara.

that a garden in Mughal style was originally created around the tomb. The garden measuring 219 feet x 219 feet, had a baradari on the west and two big tanks with fountains on the east and north.

The close proximity of this garden with the Gulabi Bagh garden suggests that both may have had a common wall towards the south of this tomb. Fig. 10 shows the relative location of all the four structures and the probable garden sites in the area. The location of Gulabi Bagh gateway, the tomb of Dai Anga and the Saruwala Maqbara have been taken from the plans prepared by Survey of Pakistan and the location of the tomb of Ali Mardan Khan is based on field observations.

THE URBAN SPRAWL WITHIN AND AROUND GARDEN COMPLEXES

Unfortunately, the Mughal sites in Punjab were extensively damaged during the Sikh period. The situation in the Colonial era was no better, but after the partition of the Indo-Pakistan sub-continent in 1947, the huge influx of refugees from India encroached upon whatever open spaces were available within the urban limits of Lahore and added to the deteriorating condition of these sites.



Fig. 9: The ornamentation on the Saruwala Maqbara.

Later construction works by these encroachers blocked or interfered with many desirable views of whatever little exists. The Gulabi Bagh gateway, the Saruwala Maqbara and the tomb of Ali Mardan Khan and their gardens are the best examples to show the havoc played upon this treasure by encroachers (Fig. 11). The tomb of Ali Mardan Khan has totally been surrounded by railway workshops and can only be approached through a long narrow tunnel. In spite of its massive and imposing structure and the large height, one can only see the dome of the structure from a long distance (Fig. 12). Although one would agree that it will be difficult to intervene and clear up the premises from encroachers, efforts should be made to stop this process to avoid further deterioration of the historic precincts.

PRESENT STATE OF OUR CULTURAL PROPERTY

The above study describes one of the garden complexes of Lahore called the Gulabi Bagh which was created in Lahore during the middle and late Mughal period. A first glance at the garden complex suggests that this must have been a part of a larger complex, and only the remnants exist now. The garden complex does not exist today in its original form. This study raises a number of pertinent questions about our economic and cultural values which have led to the degradation of our cultural heritage, (Fig. 13) and particularly the dramatic decrease in the number of gardens in the last fifty years. The area within and around garden complexes has been extensively encroached upon. The study also raises questions about the conservation/repair-work of what remains now and the maintenance/reconstruction of the original setting of this and other garden complexes. Another important question to ponder for the professionals is to analyse how can we create/contribute to a re-awakening/awareness about the importance of such green pockets in a democratic society.

The state of conservation in Pakistan can be regarded as similar to other developing countries, such as India, Malaysia, Iran or Egypt. The obvious reasons are the lack of awareness in the public about the cultural value of this property, the apathy of the professionals in the Department of Archaeology and the limited financial resources available. This has further been aggravated by the mass scale immigration at the time of partition of subcontinent in 1947

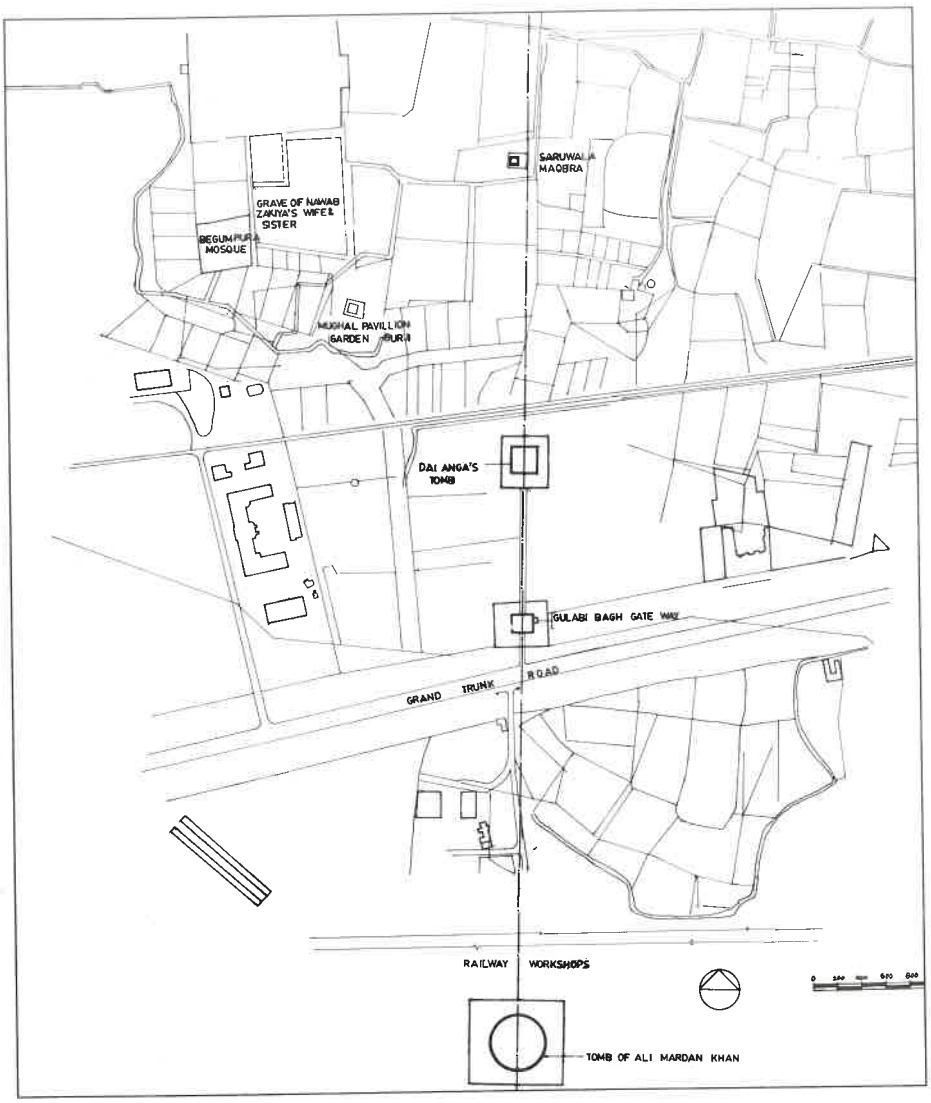


Fig. 10: General disposition of buildings in the garden complex (taken partly from the Survey of Pakistan plan and partly based on field observations).

and the fact that Lahore, being close to the border, was the hardest hit.

This country which is so rich in its cultural heritage has not come up to the expectations needed to keep up this treasure. It may not be out of place to present a few statistics to show the present state of our cultural property. The country's past 500 years of history produced innumerable ancient sites and monuments of historic, cultural and architectural value; but unfortunately a very small number, only 355 of these sites and monuments, have been listed by the Department of Archaeology in the entire country. Of this list 232 are monuments and 123 archaeological sites. This number is very small as compared to the large treasure known to exist in this part of the world. A study conducted for L.D.A. for prepar-



Fig. 11: The encroachments within and around garden complex.



Fig. 12: The encroachments around the tomb of Ali Mardan Khan.



Fig. 13: A typical example of the state of disrepair, Gulabi Bagh gateway.

ing a Conservation Plan for the walled city of Lahore by Pakistan Environmental Planning and Architectural Consultants (PEPAC) between 1986–88 has suggested that the walled city alone has 4000 structures of architectural importance.

In fact there are innumerable sites/structures which have never been identified or visited by the professionals concerned. In reality, if serious efforts are made, this number will run into thousands. One can well imagine the state of monuments and sites which have been left to the mercy of the general public. A case, therefore, exists for increasing the number of listed properties in the country and also think of saving whatever remains from the havoc of urban sprawl.

Recently a study has been conducted by Awan (1993) for the buildings of historic and architectural value located in the city of Lahore only. On the basis of literature survey, he selected a total of 283 buildings of value which existed in Lahore in 1892. These included 56 listed and 227 unlisted buildings. The study revealed that during the one hundred years between 1892–1991 a total of 91 buildings/premises have totally disappeared, and another 6 had virtually collapsed with very few remains. The remains of these six buildings cannot neatly be recognized as part of the significant structures of which they are remnants and are not able to be repaired. This represents virtually a loss of one such property per year, and cumulatively, a loss of 34% of our cultural heritage over the last 100 years.

The study and analysis done by Awan in respect of garden sites presents an equally bleak picture. The analysis shows a demolition rate of 87.5% with respect to gardens as thirteen of the sixteen gardens have completely vanished and another one virtually collapsed. Only two of the sixteen gardens exist and are being used as such today. The situation is no better in case of listed garden sites. According to this study only six garden sites were listed by the Archaeology Department in Lahore and over the last one hundred years four of these have been completely demolished and are virtually collapsed, the rate of demolition being 83.33%. Awan (1993) also refers to the state of affairs in the last twenty five years by sharing that an average of one building has been lost every three years from 1968-1991. Though these figures of the last twenty five years do not directly or exclusively relate to garden sites, this rate must give a cause of concern. This trend also indicates a failure of the government of Pakistan as well as an indifference shown by the related professionals towards this cultural property.

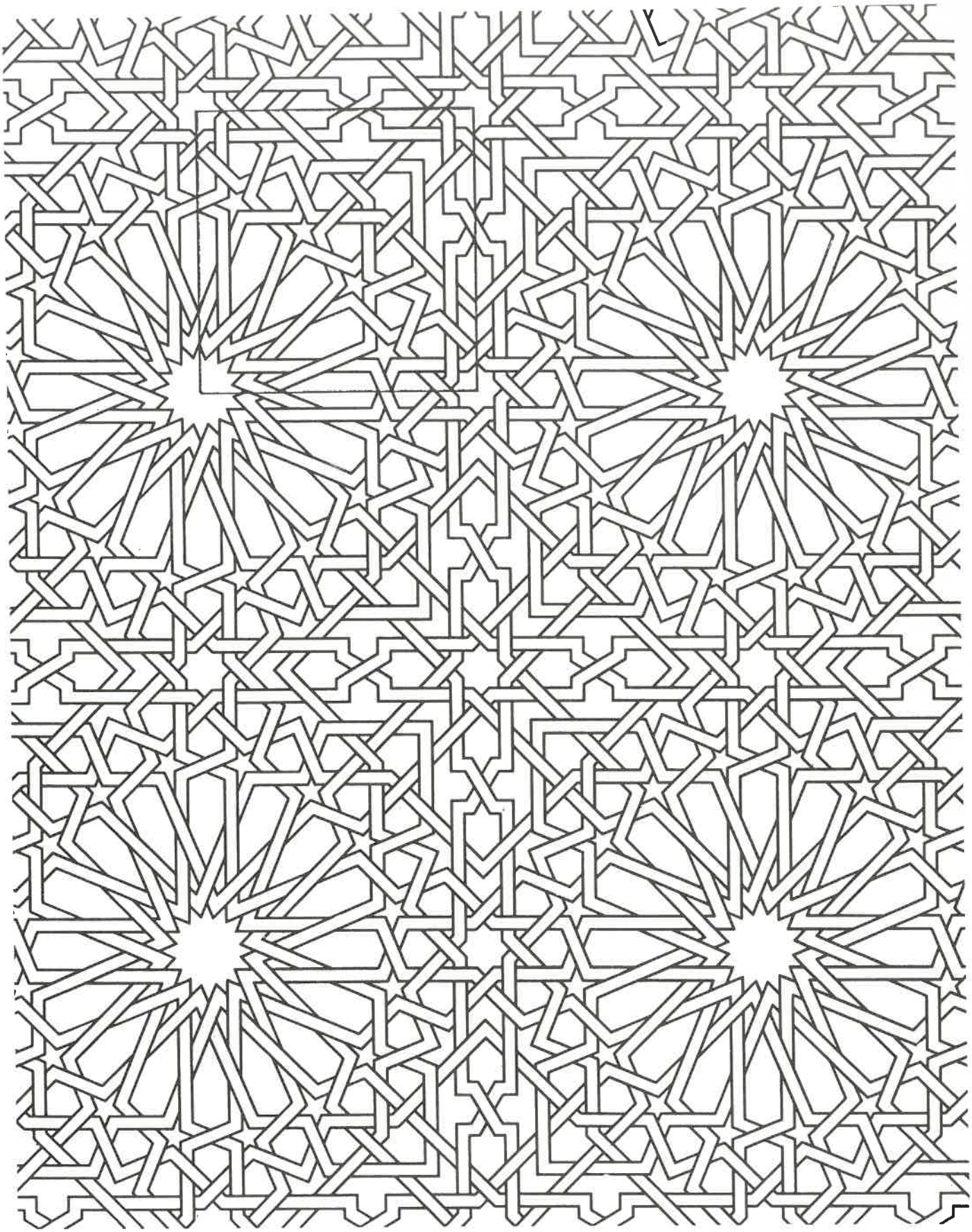
MAINTENANCE OF ORIGINAL SETTINGS

The maintenance of the original setting of historic premises is an important matter, but as a result of the very little attention from government and the professionals, garden conservation has remained neglected. This has resulted in the Mughal gardens and their surroundings being heavily encroached upon and modified over time. With the increasing population and the urban sprawl of Lahore, many deteriorating premises were occupied by immigrants either from India or from the rural areas, thereby accelerating their pace of decay and deterioration.

Even though legislative provisions do not allow new construction within a distance of 200 feet from the boundaries of such historic premises, it has never been implemented. The need to change the act with the changed circumstances and to bring about its proper implementation is the need of the day.

REFERENCES

1. M. A. Chughtai (1963), *Fun-e-Taamir*, West Pakistan Publishing Company, Pakistan, p. 87.
2. R. E. M. Wheeler (1950), *Five Thousand Years Of Pakistan*, Royal India and Pakistan Society, London, p.....
3. K. Lal (1984), *Tarikh-e-Lahore*, Sang-e-Meel Publications op.cit., p. 310.
4. M. W. Khan (1964), *Lahore And Its Important Monuments*. Department of Archaeology, Government of Pakistan, Lahore, pp. 62-63.
5. Latif (1892), *Lahore, Its History, Architectural Remains And Antiquity.*
6. M. H. Khokhar (1982), *Pakistan Journal of History and Culture*, Vol. III No.1, Jan–June 1982.
7. M. Y. Awan (1993), *A Study of Significant Historic Buildings in Lahore leading towards Formulation of a National Conservation Policy for Pakistan*, Ph.D. Thesis, Sheffield, U.K.



Geometric pattern used in Mughal Gardens.

SHALAMAR GARDEN, LAHORE
THE OTHER SIDE OF THE SQUARE

MUHAMMAD NAEEM MIR
Department of Architecture,
University of Engineering and Technology, Lahore, Pakistan

GEOMETRY AND DESIGN

The significant role played by geometry in the design of Islamic architecture has long been recognized by scholars. Particularly during the last three decades of this century several practicing architects, from the Muslim world and from the West, have made significant comments on the iconographic *meaning* and cosmological *symbolism* in Islamic art and architecture. In such works as Critchlow (1969), El-Said and Parman (1976), Ardalan and Bakhtiar (1987), the tendency to *poeticize* and *mystify* geometry has been predominant.[1] We shall note here the views of E. B. Moynihan regarding the geometry and design of Mughal Gardens as an example:

> The Mughals loved symbolism, and it was an important consideration in their garden design. Superstitious as well as religious, some of the emperors sought guidance from the stars and occasionally built their charbaghs to conform to the number of planets, or signs of the Zodiac. .....eight was another number with special meaning for Mughals, and the octagon was a favourite design in their early gardens for pools and platforms and even pavilions, although Shah Jahan usually used the square. The octagon as the circle squared – the circle symbolizing eternal perfection, the square symbolizing earthy order – represented man's wish for order.[2]

While it is probable that geometric designs are imbued with a *sacred content* and *cosmological symbolism*, it seems unlikely that the creators of these designs: the architects, master builders, and craftsmen, would have had these properties uppermost in their minds. Rather they would be following the teachings of their masters and the traditional skills of their profession and would no doubt have left to others the *interpretations* of their creations. Let us also put these interpretations to one side for a while and consider geometry as the *technical* means to achieve the spatial organization of Mughal designs.

The geometric basis of Mughal design is apparent in many facets of their architecture: in the proportions of spatial design, in the creation of three-dimensional geometric 'objects' (stellate vaults and *muqarnas*) and in two dimensional surface decorations. A few general remarks should be made about the significance of this design system. Essentially, it is a system of proportions based on a limited number of geometric progressions, but with wide ranging additive qualities, giving it great flexibility. The Mughal system of proportions, which utilizes both commensurable and incommensurable numbers ($\sqrt{2}$, $\sqrt{3}$, $\sqrt{5}$ and like), is based on the geometric properties of the square.

We shall follow the assertions made by the Muslim scholar Bulatov from Uzbekistan in his 1988 work, *Geometric Harmonization in Islamic Architecture*. This work is the first and the only one, so far as we know, in the midst of a whole generation of scholarly works from Critchlow (1969) to Walls (1991) and numerous unpublished theses, to demonstrate that architectural geometry is related more to mathematics than any other branch of learning, such as, astronomy or cosmology. Furthermore, geometry and mathematics are complementary to each other; and geometric designs are more scientific than mystical at least in the *practice* of architecture. Bulatov (1988) has quoted al-Farabi, the renowned mathematician and geometer of the thirteenth century, that:

> ...the sides of the square and the segment of a circle serves as the measuring instrument in architecture ...and are analogous to the syllogism in logic, the strophe in poetry.[3]

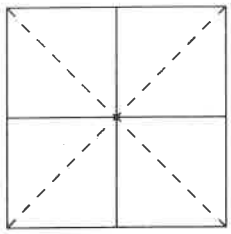
Our geometric analysis of Mughal buildings is based on this view projected by Bulatov in his 1988 works that geometry and mathematics are comple-

mentary to each other. Geometry provides a means to achieve the range of proportions involving incommensurable numbers, which are impossible to achieve by other conventional techniques of drawing. Although the square, as a figure, has a wide range of additive and transformative properties we shall discuss only two of these; the equal and variable subdivisions of the side of a square and its transformation into an octagon. These will be applied to analyze the proportions of Shalamar Garden and in more general terms to reconstruct the probable method of disseminating architectural ideas on paper, and on the site, that may have been employed by the Mughal architects.

Equal Subdivisions of the Square

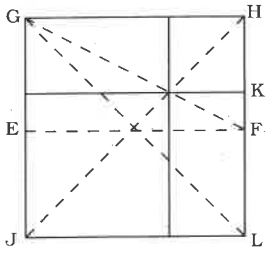
Technique 1

Dividing the side of the square into halves.
Draw the diagonals; then draw a horizontal and a vertical line through junction of these diagonals.



Technique 2

Dividing the side of the square into thirds.
Draw the diagonals, then a horizontal line 'EF' through the junction of diagonals creating two rectangles. Draw the diagonal of this rectangle 'GF'. Draw a horizontal line through junction of 'GF' and 'HJ' the diagonal of square, 'HK' is $\frac{1}{3}$ of the side of the square.

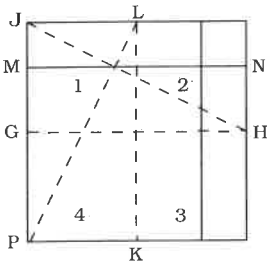


Technique 3

Dividing the side of the square into fourths.
Repeat the division into halves, **Technique 1**.

Technique 4

Dividing the side of the square into fifths.
Divide the side into halves, creating four squares within. Draw the diagonal of the rectangle comprising squares 1 and 2, 'JH'. Draw the diagonal of the rectangle comprising square 1 and 4, 'PL', Draw a horizontal line 'MN' though the junction of 'JH' and 'PL'. 'JM' is $\frac{1}{5}$ of the side of the square.

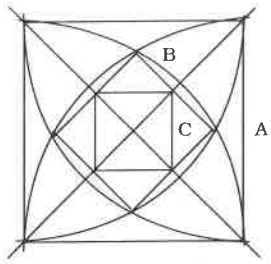


By using combinations of these geometric techniques we can divide the side of a square into many desired numbers of equal subdivisions. The exceptions to this approach include the following odd numbers and their multiples: 7, 11, 13, 14, 17, 19, 21, 22, 23, 26, 28, 29, etc. No other figure has this property of subdividing itself into equal parts with such simple geometric operations. This has provided a useful technique for creating architectural spaces into required proportions.

Variable Subdivisions of the Square

Technique 5

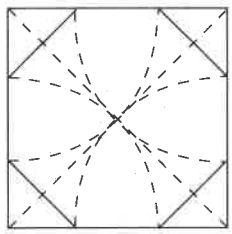
Within the square A, strike four quarter circle arcs taking each corner of the square as the center and each side as the radius. Joining the intersection of these arcs, draw a diagonally placed square B. Joining the mid-points of the sides of the square B, draw square C.



Side of square B = Side of square A - {(2- $\sqrt{3}$) (side of square A)}
Side of square C = $\frac{1}{2}$ diagonal of square B.

Technique 6

Transforming the square into a regular octagon. Draw the diagonals. Taking one of the corners as the center and half of the diagonal as the radius strike a quarter circle touching adjacent sides of the square. Repeat the operation on all four corners.
This creates eight points on the sides of the square. Join these points to make an octagon.



APPLICATION TO THE PLAN OF SHALAMAR GARDEN

The plan of the Shalamar Garden is a rectangle measuring some 2009 feet by 876 feet, and is defined

by boundary walls. This enclosure houses three terraces separated by differences of level. The upper and lower terraces are square in shape each side measuring 876 feet, while the middle terrace is rectangular measuring 876 feet by 256 feet 7 inches. The upper and lower terraces have similar subdivisions; four equal squares separated by paved water channels 18 feet 6 inches wide, flanked by 21 feet 3 inch wide walkways and punctuated with fountains at regular intervals. At the crossing of these water channels the flanking walkways are extended outwards by 17 feet 6 inches and a square water tank measuring 62 feet 6 inches, on one side, has been created in the center (Fig. 1 Plan).

The middle terrace is itself divided into three equal parts, each measuring 293 feet wide. The central portion is 7 feet higher than the other two and contains a large water tank with pavilions on three sides and a grand waterfall on the side adjoining the upper terrace. The two other parts are further subdivided into six rectangles by a set of three water channels.

The Coordination of Dimensions on the Middle Terrace

To calculate, and understand, the width of the middle terrace, apply Technique 6 and develop an octagon within the square. We know the mathematical relationship between the side of the enclosing square 's' and the side of the octagon 'a';

a = 0.415 x s

in the present case 's' is 876 feet.

a = 0.415 x 876 = 363.54 feet.

Dimension 'c' of the remaining two equal parts of the side of the square can now be calculated by subtracting the side of the octagon from that of the square and then dividing the result by two. Thus:

c = (s-a)/2 = (876-363.54)/2 = 256.23 feet.

This compares with the actual measurement of 254.58 feet; the difference of 1.65 feet represents an error of 0.64% (Fig. 2).

The Division of the Central Rectangle

Apply Technique 2 to divide the side of the square into three parts. Project these into the rectangle and discover that these coincide with the dimensions of the subdivisions. When 876 feet is divided into three equal parts the result is 292 feet. The actual measurements are 292.5, and 293.5 feet. The difference here of 1.5 feet represents an error of 0.513% (Fig. 3).

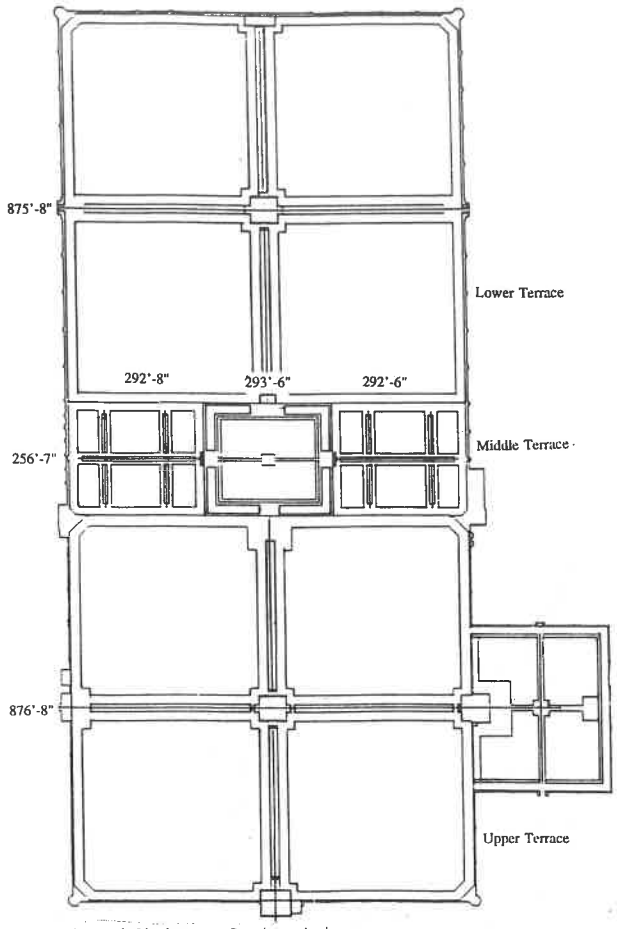


Fig. 1: Plan of Shalamar Garden, Lahore.

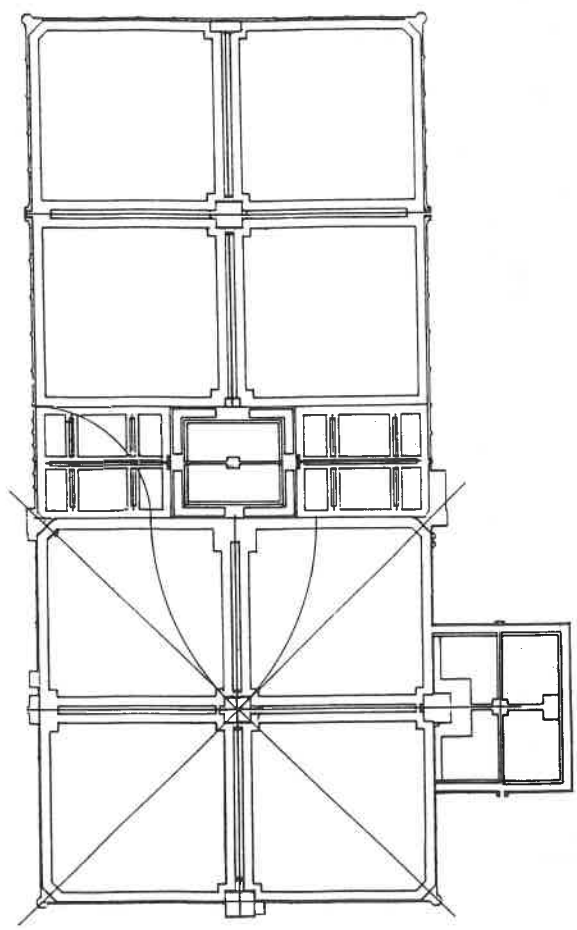


Fig. 2: Proportion of Upper and Middle Terraces.

The Water Tank in the Center of the Upper and Lower Terraces

Divide the side of the square into five using Technique 4 (Fig. 4) this will generate a square in the center. Then apply Technique 6 to draw the square in the center of the existing square. This then becomes the water tank (Fig. 5a).

The side of Square A measures $\frac{1}{5}$ of the boundary square = 876 x $\frac{1}{5}$ = 175.2 feet.

The diagonal of the Square B
= side of square A - [(2 - $\sqrt{3}$ (side of square A)].
= 175.2 - [(2-1.733) (175.2)]
= 175.2 - [46.77]
= 128.43 feet.

Side of square C measure
= $\frac{1}{2}$ diagonal of square B.
= $\frac{1}{2}$ x 128.43 = 64.215 feet.

Here the actual measurement is 62.5 feet this represents a difference of 1.715 feet with a error of 2.67 %.

The Width of the Water Channel

Divide the side of the diagonally placed square into three (Fig. 5b). The crossing of these lines and the side of the tank will give the width of the channel.

The diagonal of square 2 is 128.59 feet, each side should measure = 128.59 x $\frac{1}{2}$ = 90.876 feet.

Divide the side into thirds. The center line divides the middle third into two, and we get 1/6th of the side that is 15.14 feet. The diagonal of this 1/6th square = 15.14 x $\sqrt{2}$ = 21.42 feet. The actual measurement 21.25. The percentage error comes to be 0.8 %.

A Handbook

We can continue this exercise until we have analyzed and co-ordinated all the constituent spaces and structures of the Shalamar Plan. However, because of limitations of the scope of this presentation we will move on to the inferences we can draw from geometric analysis. Imagine that we have a Handbook of these techniques, with systematic nomenclature, such as, Technique No..... and so on. Draw the plan on some scale. Write the schedule of Technique Numbers, and the sequence to be followed. This approach would yield a complete working drawing. The professionals who has access to the Handbook, in print form or in verbal form by training, could construct a demonstration model or an actual build-

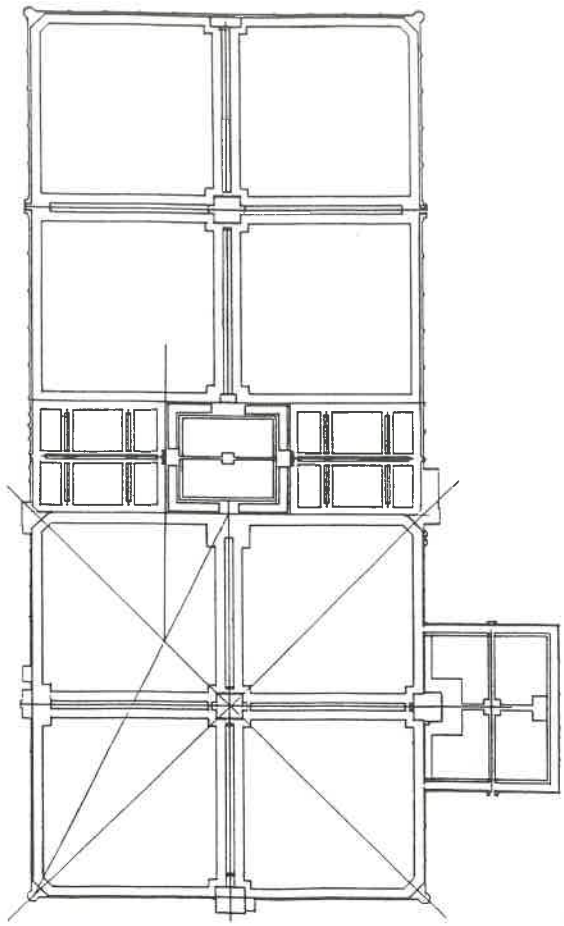


Fig. 3: Shalamar Garden, Lahore Division of the Middle Terrace.

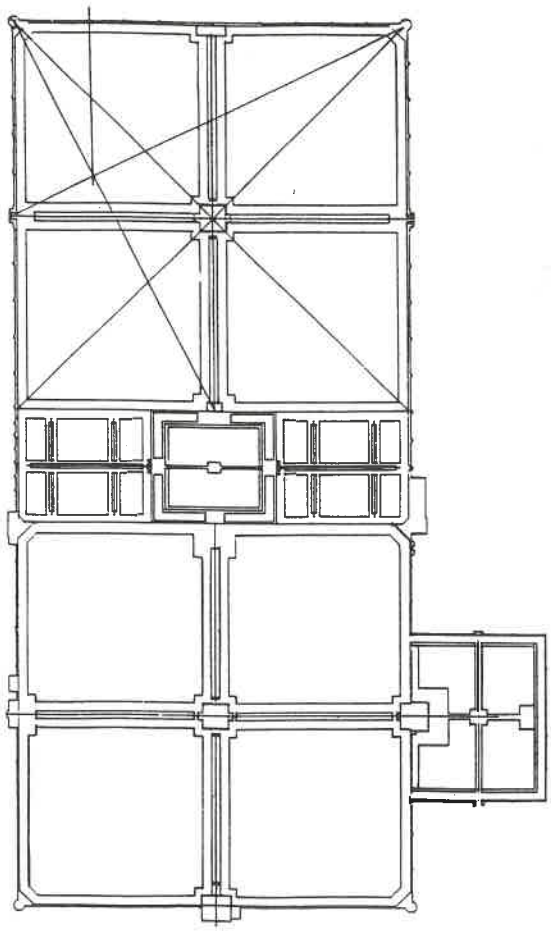


Fig. 4: Proportion of Water Tank in the Centre of Upper and Lower Terraces.

ing from it (Fig. 6).

This system of 'communicating design' can work like a computer program. We need to feed in the dimension of the side of the originating square, using any system of measurement: Mughal (*Gaz*), Imperial, or Metric. All the dimensions of the component spaces and structures are processed by the sequence of prescribed geometric techniques like the ones we have mentioned above. The system can be called universal, in the sense that it is not dependent on a particular system of measurement, but rather upon the co-ordinated division and subdivision of dimensions. When working with a different system of measurement the building professionals have to convert just one dimension: the side of the originating square, or the shorter side of a rectangular plan, into their local measurement system, and rest of the proportions, pre-set by the architect, will follow through the prescribed geometric sequence.

But however, universal, efficient, and convenient this system may appear, it is a thing of past. We need to update and modify the system to bear upon our present concerns: the higher quality of conservation and additions to our built environment - the historic and modern. That would require more minds, equipped with a critical attitude and modern facilities, such as computers, and a consistent long-term research program. To begin with we must retrieve similar techniques through empirical studies of existing buildings, as we have presented here, and compile the Handbook. That would be an alternative source of techniques to modern handbooks, such as *Graphic Standards* and *Time Saver Standards*. This resource would provide a stimulus to the conservation of historic buildings and the creation of new ones alike.

METHODOLOGY FOR FUTURE RESEARCH

A broad outline of the methodology developed for this study and recommended for further studies would be to:-

- Prepare up-to-date new measured drawings of selected buildings inasmuch detail and accuracy as possible, even if some old drawings are available. Old drawings may save some labour, but these must be verified by physical surveys of actual building conditions. This process is time consuming and laborious but fundamental to the study.
- Feed these drawings into a computer using some graphic software designed for architects

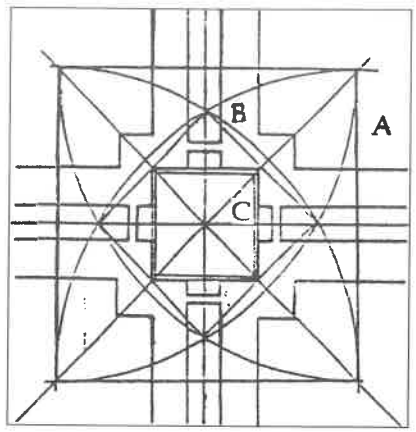


Fig. 5a: Determining the size of water tank.

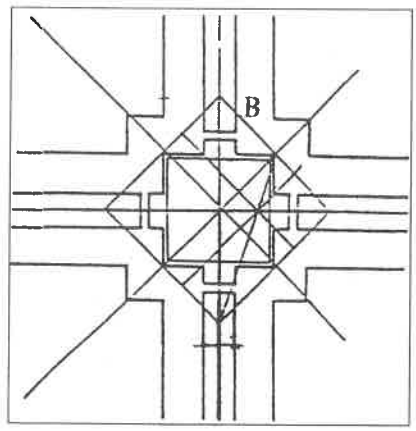


Fig. 5b: Determining the width of the water channel.

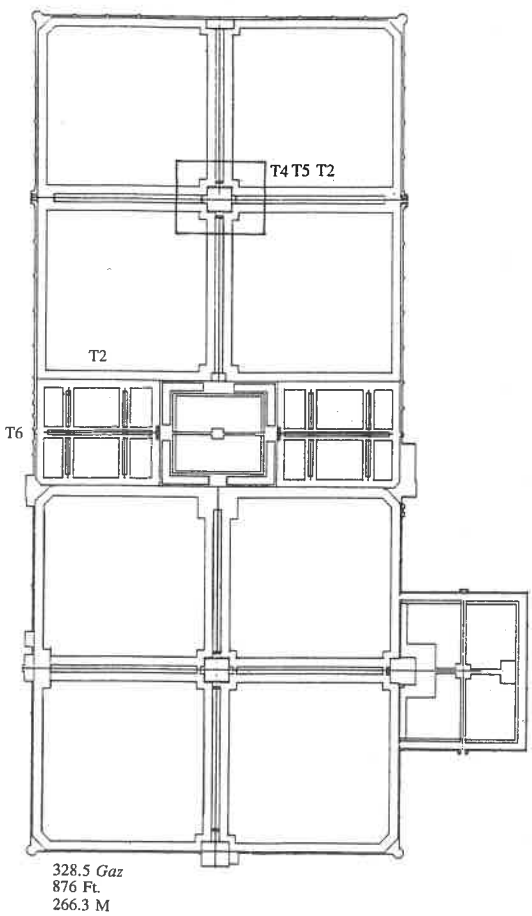


Fig. 6: Shalamar garden, Lahore.

or engineers. (We used Auto CAD, a product of Auto Desk Corporation).

- Apply the geometric techniques to co-ordinate dimensions, always starting from the 'shorter side' of the plan. Meanwhile, as this analysis is undertaken, it must be kept in mind that every building has some new combinations besides the basic ones - i.e. the architect's innovations - these require little more attention. All in all it is very similar to 'chemical analysis', where some basic elements are known but their various combinations, which create different compounds, has to be resolved.

- There is a conventional method also, that is carried out on paper drawings using simple equipment like a compass and ruler, but it has some problems.
  There is a limit to the accuracy of manual drafting. Working with the smaller scales, such as, 1" = 16', it is difficult to differentiate between the representation of dimensions, by line, with a margin of two to three feet, which can be crucial for such analysis.
- In addition, drawing paper is very sensitive to temperature and humidity, it may shrink or expand within appreciable limits during the process of drawing, reproduction of copies, or storage. The drawings may be little misleading. That is why architectural working drawings are always provided with dimensioning in textual form and notes. These drawings are to be read and not to be measured.

Above all, one must question conventional spatial

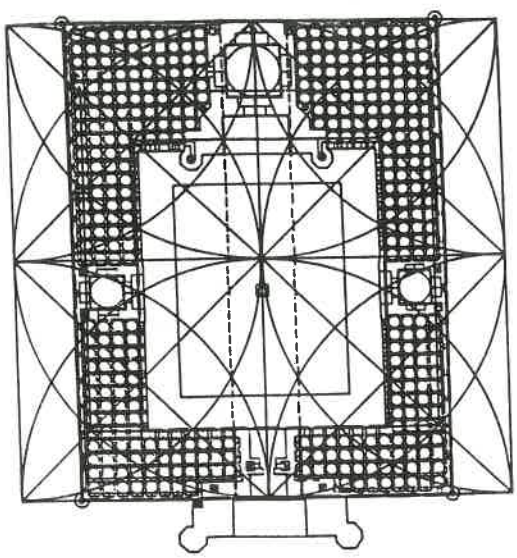


Fig. 7: Tomb of Bibi Khanum, Samarqand, USSR, 800–806/1398–1404.

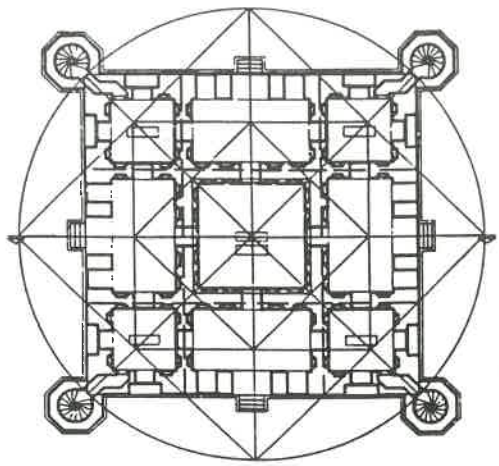


Fig. 8: Tomb of I'timâd al-Dawla, Agra, India, 1037/1628.

assertions, e.g. made by El-Said and Parman and some other researchers e.g. that the 'circle is the basic figure that generates all other figures). Such ideas were also originated by Critchlow (1969) and are being followed as flare of fashion for about quarter of a century now, without a critical evaluation. These have been widely adopted, but the results are never satisfactory. We have reproduced here three examples of such analysis (Figs. 7, 8 & 9) carried out by El-Said and Parman. The problem with this type of generic analysis is two-fold.

First, it does not verify the reference points of the building components in mathematical terms at all and the resultant geometry of the plan appears as a mere superimposition of a circle. Second, most of the reference points fall outside the building and one fails to understand, being an architect and knowing little about the trade, how the buildings could have been constructed from these 'out of site' reference points.

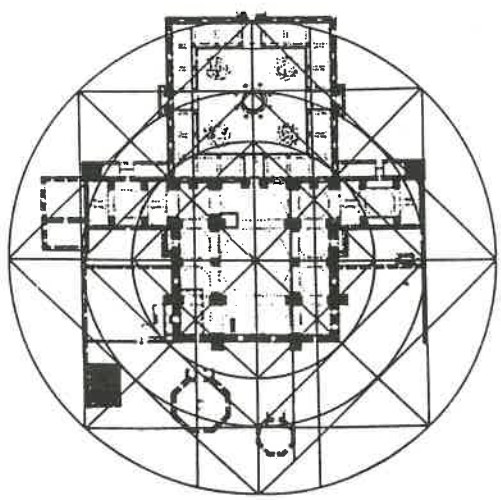


Fig. 9: Mosque of Báyezid II, Bursa, Turkey, 906/1501.

That approach would imply that it is graphically possible for a circle to generate almost all other figures on paper, or in a (research) paper, but for practical purposes a building plan has to have a generative system within its dimensional limits, and for all the geometric analysis of building plans, we must look for reference points within the plan.

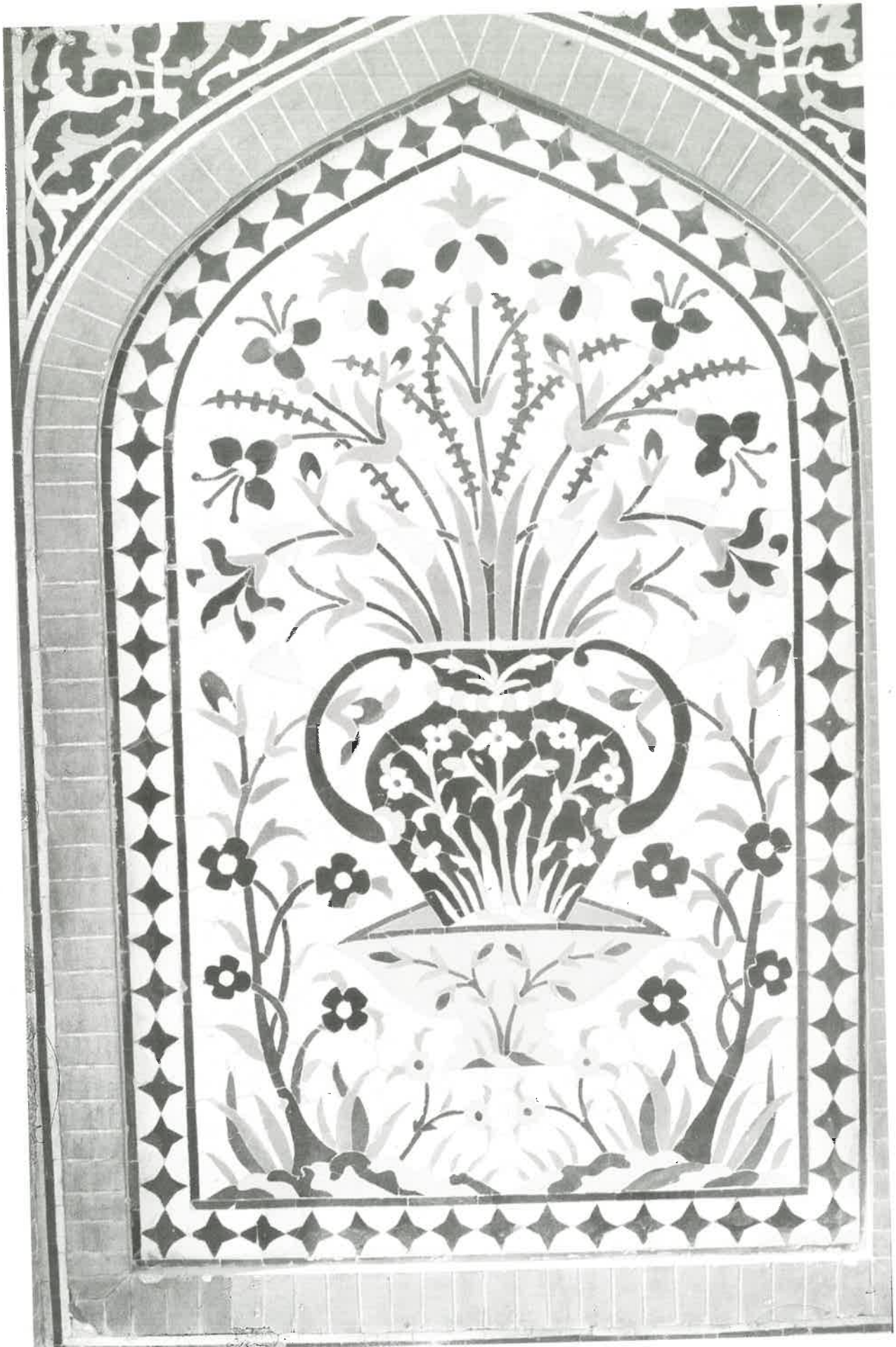
The first two problems can be rectified by using computer technology that is conveniently available and the third one needs a change of approach, which is fundamental to this methodology. It is not the circle but the square that generates architectural spaces and forms.

REFLECTIONS

The transformative properties of the square and associated geometric technique, presented here are just few graphic tools out of a huge armoury that was used by the Mughal architects to materialize and communicate their ideas of design. They employed 'old combinations' of these techniques and developed some 'innovative combinations' also. Each 'innovative' design, a private house or a royal monument, enlarged this stock of tools. Shalamar plan, for example, contributed the unique proportions of the middle terrace and layout of its walkways and central water tank, alongwith other features such as the Chini Khana, Takht-Shahi, waterfall, and the like. Thus, the reconciliation of 'Modernity and Tradition' through innovation, rather than nostalgic preservation and imitation, created the wonders we know as 'Mughal Architecture.' We also can do better now that we have the means and visions alongwith this wonderful heritage. We need to be more critical about the past, more confident about the present means; more imaginative about the future; and then *design with this deeper historical awareness.*

NOTES AND REFERENCES

1. Critchlow (1969), El-Said and Parman (1976), Ardalan and Bakhtiar (1987) are few examples of this tendency.
2. Monihan, E. B. *Paradise as a Garden in Persia and Mughal India,* London 1979.
3. Bulatov, C. M. *Geometric Harmonization in the Architecture of Central Asia 9–15th century.* Morcow, 1980 (in Russian) The statement translated and quoted in Golombek, L. Timurid Architecture Princeton, 1988.



Floral design in faience mosaic in Wazir Khan Mosque Lahore.

QURANIC CONCEPTS OF LANDSCAPE ARCHITECTURE: A COMPARISON WITH SHALAMAR GARDEN

IKRAM ALI SHAH GELANI,
Department of Architecture,
University of Engineering and Technology, Lahore, Pakistan

INTRODUCTION

Al-Qur'an is the name of the Holy Book in which Muslims believe. Allah revealed it to Muhammad, and Muhammad lived according to the guidance of the Book. Allah wishes Muslims to follow the guidance of the Book, and Muslims believe that *Al-Qur'an* is the best and most potent guide in every aspect and walk of life at any time. Therefore, *Al-Qur'an* also sheds light on gardens and landscape architecture. This paper discusses these connections between *Al-Qur'an* and landscape architecture, but first we present some facts about *Al-Qur'an* which relate to the text that follows.

Al-Qur'an has 114 chapters and 6666 verses in total. A chapter has a minimum of three verses and a maximum of 286. References to passages from *Al-Qur'an* include the chapter number on the left side, with title of that chapter, and the verse number is noted on right side of the reference [e.g., 6 (*Al-Anaam*): 99].

Al-Qur'an in the original text is in Arabic. Here, the translations are mostly those of *Al-Qur'an; A Contemporary Translation* by Ahmed Ali, published by Akrash Publishing, Karachi in 1984.

Allah sent *Al-Qur'an* to man as the last and complete guide book. Before this Holy Book, there were holy scriptures; therefore, topics in previous scriptures and in *Al-Qur'an* are sometimes similar. Previous scriptures and Al-Qur'an, for example, have passages on the concept of paradise as a garden. Human beings on earth strive to do good to be in those paradise gardens in the life after death; and man has also tried to make replicas in the form of gardens, for a paradise on earth. Figure 1 contains references to more than 67 verses of *Al-Qur'an* which speak of the gardens of paradise. Figure 2 has a translation for some of the verses which clearly frame and convey concepts of gardens in paradise. To deal with every detail of landscape architecture in *Al-Qur'an* is so vast as to be beyond the scope of this paper, so only two important elements of landscape architecture in *Al-Qur'an* are given consideration here. These are greenery and water.



Fig. 1: Floral Design in faience mosaic in Wazir Khan's Mosque Lahore.

Greenery

Allah speaks in *Al-Qur'an* about grass, leaves, buds, petals, plants and trees; and about thick foliage, passages, tracks, and other landscape features. All these elements of greenery are noted in Figure 3 with their specific references in *Al-Qur'an*.

Water

Allah in *Al-Qur'an* describes water as the source of life for all living creatures. For gardens in paradise, flowing water is often regarded as the main feature. Allah speaks in *Al-Qur'an* about water from the scale of dew to that of the ocean. Figure 4 notes many of the uses of water in landscape architecture in *Al-Qur'an*. In addition to elements of greenery and water, some other elements of landscape design which architects often describe as 'hard landscape", are listed in Figure 5.

THE QURANIC CONCEPT OF LANDSCAPE ARCHITECTURE

A "concept," as a simple term of logic, means a general idea. Conceptualisation involves processes of abstraction, comparison, and generalisation. For this study, the key process is a comparison of the Qur'anic concept and the Mughal garden known as Shalamar. The comparison seeks to test the "realism", of the concept, i.e. the correspondence between the concept and the physical landscape.

The concept of landscape architecture in *Al-Qur'an* has already been presented in the foregoing text. The next section of the paper introduces the criteria for making comparisons of historical Mughal gardens and future gardens as well.

Criteria for Comparison

The criteria for assessing particular landscapes can be derived from *Al-Qur'an*. All the virtues of paradise in *Al-Qur'an* provide criteria for making paradise gardens on earth. In the past, kings and rulers did try to imitate paradise in this way. *Al-Qur'an* has 114 chapters, which are placed in two groups according to whether its revelation occurred in Makkah or in Madina. All virtues of gardens revealed in these Makkan and Madinan chapters may be combined to assess or design a landscape. Similarly, an individual chapter which conveys the virtues of a garden may be taken as the basis for comparison and design. *Al-Qur'an* provides innumerable concepts for composing a landscape architectural project; it is up to a designer to look into *Al-Qur'an* to identify the criteria for the project in hand.

An Illustrative Comparison

To illustrate this process of comparison between the concept and a Mughal garden, and to demonstrate the realism of *Al-Qur'an*, a chapter of *Al-Qur'an* and Shalamar garden are placed side by side in Fig. 6. This comparative process is not done to justify a Mughal garden as Islamic or non-Islamic. Instead, the process is of comparison assessing the avenues, as noted in preface, for exploring a landscape project in the light of *Al-Qur'an*. For comparative purposes a design concept is derived from the 55th chapter of *Al-Qur'an*. The 55th chapter in *Al-Qur'an* is *Ar-Rehman*. It has 78 verses. Some of these concern landscape. Their translation is given on the left side of Figure 6. On right side are two columns (one for yes and the other for no) to see to what extent Shalamar garden coincides with the design concept and criteria of *Al-Qur'an*.

The concept of the paradise garden emerges from this translation, against which the present day Shalamar garden is tested. The analysis may be extended to adjacent areas. For example, Shalamar garden had a vineyard in front of its main gate, where the Angoori Bagh Housing Scheme has come up now. Around Shalamar garden were fields of corn and date palm trees, therefore, there could be a "Yes" for verse eleven and another "Yes" for verse twelve.

Similarly, if the concept is expanded from chapter *Ar-Rehman* to the entire *Al-Qur'an*, the planning of the Shalamar garden area with a stream in the center can also be explained by the verse.

> "Each of the two gardens yielded its fruit and did not withhold the least and we made a stream flow in between them
>
> 18 (*Al Kahf*); 33

In short, it can be said that landscape projects of the Mughal period incorporated the Qur'anic concept of paradise to a great extent.

Conclusion

The most recent publication on Shalamar garden was written by Sajjad Kausar, Michael Brand and James Wescoat Jr., and was published in 1990 in Karachi. On page 19 of the book Mr. Sajjad Kausar writes, "The Islamic garden tradition ... can be traced in all Mughal gardens ... Mughal gardens often represented those of the Koranic gardens of paradise."

This chapter takes a step forward in this direction of garden research. It shows that a garden can be tested on the basis of Qur'anic context and also that a Qur'anic concept can frame the basis for planning gardens. For further research in this direction, other avenues of architecture and housing can also be explored from *Al-Qur'an*.

FIGURE 1

Paradise as a Garden

More than 67 verses of *Al-Qur'an* speak of paradise:

34 (Saba): 15, 16
55 (Ar-Rehman) : 46, 62, 54
18 (Al-Kahf) : 32, 33
2 (Al-Baqra) : 25
3 (Al-Imran) : 15, 195, 198
4 (An-Nisa) : 13, 57, 122
5 (Al-Maida) : 12, 65, 85, 119
6 (Al-Anam) : 99, 141
9 (Toba) : 21, 72, 89, 100
10 (*Yunas) : 9
13 (Ar-Rad) : 4, 23
15 (*Al-Fijr) : 45
16 (An-Naml) : 31
18 (Al-Kahf) : 31
19 (Maryam) : 16
20 (Ta-Ha) : 76
22 (Al-Haj) : 14, 23, 56
23 (Al-Muminun) : 19
25 (Al-Furqan) : 10
26 (Ash-Shuara) : 57, 134, 148
70 (Al-Maaraf) : 35
65 (Al-Talaq) : 11
66 (At-Tahrim) : 8
68 (Al-Qalam) : 34
98 (Al-Bayyina) : 8
31 (Luqman) : 8
32 (As Sajda) : 19
35 (Al-Fatir) : 33
36 (Yasin) : 34
37 (As-Saffat) : 43
38 (Sad) : 50
40 (Al-Mumin) : 8
42 (Ash Shura) : 22
44 (Ad-Dukhan) : 25
47 (Muhammad) : 12
48 (Al-Fath) : 5
50 (Qaf) : 9
51 (Adh-Dhariyat) : 15
52 (At-Tur) : 17
54 (Al-Qamar) : 54
56 (Al-Qiqiah) : 12
57 (Al-Hadid) : 12
58 (Al-Muhadilah) : 22
61 (As-Saff) : 12
64 (At-Taghaban) : 9
85 (Al-Bury) : 11
71 (Nuh) : 12
74 (Al-Mudathar) : 40
78 (An-Naba) : 16

FIGURE 2

The Virtues of Paradise

These verses represent more than one percent of the 6666 verses of *Al-Qur'an*.
Some of the virtues of gardens in paradise are noted below:

- running waters — 3 (Al-Imran): 15, 136, (An-Nisa) 122, 5 (Al-Maida) : 12
- rippling streams — 3 (Al-Imran) : 195, 20 (Ta-Haw) : 76
- green foliage
  grains lying close
  date palm trees
  gardens of grapes and of
  olive and pomegranates — 6 (Al-Anam) : 99
- palm trees
  olives
  and pomegranates — 6 (Al-Anam) : 141
- beautiful mansions — 9 (At-Toba) : 72
- lofty mansions — 25 (Al-Furqan) : 75
- tracts joining one another
  vineyards
  fields of corns
  date palm trees some forked
  some single trunk
  yet irrigated by the self same water — 13 (Ar-Rad) : 4
- perpetual gardens — 13 (Ar-Rad) : 23
- perennial gardens — 16 (An-Nahl) : 31
  couches — 18 (Al-Kahf) : 31
- each of the two gardens yielded its fruit and did not withhold the least and we made a stream flow in between them — 18 (Al-Kahf) : 33
- orchard of dates and grapes — 23 (Al-Muminun) : 19
- orchard and springs — 26 (Ash-Shuaara) : 134
- the fields of corn and date palm trees with soft and tender spatches — 26 (Ash-Shuaara) : 148
- gardens of Eden with their gates — 38 (Sad) : 50
- and tall date palm trees with spathes pile by pile — 50 (Qaf) : 10
- gardens of tranquillity — 56 (Al-Waqiah) : 12
- excellent mansions — 61 (As-Saf) : 12
- interlacing boughs — 78 (An-Naba) : 16
- and many more verses to make criteria for gardens

FIGURE 3

Greenery

A garden, two gardens side by side, and thick gardens can be found in the verses, noted in figure.1. *Al-Qur'an* speaks of those gardens separately which are within walls: Hadaiq: 27 (An-Naml) : 60, 78 (An-Naba) : 32, 80 (Abasa) : 30

Al-Qur'an also notes an open garden which has a structure in centre : Roza in 42 (Ash-Shura) : 22

For greenery in gardens, *Al-Qur'an* notes many elements which are classified from Grass to Thick Foliage and Fruits with their plants. Some examples are:

From Grass to Thick Foliage

- bunch of grass — 21 (Al-Anbiya) : 5
- thick foliage — 15 (Al-Hajr) : 78
  26 (Ash-Shuara) : 176
  38 (Sad) : 13
  50 (Qaf) : 14
- fig trees — 95 (At-Tin) : 1
- green foliage — 6 (Al-Anam) : 99
- fragrant grass — 55 (Ar-Rehman) : 12
- cactus — 56 (Al-Waqiah) : 52
- olive tree — 53 (An-Najm) : 14, 16
- trunk of tree — 20 (Ta-Ha) : 14, 16
- bud — 2 (Al-Baqra) : 261
  12 (Yusuf) : 43, 46
- leaves — 20 (Ta-Ha) : 121
  6 (Al-Anam) : 59
- tree — 27 (An-Naml) : 60
- thorny grass — 88 (Al-Ghashiyah) : 6

- thin spikes of dates	36 (Yasin) : 39
- hay	105 (Al-fil) : 5
	55 (Ar-Rehman) : 12
- grass which spread on	55 (Ar-Rehman) : 6
- date palm tree	6 (Al-Anam) : 99

In noting the elements above, it is felt that it is not enough merely to rely on translation. A knowledge of Arabic language is essential, for example, there is one word for woodland and for thick foliage. What to pick from where rests on ones knowledge of Arabic Language.

Fruits and Fruits Plants

- grapes	2 (Al-Baqra) : 226
	17 (Bani-Israel) : 91
- cover of fruit	55 (Ar-Rehman) : 11
- fruit	6 (Al-Anam) : 99
	and more than 20 verses
- pomegranates	6 (Al-Anam) : 99
- fruit (which can be dried)	36 (Yasin) : 57
	and 14 verses.
bunch of grapes	6 (Al-Anam) : 99
	69 (Al-Haqqah) : 23
plant of date palm	59 (Al-Hashr) : 5

Fruits or fruit plants in previous references are not noted here, as the objective of this presentation is simply to convey the concept of landscape architecture and not to make a full compilation of gardens in *Al-Qur'an*.

FIGURE 4

Water

Running water and rippling water has already been listed in figure 1.

Water in *Al-Qur'an* ranges from dew to ocean, containers of water, springs and fountains.

From Dew to Ocean

- dew	2 (Al-Baqra) : 265
- fresh sweet water	25 (Al-Furqan) : 53
- salty water	25 (Al-Furqan) : 53
- deep waters	24 (An-Nur) : 44
- sheet of water	27 (An-Naml) : 44
- a handful of water	2 (Al-Baqra) : 249
- rain	57 (Al-Hadid) : 20
	42 (Ash-Shura): 28
	31 (Luqman) : 34
- whirl water	27 (An-Naml) : 44
- water tide	24 (An-Nur) : 40
- canals	2 (Al-Baqra) : 25 and
	more than a hundred verses
- ocean	2 (Al-Baqra) : 50
	and 25 more verses

Containers of Water

- small storage	16 (An-Nahl) : 18
	76 (Ad-Dahr) : 15
- ditch	9 (At-Toba) : 109
- pit	3 (Al-Imran) : 103
- deep ditch	12 (Yusuf) : 10,15

Springs Fountains

- shower like	78 (An-Naba) : 14
- flowing spring	19 (Maryam) : 24
- springs	55 (Ar-Rehman) : 50, 66
	15 (Al-Hyr) : 45
- gushing sprout	55 (Ar-Rehman) : 66
- sprinklers	17 (Bani-Israel) : 90
	39 (Az-Zumr) : 21

FIGURE 5

Miscellaneous Landscape Elements

Al-Qur'an notes passages, tracks, ways and wide lanes by different ways for natural landscape and as artificial features in the following verses 5(Al-Maida):16, 2(Al-Baqra) :108, 23 (Al-Muminun) :17, 72 (Al-Jin) : 11, 21 (Al-Anbiya) : 31

Some other elements for landscape in *Al-Qur'an* are given below

- tents	18 (Al-Kahf) : 29
- thorny stones	11 (Hud) : 82
	15 (Al-Fijr) : 74
	105 (Al-Fil) : 4
- solid stone	89 (Al-Fajr) : 9
	18 (Al-Kahf) : 63
	31 (Luqman) : 16
- plain stone	2 (Al-Baqra) : 264
- shade	36 (Yasin) : 56
- umbrellas for creepers	6 (Al-Inam) : 141

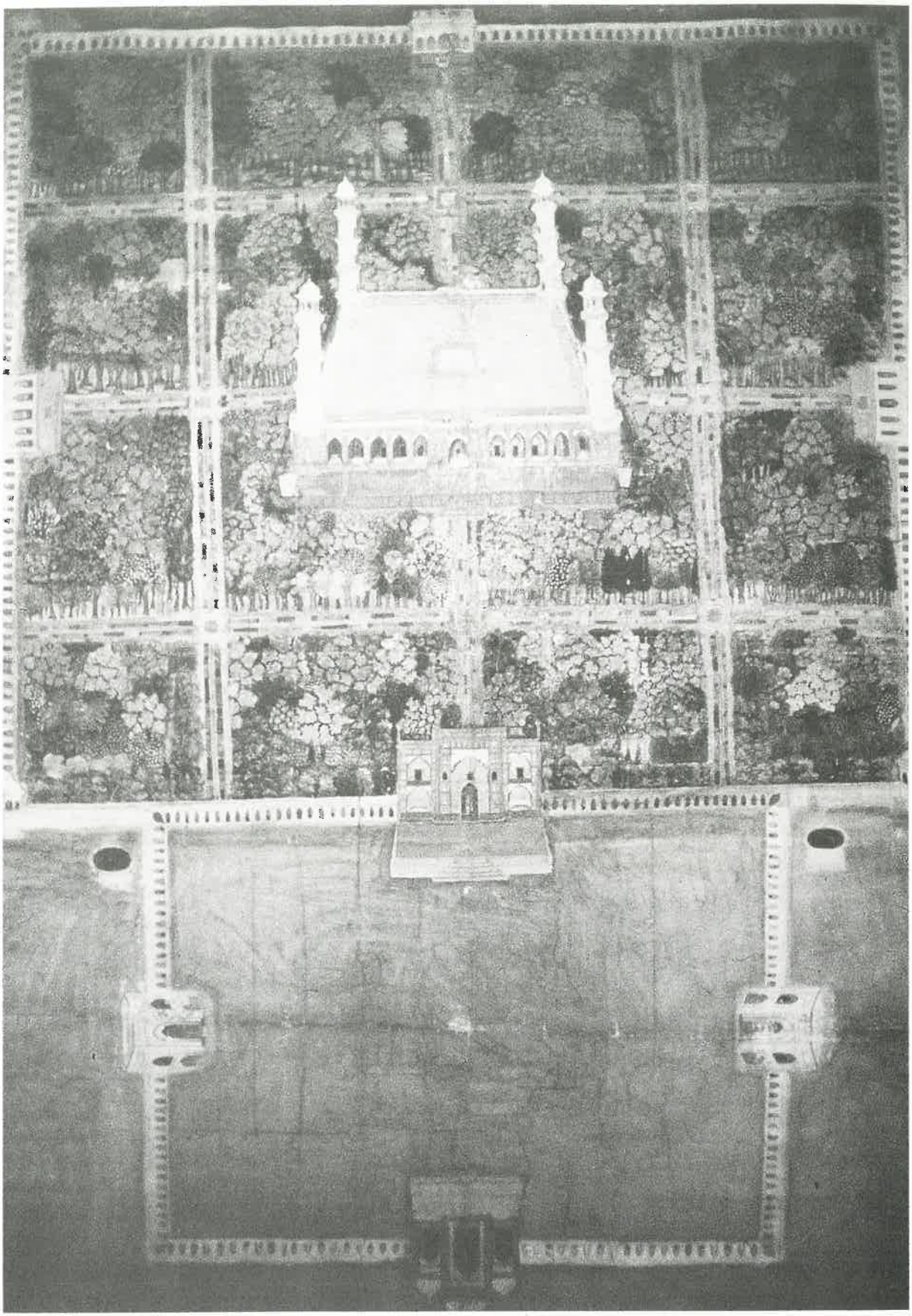
and many more.

FIGURE 6

Comparison with Shalamar Garden

Number of Verse	Translation	Shalamar Garden Yes	No
6	And grasses and trees bow in adoration	•	

11 There are fruits of •
all kinds and date palm •
with their cluster sheathed •
12 Grain with husk and •
fragrant grasses
46 There will be two gardens •
48 Full of overhanging branches •
50 With two springs of •
water flowing through them both •
52 In both of them there will be •
every kind of fruits in pairs
54 Reclining there on carpets •
lined with brocade fruits
of gardens hanging low
within reach
64 Of darkest as verdant green •
66 With two fountains •
gushing constantly
68 With fruits in them •
and dates and
pomegranates •



The tomb garden of Jahangir at Shahdara. Detail of painting on cloth XVIII century.

GARDENS AND URBAN DESIGN

ATTILIO PETRUCCIOLI
The Aga Khan Program for Islamic Architecture
at Harvard University and the
Massachusetts Institute of Technology
Cambridge, MA

The idea of the oriental city with its dense center of superposed houses where cohabitation is the rule, in a maze of narrow lanes crammed with busy humanity, surrounded by an indecent periphery oppressed by deafening traffic, is a misleading one. It is the result of a fairly recent process of immigration from the countryside, the outcome of the industrial revolution (as it is called) which, however partial, has everywhere touched Islamic countries, generating imbalances.

In the past, in a state of balance between city and countryside, the inhabited centers gave on the contrary an almost bucolic image: the low density of the built fabric maintained within it, with rules varying from culture to culture, a relationship in which vegetation prevailed. Each courtyard in the houses left space in the paving for a tree, and often even the *sahn* of the mosques were planted in regular rows of arboreal masses as in Cordova. Broad spaces of food reserves, vegetable and flower gardens, formed a green lung between the built-up area and the circuit of the walls.

With the habitual emphasis, European travelers told of fabulous green oases; Pietro della Valle saw Istanbul and Tehran as garden-cities, defining the one as a city of cypresses and the other as a city of plane trees. The Spanish ambassador Clavijo, sent to the court of Tamerlane, stated about Samarkand: "there is such an abundance of gardens and vines that when a traveler comes within sight thereof, all he sees is a great mass of greenery with the city in the center"[1] (Fig. 1 and 2).

Emphasizing the symbiotic relation in the city between garden and built area is almost trite: the garden, the esthetic distillate of an agricultural civilization, has always played a decisive role in any anthropization process. In this paper I would like to go beyond the nineteenth-century concept of urban decorum or, even worse, the functionalist one of a "green lung", to observe rather the structural relationship between garden and city, where by structure is meant an organic, orderly relation of elements.

Ever since the last century, opposed to the paien of scholars who saw in the tortuous lanes and culde-sacs of the city a blend of the exotic, the unhealthy and the horrid, there has been the contrary hymn of the few who saw extremely rational aspects. Already in 1898 Shetalov remarked that the roads of Yazd in Iran followed a precise rule: in a northwest/south-



Fig. 1: A texture of gardens in the outskirts of Bam. (Iran).



Fig. 2: The Planografia Sedis Regiae or Dawlatkhane at Isfahan. (Axonometrical drawing by E. Kaempfer)

east orientation, they were intersected by perpendicular roads in the opposite sense; and Sabzavar, Kerman, Ardekan and, more confusedly, Tabas, were no different. Bonine has observed that at Mehrir, not far from Yazd, a network of roads runs in the direction of the hill situated to the southeast; although roads are present with the interrupted, cul-de-sac form typical of an urban morphology, it is an agricultural fabric, since the geometrical arrangement depends on irrigation techniques. The arable area, in fact, is divided into rectangular strips (*kort*) and the water, diverted in the higher parts, flows into each plot.[2] From this Bonine deduces that the morphology of the Persian towns of the southeast is linked to the expansion of an original nucleus in an irrigated system, where the formation of roads without issue was probably the product of a first densification of the plots. In confirmation of this we can note that the roads issuing from the gates of Yazd repeat the urban alignments, without the typical deviations induced by territorial connections: the fabric *extra muros* of gardens is felt as part and parcel of the city. A generalized axiom, if it is considered that, in the urban periphery and within the walls themselves, where holdings are split up and cultivation is intensive, in the meticulous pattern of the cadastral plots, Islam's agricultural ideal is fully realized: in the Spanish *huertas* as in the suburban kitchen-gardens of the Maghreb.[3]

Many examples could be cited of settlements whose urban plan is linked with water or whose survival actually depends on the flows of underground canals (*foggara)* as in the Gourara,[4] but this would be a very lengthy discourse. Instead, we now have to tackle our second corollary.

In the early centuries of Islam we encounter the extraordinary episode of Samarra in Iraq, the capital of the Abbasid empire from 836 until 892. Today it looks like a field of ruins, decipherable only from the air: a boundless city of enormous linear extension, thirty-five kilometers along the Tigris.[5] Conceived as the residential capital for the exclusive use of the caliph, it is the juxtaposition of Palatine cities according to typological schemes of various cultural matrices, Roman, Hellenistic, Byzantine, Sasanian and Umayyad, but dilated at the territorial scale, each with palaces, a mosque, residences, gardens and parks, all built ex novo by the seven caliphs, each of them finding it repugnant to live in his predecessor's seat, but not to depredate the palace of all its materials. A city centered on representing power, sport, entertainment and delights, as demonstrated by the magnificence of the kiosks, the belvederes, the polo field, the hippodrome, the game reserves, and the numerous hanging gardens over the river. Samarra cannot be reckoned on a par with Samarkand as a green mass, both because of the rundown physical structures and of the climate. It must instead have appeared as a sequence of walled gardens with typically subtropical vegetation marked by palm trees.

The idea of royalty associated with the garden, drawn from a fertile Sasanian tradition–suffice it to compare the palaces of Samarra and Ctesiphon–a hundred years previously had reached its loftiest point in the paradigmatic image of the citadel of al-Mansur, Madinat al-Salam (762-767), the city of peace, where the doctrine of the autocratic sovereign was based on the idea of centrality.[6] The pattern consisted in a circular crown two and a half kilometers in diameter, enclosing a first belt of residential districts, divided according to ethnic origin and tribe. In the center of the enormous round space bounded by the districts stood the square palace, surmounted by the famous green dome over the

throne as in the Sasanian Merw. Many scholars have endeavored to reconstruct the citadel[7]; neither Tabari nor Ya'qubi, historians of the time, give any information on the central space, but we should not be far from the truth imagining it as a fabric of parks and formalized gardens.

In the so-called "Classical Islamic" period, before the devastating invasion of the Ilkhanids, the pattern of the royal city was achieved by the serial repetition of large monumental complexes, an endless sequence of square and rectangular gardens, straddling a central thoroughfare, or more seldom along a well-balanced alignment. In the palace of Balkuwara at Samarra, for instance, the axis of symmetry deviates from the residential quarters (*bayt*) and runs first through two tree-lined courtyards with monumental portals, then the throneroom with its four accesses, and finally into the great garden for receptions facing the Tigris. A scheme repeated with few variants in the palace of al-Mutasim, where the whole rear was occupied by gardens with a large basin in the center. Not dissimilar was the composition of the ensemble of Madinat al-Zahra, although the relief favored a freer arrangement. The Ghaznavide city of Lashkari Bazar belongs instead to the second scheme.[8]

The more recent example of Granada is a possible third variant: a collage of gardens without a break, adjoining at rotations of ninety degrees and in accordance with simple symmetries in the Alhambra palace (the Courts of the Myrtles and of the Lions, and the Garden of Linfaraja and of the Partal), and those of the Generalife[9], with a free-ranging view, on the terraces.

From the accounts of the chroniclers, Oleg Grabar[10] has taken the three key themes, recurring in each royal city: First, gardens and palaces were places of pleasure, even heterodox; Second, the decisive function was court ceremonial. An extraordinary description of the visit of the Byzantian ambassadors to Baghdad in 917 has been left to us by Al-Khatib. The Greeks were taken into the palace gardens on a ritual pilgrimage, from one surprise to another: "And then the ambassadors came into the Palace of the Tree which stands in a round basin, filled with translucid water... the majority of the branches of the tree are of silver, but some are even of gold",[11] and, the final marvel, the caliph appeared only at the end of the Throneroom. Third, associated with the labyrinth of gardens and palaces is the idea of the prince's quasi-magical isolation.

The invasion of the Ilkhanids broke for good after 1256 the unity of the Islamic world: after this date also stories of the garden were to take different paths. A first consequence was the yearning for legitimation that was to touch all the new dynasties; in the east this was to be revealed through grandiose programmes of celebrations and in the imperative stimulus to build the new capitals as a self-portrait of the prince. The archetype of *chaharbagh* of Persian tradition, (Fig. 3, 4) a square with four sides, four quadrants, four canals and four axes of symmetry, responds adequately to the renewed demand for centrality. For that matter, isn't it said in Persia that the city is the garden of the universe? (Fig. 5).

Above all the dynasty stemming from Tamerlane took up the principle: after 1391 Herat[12] underwent a rebirth under the latter's son, Shahrukh, who established his capital there. The layout of the city is square in shape and recalls a gigantic *qual'e* (fortified farm), to which four gates provide access to four straight lines that split the city into four sectors. In keeping with a custom recurrent in Samarkand and Bukhara, a large dome covered the intersection

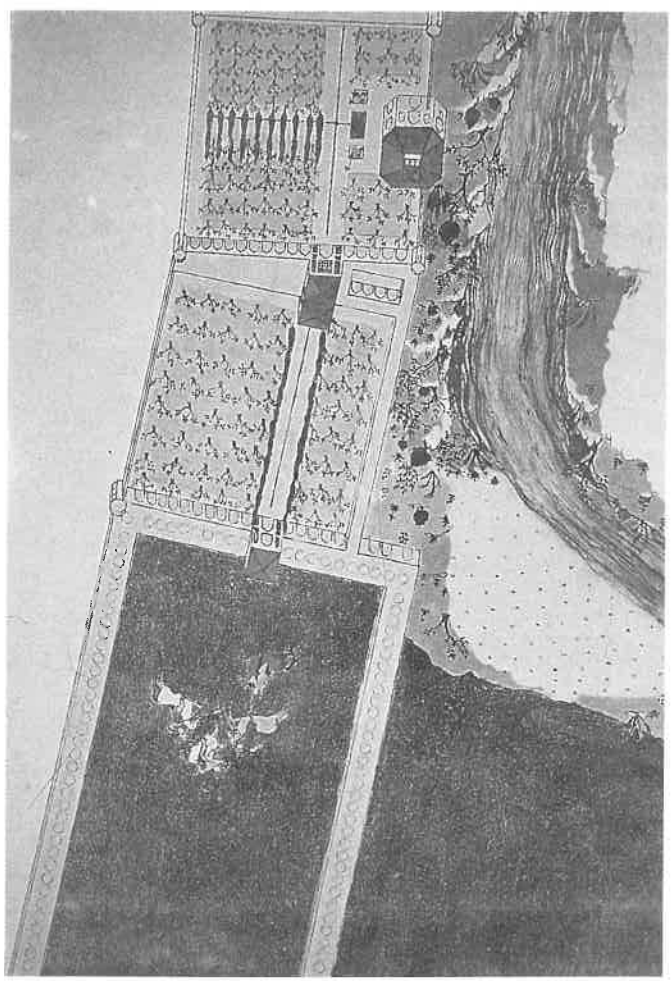


Fig. 3: Reconstruction of the Royal Garden at Farahbad, the meydan, the mosque and the bridge on the river Tijna. (Drawing by Mahvash Alemi).

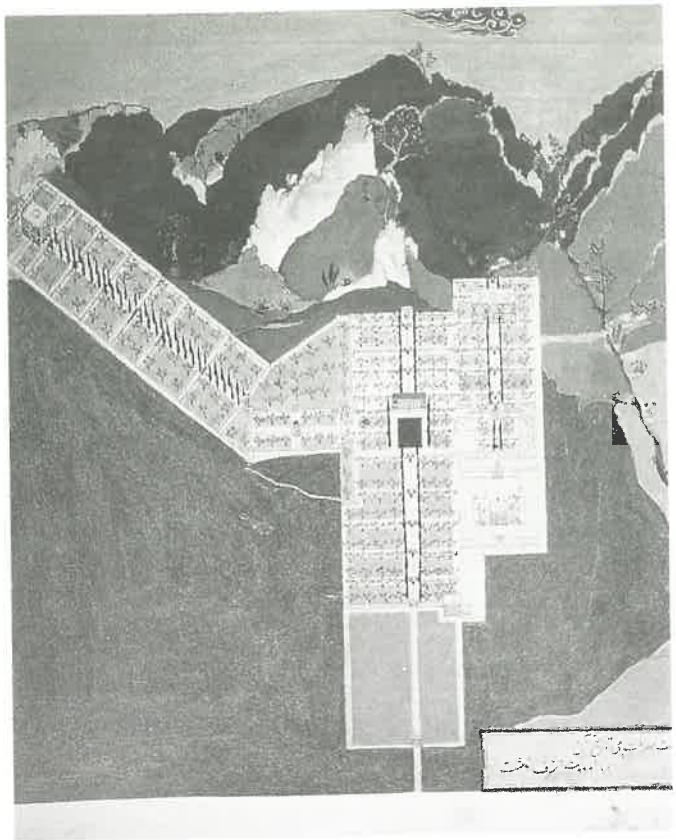


Fig. 4: Reconstruction of the gardens at Ashraf. (Drawing by Mahvash Alemi).

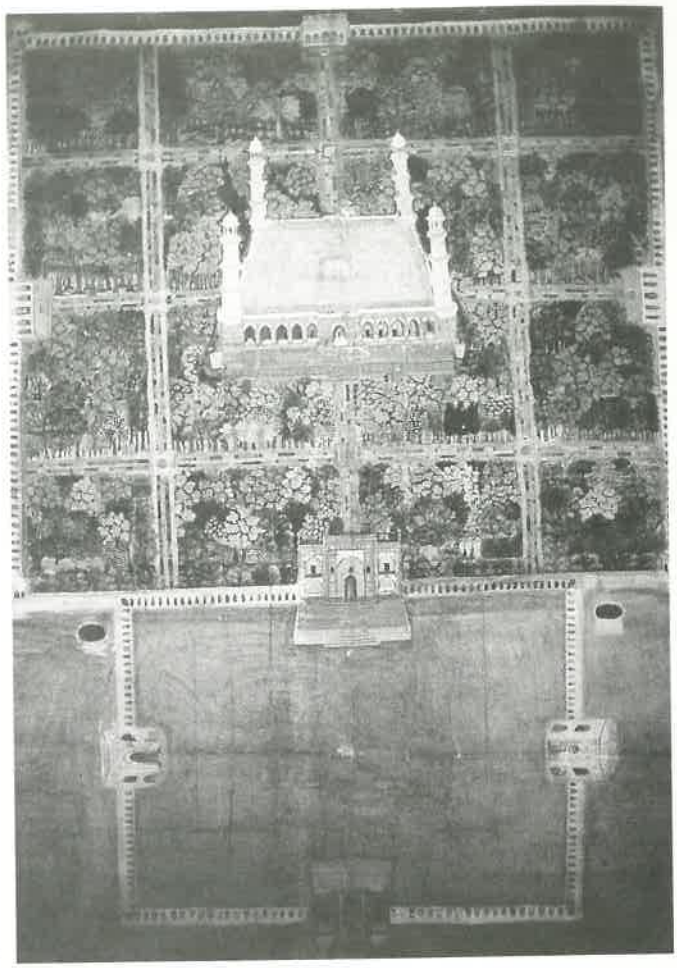


Fig. 5: The tomb garden of Jahangir at Shahdara. Detail of a painting on cloth, XVIIIth century. (Royal Asiatic Society, London).

of the four bazaars *(chaharsuq)*. Herat is the point of arrival of long research whose cornerstones are at Merw (1409), Termez and Shahr-i-Sabz, founded at the end of the 14th century,[13] and it is the reference point for all subsequent attempts made in the Deccan of India, ending with the layout of Shahjahanabad (Old Delhi) in 1638.

In the Deccan,[14] already in 1399 the Sultan Firuz Shah founded a city on the River Bhima which bears his name: Firuzabad, having a quadripartite layout. Hyderabad, a city founded (1591) on a double cross-over layout which subdivides it into six sectors of unequal area, is the most fascinating case: summarizing the complex symbologies linked to the two crosses, we observe that one is dominated by a very tall parallelopiped resting on large arches, called Charminar[15] (four towers), whose lower loggia was, according to Thevenot, the entrance to the royal quarters of the founder Mohammed Qutb Shah,[16] while to others it was the *divan-i'am*, the room for public audiences, dominated by the throne. If then we consider that below the vaults of this *chahartaq*, a sort of quadripartite temple, it was the custom to read out proclamations, all our doubts disappear: it is an *omphalos*, an evocation of the umbilicus or navel of the universe.[17] But there is more. In the center of the opposite cross, *Chaharkaman* (literally, four open arches) there was an octagonal fountain, *Carsu ka Hawz*. We do not know the arrangement of the trees planted around the fountain, but they were of two species: the coconut palm and the betel nut palm. Sura LVIII, 28 of the Koran says: "O, those of the right hand shall wander between *sidr* plants without thorns and *thal* trees with copious boughs, with much shade and flowing water and fruits". According to Jan Pieper,[18] the mythical trees of the Koran were both connected with the Muslim tree of life. In Indo-Muslim tradition in particular the coconut palm is viewed as possessing vital powers, and a betel leaf mixed with lime, areca nut and *catechu* is placed in a dead man's mouth so that a final pleasure may accompany him into the great beyond.

In Hyderabad the cosmic mountain thus rests on the Koranic paradise: the axes of the city, for greater

evidence, have a deviation of ten degrees and are oriented toward Mecca like a gigantic mosque.[19] The selfsame approach was adopted by Akbar (1556–1605) with few formal variants at Sikandra in his own garden-tomb at the beginning of the next century, and in Delhi for the tomb of Humayun. In this city, to symbolize the aspect of the new capital, he did not plan a pattern of more or less regular tissues, but entrusted the result to a single great polar measure, the point of visual convergence of the whole city.

Along the Mathura Road, which at the time linked Lahore with Agra, the city of Humayun's father, Dinpanah, already existed, and about a thousand and five hundred meters further south stood the Sunnite shrine built around the highly venerated tomb of Nizam al-Din Awliya. The grandiose, huge garden-tomb oriented with the cardinal axes stands strategically at the side of the Mathura Road. Akbar expected that the future city would conform to the massive construction of red sandstone and white marble (start of work 1555), whose great mass–forty-five meters high and equally long–is emphasized by its tall base.[20] But history has decided otherwise. To maintain an adequate proportion, the *chaharbagh*, in the center of which lies Humayun's tomb, expands its size up to a side length of three hundred meters; the nine squares of the basic compositional scheme[21] –subdivided by four repetitively, crossed by the slenderest of canals with negligible quantities of water, barely more than lines inscribed on the flooring, surrounded by paved avenues at a slightly raised level–are the ghost image of the future city.[22]

In the north of India conquered by the Mughals after 1526, creating a place fit for the rulers accustomed by their culture to irregular travels meant building privileged and exclusive urbanized nuclei. Instinctively, the "materials of design" were drawn from the garden and from its paraphernalia. Thus the founder of the dynasty, Babur (1526-1530) strove to provide the territory with equidistant points of sojourn and recreation at Dholpur, Agra, Fatehpur Sikri and even at Sheikhupura, close by the site of the battle of Panipat: gardens connected by a weft of road and hydraulic infrastructures which his successors ceaselessly added to and strengthened, with their gaze on the impossible model of a single great garden as large as the whole Empire[23] (Fig. 6).

Babur did not love the torrid climate of India: "One of the main defects of India being the scarcity of water courses, I decided that wherever I might

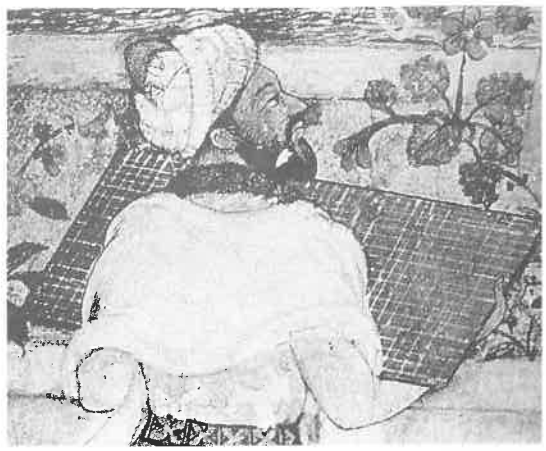


Fig. 6: Detail of a miniature of the Baburname. The architect holds a grid used as a basis for any plan. (Victoria and Albert Museum, London).

establish my residence I would construct waterwheels to create artificial water courses and to lay gardens of elegant, regular design. Arriving in Agra, I crossed the Yamuna with this idea in my mind and I inspected the surroundings in search of ideal terrain for a garden. These sites were all ugly and we traversed them with disgust and repulsion. But lacking any better I made a virtue of necessity and started on constructing a *chaharbagh Baburnama*". Therefore, neglecting the preceding Indo-Muslim city on the right bank of the river, Babur left his strong mark on the opposite bank, a pattern of gardens stretching for more than a kilometer, in which the idea of "monumentality" and "representation" of the new order was entrusted to the high, continuous stone plinth along by the river. "Khalifa, Shaykh Zayn, Yunis Ali and several others, having found sites on the river bank, started constructing elegant, regular gardens and pools and wheels in the manner of Lahore and Dholpur, with which the necessary water was obtained. The peoples of India, who had never seen anything of the sort designed in greater style, gave the name Kabul to that side of the Yamuna".[24] A project strengthened by his successors with the Red Fort and the world-famous Taj Mahal and the serried gardens along both banks of the Yamuna[25], outstanding among which is the rigorous design of the garden-tomb of I'timad-al Dawla (Fig. 7 and 8).

Starting from the latter half of the 16th century, the Mughal "delights" became more and more consolidated in marble and sandstone palaces, which retained the mathematical order of rhythms and ratios of the garden, the forms of pavilions, tents and *baradari*, the hierarchy in the arrangement of the enclosures and, despite the reduction of the plant population, all the furniture: fountains, basins, little canals and *chadar*. The palaces, having been turned

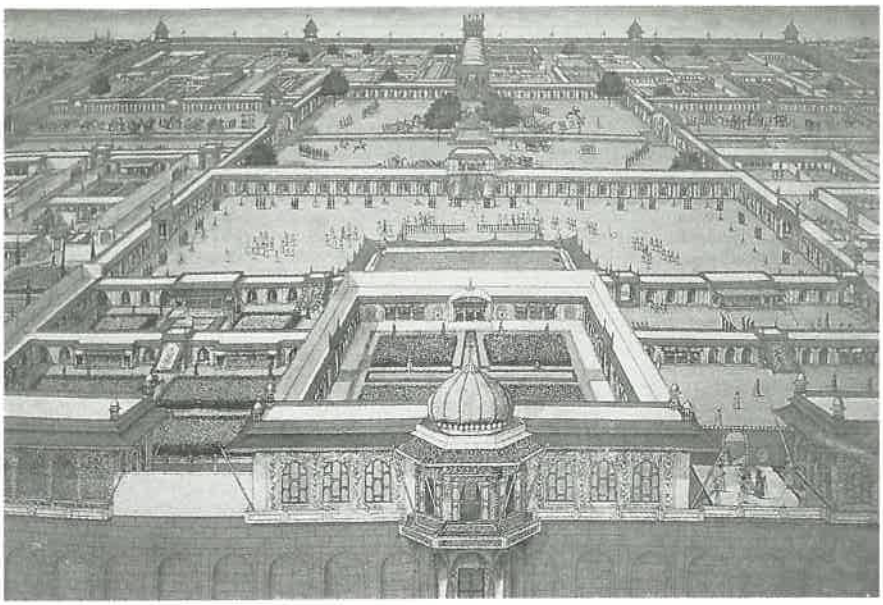


Fig. 7: The Red Fort at Delhi. (Berlin Staatliche Museum).

into the administrative centers of a bureaucratic empire, grew out of all proportion so as to house services, ministries and the increasingly more complex activities of representation.

But it is only in the Valley of Kashmir that the Mughal dynasty reached the goal of integrating the design of the garden into a larger territorial structure. The following pages are not intended to be yet another description of Mughal gardens in Kashmir, on which an extensive literature already exists, albeit based on the original work by Villiers-Stuart.[26] Rather, the intention is to suggest a new perspective (susceptible to further study), based on two principles: 1) in spite of cultural and religious differences in the management of the Srinagar valley reservoir,[27] there is a substantial continuity between the Hindu and Muslim dynasties; the appropriation of the territory takes place through a ritual refounding which goes through a process of resacralization of the place.

Including the surrounding mountains, the Vale of Kashmir is about 170 km long and 60 km wide, with an approximately oval shape. It has always corresponded to the basin of the River Vitasta, today the Jhelum. The region owes its political and linguistic unity to its isolation, due to its peculiar geographical position: a fertile plain surrounded by a chain of very high mountains, dominated by Mount Mahades, and large enough to support a kingdom and nourish an advanced civilization. A height of 1500 metres above sea level and its particular position create a climate protected against the torrid heat of India and the freezing chill of the Himalayan regions. An isolated world, that has enabled a conservative society to safeguard its original features, in spite of the various political changes and religious conversion.[28]

Srinagar, the capital, occupies the heart of the valley in a magnificent position along the course of the Jhelum, in the centre of lively trading of wares transported by boat, and with a broad, fertile hinter-

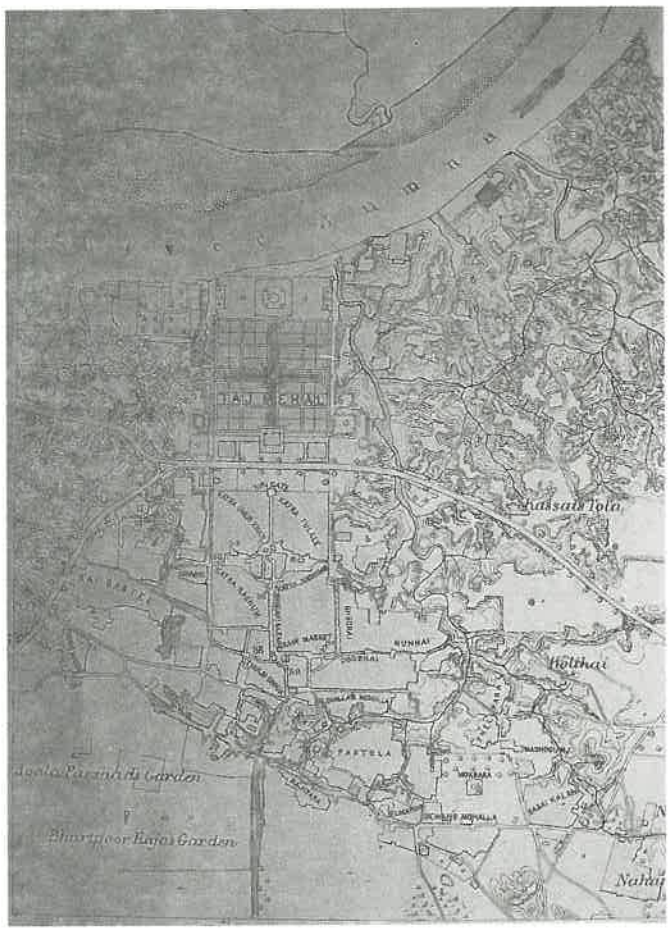


Fig. 8: Agra in the XIXth century from a British map. Detail of the Taj Mahal area.



Fig. 9: A view of the Haraparbat.

land in Lakes Dal and Anchar.

The canvas plan kept in the City Palace Museum in Jaipur[29] evidences the structure of the city, incised by numerous canals; as opposed to a slender collar of *terra firma* on which rises the hill of Haraparbat[30] (Fig. 9), the city is protected on three sides by the waters of the river, by the marshes where Lake Anchar expands to the west and by the shores of Lake Dal to the east. Down below we read the knee-shaped Tsunth Kul or Mar, the canal that links the river to Lake Dal, protected by a continuous dyke *(setu)*. Beyond the canal we find, in succession, the districts of Bardimar, Balandimar and Khandabavan where the ancient Skandabavana *vihara* (Hindu or Buddhist monastery) used to stand, and where today rises the *ziarat* (Islamic sanctuary) of Pir Muhammad Basur. Ancient ruins of the monastery were venerated until the 19th century as a *tirtha* (sacred spring). The confluence of the Mar with the river, too, level with the Shergarhi Palace, has always been a *tirtha* by the name of Marisamgana, used for funeral ceremonies. On the left bank, a canal starts towards the district of Khatul, and reaches the river after the last bridge, enabling boats to shorten the route. Further west, the city is protected by the Dudhganga, which flows down from the Pir Pantsal chain and makes a confluence with the Jhelum, which Hindus hold sacred. On the right bank in the centre of the built area, we read the quadrangular form of the *Jami Masjid*, the congregational mosque around which numerous ancient remains bear witness to the earlier existence of Hindu temples (Fig. 10). It is clear, from this bird's eye description,[31] that to Hindu eyes Srinagar is a *ksetra*, a complex hierarchical system of

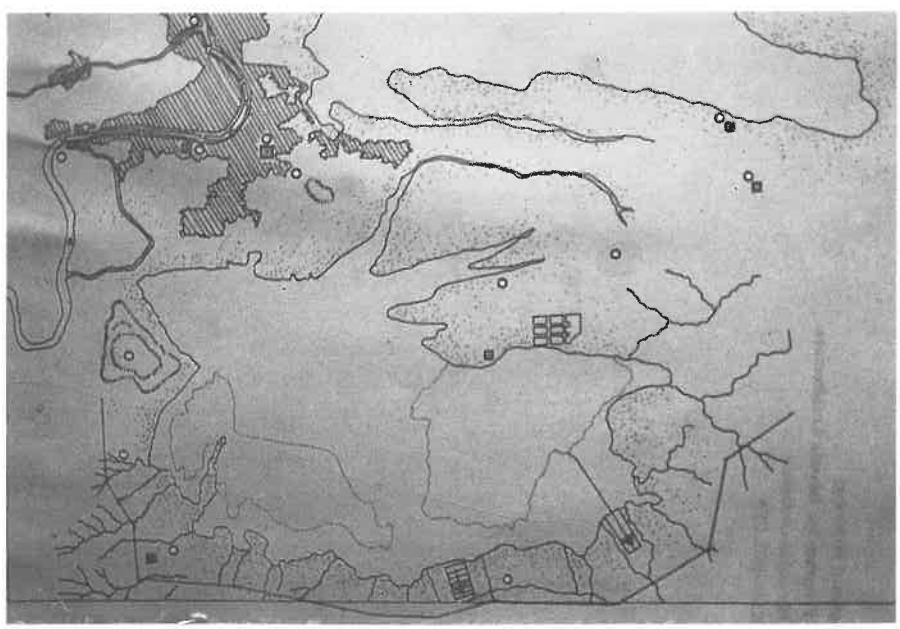


Fig. 10: Reconstruction of the "Ksetra" of Srinagar. The square indicates Muslim ziyarats and the circle Hindu tirthas.

holy places, linked by pilgrimage circuits (yatra).[32]

The whole Indian subcontinent is structured by similar privileged spaces, which form an ensemble, where the practice of the ritual movement generates a hierarchy of pilgrimages, linked with a hierarchy of places. India is covered by this mesh of places and roads, in its turn divided into subsystems. Starting from the largest scale, which marks the four corners of the continent, and going down to the single cities, these are divided into zones, structured by complex configurations, governed by symmetrical references and by ritual movement, which reflect the beginning of the largest scale. These hierarchical systems become the more elaborate, the smaller the area covered and the more the non-spatial, social and ideological factors become prevalent. A mental construction that could be depicted as a series of small concentric rings. The smallest ring, the city - and Srinagar is no exception - is located in such a way that the topographic landmarks all around it suggest and strengthen the sacrality of the place.

We now have to identify the sacred area[33] of largest scale around Srinagar, or rather those significant points that define its *limes*.

To the south the most important topographic element is the Takht-i-Sulaiman, with the remains of an ancient Hindu temple atop its pyramidal shape, probably connected with the cult of Siva - Jyesthesvara. A *linga* known by the same name is today venerated at the spring of Jyether less than 2 km to the east at the foot of the hill.[34] Going eastwards we reach the village of Thid, amid vegetable gardens and vineyards: this is the Theda quoted in the Rajatarangini. Abu'l Fazl describes it as an enchanting spot "where seven springs meet; around sand stone buildings, reminders of bygone days".[35] Further on, the little conurbanation of Bran can be identified as the ancient Bhinadevi. The *thirta* has disappeared, but may be placed alongside the spring at Dampor, where later a Moslem shrine was established.

Great fame and importance attached to the village of Isabar, situated beside the Mughal garden of Nishat; sacred to Durga, it has numerous places of pilgrimage along the cliffs, which sweep down to the lake.[36] Passing the garden of Shalamar, we reach the village and spring of Ranyil, in the Sind plain; and Zukur is also situated among the branches of the river north of Lake Dal. Shrines and tombs in the village are probably made with remains of an ancient *vihara*. Further on in the village of Amburher, the *ziarat* of Farrukhzad Sahib covers an old temple of Siva. Three km lower down towards Srinagar is the large village of Vicar Nag, in the midst of walnut plantations; here the image of a sacred snake (naga) is the goal for a popular pilgrimage in the month of Caitra. To the west of the village the ruins of three Hindu temples stand, today transformed into *ziarat* and tombs.[37]

Situated on a deep inlet of Lake Dal is the village of Sudarabal, where the Sodara spring was located formerly. Beside the village mosque there are two basins fed by perennial springs. A few hundred metres further west, the Moslem shrine of Hazrat Bal, the most popular one in Kashmir, where a hair from the beard of the Prophet is religiously preserved, is built on a previous garden, probably of Moslem era, as pointed out by Villiers Stuart.[38]

Joining up all the points we obtain a broken line, the *limes* of this sacred space, which surprisingly does not follow the crest of the hills, overlooking the Jhelum valley, but marks the edge of the cultivated lands, separating the artificial world of the vegetable gardens, the vineyards, the floating gardens of lake Dal and the canals, from the swamps and the forests. It is after all not by chance that in Brahman images the *ksetra* is always represented as an enclosed garden!

The line contains a mainly aquatic world: "The Gods approach the places, which contain water and gardens", says the Bhavisya Purana (I.CXXX,10). We cannot know whether in a pre-Islamic age there were formally laid-out gardens or simple parks by the springs, but it can be sensed: "The Gods reside close to the forests, rivers and mountains, streams and in the cities which are full of gardens", states the same sacred text (I.CXXX,15). In the Kadambari of Banabhatt (7th century A.D.) we find a description of a garden-palace and of plants for raising and conveying water, and of canals and pools for bathing. Kalhana in the Rajatarangini mentions a garden founded by King Jaysingh in 1150 in Kashmir (VII, 3360).

We are thus entitled to imagine along the boundary a continuous range of gardens of varied layout, at times merging with the pattern of productive gardens, floating on the lake.[39] A total synthesis of water and crops, a worthy response of a civilization, which as opposed to the Moslem world, has not established a dialectic or opposed relationship with Nature, but one of total devotion and belonging.

But the preceding reconstruction brings to light

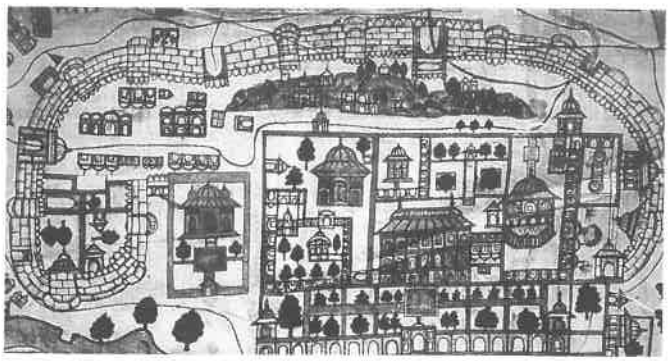


Fig. 11: The gardens of the Haraparbat in the XVIIIth century. (Miniature on cloth at the Maharaja Jai Singh II Museum, Jaipur).



Fig. 12: The source of the river Bihat at Vernag.

another interesting fact: the coincidence of the topography of Hindu and Moslem holy places. Lacking any confirmation that comes from a thorough work on the sources, we may envisage that initially the appropriation of the territory of the Islamic dynasties from Shams-ud-din to Akbar took place by the mere substitution and reconsecration of the venerated springs. Continuity, for that matter, is borne out by the place names, with their unmistakable Sanskrit origins.[40]

Akbar, the Great Mughal, went only three times to the valley, after Kashmir was added to the crown possessions. He built his palace in the fort of Haraparbat–the walls and two gates at the foot of the hill still exist–and inserted a small garden, today no more. The other garden attributed to Akbar, Nasim Bagh, is now a wood of plane trees, planted in straight rows by his nephew Shahjahan, and facing onto lake Dal. Of the original plantation there remain some relics of terraces along the lake, while of the hydraulic plants, an indispensable element for any Mughal garden, no trace remains (Fig. 11).

The real architect of the remodelling of the valley was indeed his son Jahangir, who, gifted with scientific curiosity and talent as a naturalist, created a symbiotic relationship between place and architect. First of all he tackled his father's garden: "In the palace there was a small garden, with a pavilion in which my revered father used to sit. It appeared to me in disorder and ruins... I ordered Mu'tamid K., a faithful servant, who knows my temperament, to make every effort to clear up the garden and remake the pavilion. Within a short time, thanks to his assiduity, it took on fresh beauty. He made a square terrace in the garden, its sides measuring 32 gaz (about 25 metres), divided into three areas, and after repairing the building, he decorated it with paintings. I call this garden Nur-afza".[41] The palace with its gardens, in its state prior to being destroyed by the Afghan dynasties, is shown in detail in the plan of Jaipur.

The source of the River Bihat, known as Virnag, is at the entrance to the valley after Banihal pass (Fig. 12). It is a remote place, surrounded by pine forests, where a spring, dedicated to a *naga* since time immemorial, issues from a deep pool of water. The king's plan was merely that of giving a geometrical shape to the natural element: a light blue, octagonal tank[42], surrounded by a continuous portico, permitting only views of the mountain, over which the profile of the sky is delineated, borders the pool of limpid water, in which shoals of carp swim. From the tank runs a rivulet which, flowing over a lawn as smooth as a billiard table, empties into a torrent full of trout. The essential thing pertains to the great designers: vis-a-vis the lush, impending nature, in any case always bound to prevail, Jahangir opposes the abstract composition of a node, a line, a surface. At Achabal, a perennial spring gushes out from the base of the hill. Here the wholly new problem is posed of putting an impetus of nature, violently bursting upwards, into order; anyone who has seen a torrential stream in Kashmir when the snow melts, knows what this means. The earlier generations of Mughal gardens were always modelled on the canonical pattern of the *chahar bagh*, with its theoretically infinite reiterative divisions, both in the garden-tomb version (Humayun's Mausoleum in Delhi and Akbar's Mausoleum at Sikandra), and that of the garden of delights (Akbar's gardens at Fatehpur Sikri) where the water, almost still and anyway in a minimum quantity, flows along narrow little channels, often no wider than a shoe. Here the memory of the rivers and mountains of Afghanistan

is evoked through the illusion of the metaphor. There were some attempts to speed up the movement of water, introducing a privileged symmetrical axis along terraces at progressively different heights, but at the price of tremendous efforts! We know that Babur in his garden at Dholpur had to build an artificial hill for the purpose.

Jahangir's proposal at Achabal once more is not grandiose. Monumentality is not achieved by the heroic scale, but by mastering the force of the natural elements: the theme is that of a bed of stone, the regular banks of which restrain a water course. The great masses of water flow into the rectangular tanks and then hurl onto the inclined levels of the *chadar*, where the *mahipusht* pattern imitates the reflections of the splashes. Descending downstream the canal narrows, as if to accentuate the pressure by reducing the section, and finally flows into the torrent below. All the rest is of secondary importance: the lateral branches of the *chahar bagh* having no further reason to exist compared to the symmetrical main bed, disappear from the composition.

But it is above all in the basin around Srinagar that Jahangir and his son Shahjahan, imitated by the dignitaries of the empire, strove to transform the territory to reflect their image.[43] On the monumental complexes their sizes were limited to their duty as Grand Protectors of Islam, preferring instead to dedicate more assiduous construction activity to the gardens. All this fervour, according to the sources, produced no fewer than seven hundred gardens in the valley. In the "sacred enclosure" of Srinagar a systematic design activity was carried out that can only superficially be interpreted as an attempt at secularization. Gardens and parks are regarded as "services" only in the West since the Enlightenment period. On the contrary, it is an organic attempt to create a third branch of the sacred, with the figure of the king as the protagonist.

A well-known article by Begley[44] on the Taj Mahal has shown that the emblems of power were the everyday obsession of the Mughals, and that the equation between architectural forms and celestial prototypes, always viewed in terms of the celebration of the deified image of the king, was the real spur for any architectural enterprise. What could not be stated by the orthodox Moslem, vicar of Allah, was left to the metaphor of stone. Playing continually on the ambiguity between Divine Throne and royal throne, an unbridled vanity, urged on by an adulatory court poetry, transformed tombs and monuments into symbols of glory and called for the laying out of gardens, replicas of the Koranic Paradise, to exalt the figure of the (holy) demiurge. "The garden is the place of illusions", says Pierre Grimal, "where the king is adulated and where the (wholly imaginary) evidence of his power has accumulated".[45]

Another original aspect was the great mobility of the whole court, which certainly had its origin in the distant nomadic tradition of the Turkish *chagatai*, but was dictated also by the need for a spreadout presence of the royal image throughout the country, in order to control people's consciences and intimidate rebels. During the summer stays in Kashmir this tradition manifested itself in the coming and going of flotillas of *sikara* (local gondolas), taking the king on a pilgrimage from palace to gardens; in naturalistic explorations: "In those two or three days I frequently went aboard boats and it was pleasant to go around admiring the flowers of Phak or of Shalamar",[46] and on more distant expeditions up secondary branches of the Jhelum. An analogous form of *tirthayatra*. In the gardens the springs are harnessed and the water flows under the king's throne *(chabutra)*, "a distillate of the emanation of the Divine Being, a ray of sunshine illuminating the Universe, the subject of the book of perfection, the repository of all the virtues";[47] the *tirtha* has been rededicated.

Shalamar Bagh lies on the eastern shore of Lake Dal, on both sides of a narrow gorge, over which the mountains rise sheer.

The site is squeezed between the mountains and a lagoon, which mediates its relations with the lake. An access canal is cut through it, a kilometre and a half long, used in the past by the royal fleet. The land slopes gently down and the modest terraces are camouflaged in the background landscape. Shalamar is a garden that has to be discovered step by step, one enclosure after the other. It is a royal garden *(Padshahi Bagh)*. Typologically it refers to a scheme, which aligns in sequence the public *(diwan-i Amm)*, the semipublic *(diwan-i Khass)*, reserved for the king and his court intimates, and the private *(harem)* sectors. It is repeated in all the palaces, but has a clear origin in the model of the Timurid encampment, not only in the distribution of the spaces, but also in the architecture and in the nomenclature taken from the tents. The Mughal palace is defined as a "stone camp".[48]

Similarly, in Shalamar, the first terrace behind the entrance marked out by Jahangir in 1619, dominated

by a *talar*, a pavilion to provide shelter for the throne, was the place for holding the *darbar*, audiences, the representation of the king's divine origin, where with clear theatrical instinct, etiquette established a precise role for all. "When the king sits on the throne, all those present shall prostrate themselves and then remain standing in the place assigned on the basis of rank, their arms crossed, receiving the light from the Divine Countenance... The firstborn prince shall be at a distance of one to four *gaz* from the throne... The secondborn ... sits at a distance of three to twelve...".[49] The *diwan-i-amm* was moreover especially decorated for the purpose and illuminated for the king's solar and lunar birthdays, during the religious festivals of *Eid*, *Dusahra* and *Diwali*, and to celebrate military victories; on these occasions the scenic venue was expanded to the extent of taking in the whole lake.

The second and third terraces are two classical *chahar baghs* completed by Shahjahan after 1630. One is the private garden: once more the king sits in the centre of a square basin of water, whose corners are marked by four monumental plane trees, in accordance with a widespread custom in Kashmir. The other is the *chahar bagh* of the *zenana* with the magnificent Black Pavilion. The torrent diverted into the garden is a broad canal measuring six metres across, flowing majestically in the shade of plane trees (*chinar:* Platanus orientalis). All this struck the imagination of François Bernier in 1665: "Here starts a magnificent canal, which runs with short rises to the end of the garden. This canal is paved with stone and in the middle there is a long line of water jets, one every fifteen feet...".[50] The effect sought is that of a continuous sheet of water, falling from one terrace to the next, then dropping into low tanks, surmounted by pavilions as palafittes, placed in alternation in the centre or in pairs at the sides.

Shalamar's three enclosures are the right physical support for everyday life at court, based on a very rigid ritual, but extremely flexible in its use of spaces. The single quadrants were in Jahangir's day planted with fruit trees in rigorous geometrical order, whereas today the free composition of colonial taste prevails.

Nishat Bagh fronts onto Lake Dal and is in direct relationship with it - access to it through a passage under a bridge, from a loop of the clearest water. Although a modern road has destroyed the lower level and reduced the surprise effect of the approach, the series of steps, the secular plane trees and the silhouette of the hills together in one and the same image, are designed in order to be reflected in the stretch of water in front. The very accentuated changes in height, marked in the centre by *chadar*, *chabutra*, steps and decorations, the majestic *chinar* trees along the central avenue seek a monumental effect, which is not produced in the other gardens. Based more on the presence of spaces of equal size and pavilions at human scale, where the monumental spirit lies in the counterpoint between plant ranking and the nodality of stone, rather than in the heroic dimension of the components. The design theme is that of the endless extension, a Baroque principle; the terraces, twelve in number as the signs of the Zodiac, merge into a single flight of steps. It was intended as a metaphor of that pilgrimage in stages, which the sovereigns and their suite followed every year to escape from the torrid heat of Lahore. But according to a shrewd scenography, repeated in the coeval Taj Mahal in Agra, the circuit stops abruptly up against the wall of the *zenana*, *six* metres in height, built with large niches and ending in two slender little towers of octagonal layout. The visual axis and the circuit axis are differentiated: the latter rotated at 90° is downgraded.

The Chasma Shahi Bagh, or Garden of the Royal Spring, established by Shahjahan in 1632, has been reorganized to a great extent, and its character has been partly altered. The garden is a rectangle divided into three terraces: the spring is protected by an *aiwan* type pavilion, open towards the lake panorama. The thin stream of water, after feeding a tank on each terrace, dropped at the end with a surprise effect onto the last one, passing through a Kashmiri style pavilion. A misinterpreted concept of historicist restoration led to the demolition, not many years ago, of all subsequent structures: thus together with the pavilion of Chasma Shahi, the *baradari* of the entrance to Nishat Bagh also suddenly disappeared!

The study of Hindu religious topography is a research theme of great evocative interest, indispensable to understand the successive attitudes of the Mughals towards nature and the landscape. Of the many points I have neglected, I will take up just one: in the closed world of the Hindu *ksetra*, analogical vision is of extreme importance: the form of the spaces and the arrangement of the significant objects in space or the circuits from one object to another, refer "by analogy" to a *ksetra* at a larger scale and/or to a cosmological construction, which has no real existence. Now, something very similar is present in the imagination of the Mughals: Babur's

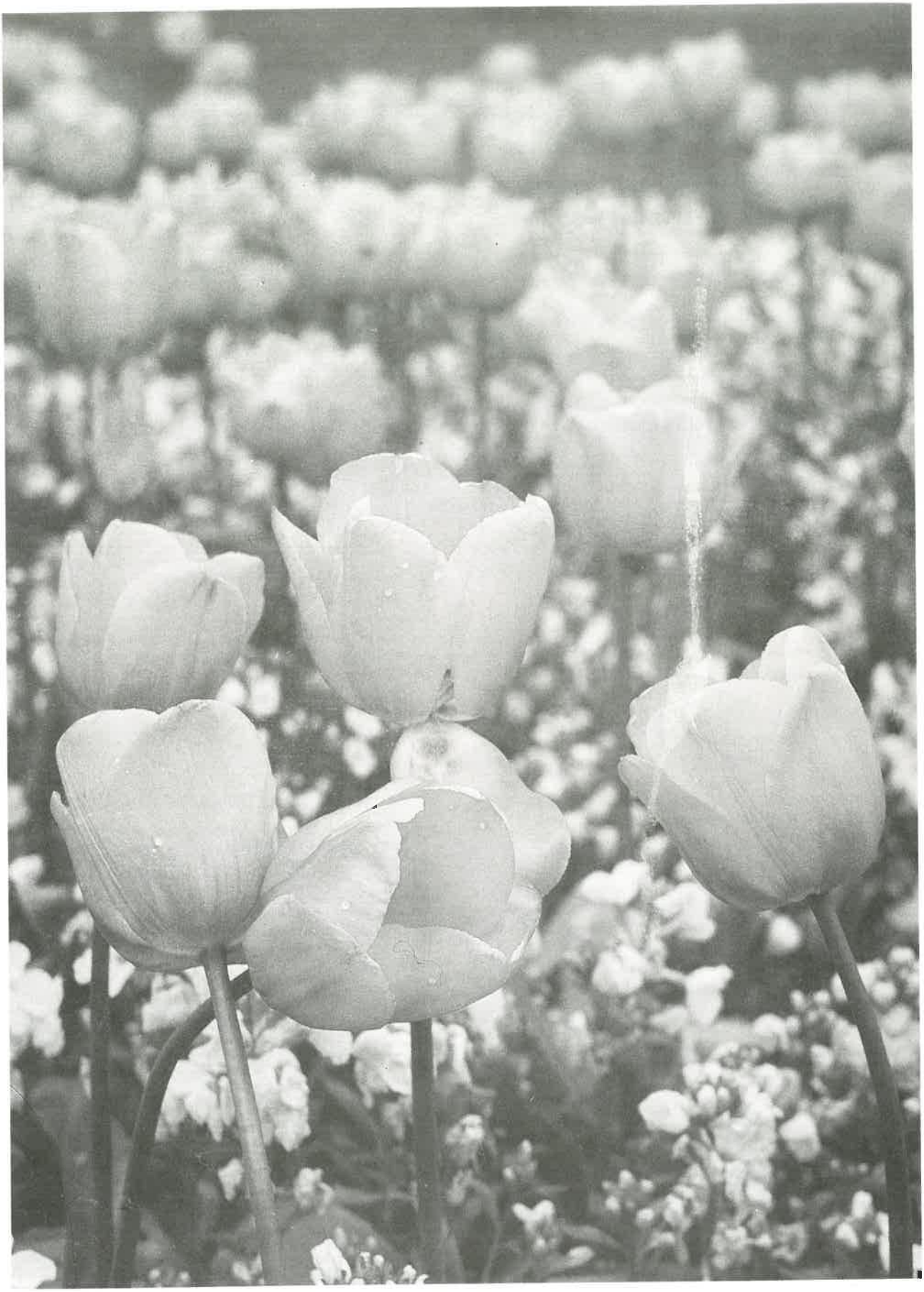
memoirs recall with nostalgia the meadows of Samarkand, never sublimated in the gardens of Agra and Dholpur; Akbar's architectural forms at Fathpur Sikri may also be read as an oneiric attempt to renew a link with the "home" never known. To the Mughals, Kashmir represents, with its landscapes, its climate and its rushing waters (but docile to harness), the end of the pilgrimage, a return to the family home, paradise regained.

NOTES

1. See L. Kehren, *La route de Samarkand au temps de Tamerlan*, trans. by R. Gonzales De Clavijo, Relation de voyage de l'ambassade de Castille à la cour de Timur Begh, 1403–1406, Paris, Imprimerie Nationale, 1990, p. 256.
2. See M. Bonine, "The Morphogenesis of Iranian Cities", in *"Annals of the Association of American Geographers"*, LXII, 9, 1979.
3. See A. Petruccioli, *Dar Al Islam, Architetture del territorio nei paesi islamici*, Rome, Carucci, 1985, in particular the chapter Ambiente, acqua, agricoltura, pp. 61 et seq.
4. For a full treatment of the hydraulic systems in Saharan oases, see P. Laureano, *Sahara. Giardino Sconosciuto*, Florence, Giunti, 1988.
5. On Samarra, see J. M. Rogers, "Samarra. A Study in Medieval Townplanning", in *The Islamic City*, ed. A. H. Hourani & S. M. Stern, London, Cassirer, 1970 and T. al-Janabi, "Islamic Archaeology in Iraq: Recent Excavations at Samarra", in *World Archaeology*, XIV, 1983, pp. 305–327.
6. On Baghdad, see J. Lassner, "The Caliph's Personal Domain. The City Plan of Baghdad Reexamined", in *The Islamic City*, op.cit., pp. 103–118.
7. See for all K. A. C. Creswell, *L'architettura islamica delle origini*, Milan, Il Saggiatore, 1958 (plan and reconstruction details of the city on pp. 183 et seq.).
8. See P. Cuneo, *Storia dell'Urbanistica. Il mondo islamico*, Bari, Laterza, 1986, p. 283.
9. Literature on the Alhambra gardens is wide ranging. We will here just cite F. Prieto Moreno, *Los jardines de Granada*, Madrid, Patronado Nacional de Museos, 1983, a complete but descriptive work; for a critical reading of the architecture, see O. Grabar, *Die Alhambra*, Cologne, Dumont, 1981.
10. See O. Grabar, *The Formation of Islamic Art*, New Haven, Yale University Press, 1973, pp. 167 et seq.
11. Ibidem, p. 166.
12. On Herat, see H. Gaube, *Iranian Cities*, New York, New York University Press, 1979, pp. 32–55; Brandenburg, *Herat*, Graz, Akademischer Druck Verlag, 1977; R. Samizay, "Herat, Pearl of Khurasan", in *Environmental Design*, 1-2, 1989.
13. See G. Pugacenkova, "Sjakri Syabz pri Timur i Ulug Begh", in *Iran*, 16, 1978, which gives a diagram of the city's quadripartite layout.
14. See A. Petruccioli, " 'Ad quadratum', Notes on Deccani Townplanning", in *Islamic and Indian Regions*, ed. A. L. Dalla Piccola & S-Zingel-Avé Lallemant, Stuttgart, Steiner Verlag, 1991.
15. Detailed treatment of the symbology of the *Charminar* is to be found in my article, "Hyderabad: un'ipotesi di urbanistica deccana", in *Rivista degli Studi Orientali*, LXIV, 2, 1990, pp. 171–193.
16. See J. De Thevenot, *Indian Travels of Thevenot and Careri*, ed. S. Sen, Delhi, National Archives of India, 1949, p. 132.
17. On the *axis mundi*, see M. Olivetti, *Il tempio come simbolo cosmico. La trasformazione dell'orizzonte del sacro nell'erà della tecnica*, Rome, Edizioni Abete, s.d., pp. 17 et seq.
18. J. Pieper, "Hyderabad. A Qur'anic Paradise in Architectural Metaphors"; in *Environmental Design*, 1, 1983, pp. 46–51.
19. Not all the cities of the Deccan are oriented according to the cardinal points: Gulbarga has a deviation of seventeen degrees to the South, on a par with Bidar; Baramati as much as twenty-two degrees; only Indapur and Sholapur are perfectly oriented with the polar axis. The rotation, like the deviation of thirteen degrees at Jaipur, could be explained by the wish to link the foundation of the city with the zodiacal sign of the prince. This hypothesis is by Sten Nilsson, Professor of Art History at Lund University.
20. In the garden-tomb of Akbar at Sikandra the mausoleum is in the center of the *charbagh*, as in the model of Delhi, but the scale is even more grandiose: the garden measures more than six hundred meters in length. The plan is generated by concentric squares: at the intersection of the two axes of symmetry with the sides of the outer square are the monumental portals; at the intersection with the middle one and at the corners there are basins of water, while the innermost quadrilateral is wholly occupied by the ziggurat shaped tomb. The scheme recalls closely the arrangement of the Bagh-i Dilgusha at Samarkand, described by Clavijo. See H.Kehren, *op.cit.*, p. 204.
21. On the tomb of Humayun and on its urbanistic impact, see G. Lowry, "Delhi in the 16th Century", in *Environmental Design*, 1, 1983, pp. 1–17.
22. For a comparative note on types of garden-tomb, see A. Petruccioli, "The Process Evolved by Control System of Urban Design in the Mogul Epoch in India", in *Environmental Design*, 1, 1983, p. 19.
23. The territorial framework was supported by a system of infrastructures that was homogeneous in theory but discontinuous in practice, extended to all the regions of the Empire. The provincial governors vied with each other to endow the network with caravanserai and resting places, dig wells, plant gardens, create shade for the main roads with tall trees, and cross water courses with bold stone bridges. An example of the megalomania of the Moghuls is seen in the *khiyaban*, the great national boulevards. It seems that the idea of creating shady roads, like a continuous oasis for the repose and protection of travellers, a "pergola" at the unusual scale of the whole nation, came to Jahangir; but *khiyaban* existed at Samarkand, Qazvin, Tabriz, etc., albeit at local scale. Royal caravanserai, *padshahi saray*, with a garden in which the court could camp, were situated along all the main routes of the empire. See R. Ch. Kak, "Antiquities of Bhimbar and Rajauri", in *Memoirs of the Archaeological Survey of India*, 14, Calcutta, 1923.
24. The following is cited, of interest for the techniques of establishing gardens: "First the well was dug for the bath; then the ground where the tamarinds (*ambli*) and the octagonal tank are situated was worked. After this came the great tank with its enclosure; then the tank and the *talar* for public audiences facing the outer residence; then the private apartments with their garden and various houses, then the Turkish bath. In this way I made buildings and gardens of considerable regularity. At each corner there were neat flowerbeds, and in each flowerbed roses and narcissi arranged in perfect order". From *Memoirs of Zehir-ed-din Muhammad Babur*, translation by J. Leyden & W. Erskine, London 1826, 1921, vol. II, pp. 257-258.
25. Ibidem, p. 258. The historical question of dating the gardens along the left bank is an open one. Ebba Koch excludes, for example, that the present Ram Bagh is of the Babur period. See E. Koch, "Notes on the Painted and Sculptured Decoration of

Nur Jahan's Pavilions in the Ram Bagh at Agra", in *"Facets of Indian Art"*, ed. R. Skelton, A. Topsfield, S. Strong & R. Crill, London 1986, pp. 51–65. The same conclusion is reached, after a stylistic analysis, for the Zahara Bagh: see E. Koch, "The Zahara Bagh (Bagh-i Jahanara) at Agra", in *Environmental Design*, 2, 1986, pp. 30–37.

26. See Villiers-Stuart, C. M. *Gardens of the Great Mughals*, London, 1913, and also: Crowe, S. and Haywood, S. *The Gardens of Mughul India*, London, 1972; Dunn, T. O. D. "Kashmir and its Moghul Gardens", in *Calcutta Review*, no. 288, p. 148–156, 1917.
27. In Mughal literature, the terms Kashmir and Srinagar mean the same thing, creating no little confusion. Srinagar corresponds to the ancient S'rinagari, which Kalhana mentions in the *Rajatarangini*, as the capital founded by the great Asoka. It was situated to the south of the present site and is commonly identified with the village of Pandrethan. The foundation of the new capital was, according to chronicles, the work of King Pravarasena II, who baptized it Srinagar or Pravarapura. After the Moslem conquest of 1320, it changed its name to Kashmir, finally reacquiring the place name of Sanskrit origin with the advent of the Sikh dynasties in the 19th century. The etymology of Kashmir derives from the Sanskrit Kasmira, which later went into Prakrit as Kasvir, transcribed by Ptolomeo, Alexander the Great's ambassador, as Kaspira.
28. For a geographical description see: Drew, F. *The Jummoo and Kashmir Territories. A Geographical Account*, repr. Graz, Akademische Druck, 1976, chap. VII–X, and Hambliton, W. *A Geographical, Statistical and Historical Description of Hindostan and Adjacent Countries*, repr. Delhi, Oriental Publishers, 1971, p. 504–513.
29. Cat. no. 120 of the museum. It measures 280 x 223 cm. In the centre of the plan is Lake Dal, at the top the city with the fort. Countless gardens of the Mughal era are reproduced, but the author did not transcribe their names. The drawing, stressing the position of the waters, visualizes an aquatic microcosm.
30. Where the demons, according to legend, showed King Pravaresvara the site for the new foundation. At the foot of the hill there is a rock, for long venerated as a physical manifestation of Ganesa, a *svayambhu*. Nearby is the *ziarat* of Baha-uddin Sahib, built with materials recovered from an ancient temple. Not far away is also the *Jami Masjid*.
31. A scientific, but partial, reconstruction of the *tirtha of* Srinagar and surrounds has been attempted by Stein. See Stein, M. A. *Memoir on Maps Illustrating the Ancient Geography of Kashmir*, in "Journal of the Asiatic Society of Bengal" 2, 1899, p. 147 et seq.; Abu'l Fazl'Allami, the biographer of the Mughal emperor Akbar, lists for the whole region forty-five shrines dedicated to Mahadeva, sixty-four to Vishnu, three to Brahma and twenty-two to Durga. In seven hundred localities he notes carved images of snakes, an object of devotion. See Abu'l Fazl'AIlami *The Ain-i Akbari*, translation by H. S. Jarret, repr. Delhi, Oriental Books, 1978, vol. II, p. 352. Two hundred and fifty plans are kept in Srinagar museum, representing *tirtha*, belonging to a manuscript of Pandit Sahibram, who died in 1872.
32. *Tirthayatra* in Sanskrit is a visit to the sacred places by a prescribed itinerary. An interesting parallel could be made with the Katmandu valley, the great majority of whose population is Hindu and Buddhist. According to Gutschow, who made a study of religious festivals in Katmandu and Bhaktapur, processional rites tend to give significance to the spaces they touch. There is stated to be a mutual strengthening of significance between the rite and the place. Conversely, the circumambulatory rite is said to "group together" scattered places in a single concept. See: Gutschow, N. "Functions of Squares in Bhaktapur", in *Ritual Spaces in India: Studies in Architectural Anthropology*, ed. J. Pieper, London, 1980, and ibid "Katmandu. Simbolik einer Stadt in Raum und Zeit", in *Urban Space and Ritual*, ed. N. Gutschow & Th. Sieverts, Darmstadt, 1978. The concept of grouping is sometimes extended to the idea of delimitation of a sacred space, on a par with the *lustrationes* described in the Gubbio tablets. See: Herdick, R. *Stadt und Ritual. Am Beispiel der Newarstadt Kirtipur*, in "Stadt und Ritual", *op.cit.*
33. According to a tradition that also has a basis in the Islamic world: the *Haram* around Mecca; or in the West, the Sacred Hills of Varese, for example.
34. The distance of the *tirtha* from the temple is no greater than that of the temple of Lalitaditya at Martand from the sacred spring, to which it is dedicated. From this it may be inferred that the two structures at Takht-i-Sulaiman are associated with the same cult.
35. See Abu'l Fazl, Ain-i Akbari, *op.cit.*, II, p. 361.
36. The *tirtha* of Isabar is quoted in all Kashmiri texts as exceptionally holy, and sought by pious men before their death. The main attraction of the place is a spring known as Guptagariga, which fills an ancient tank in the centre of the village.
37. For these ruins see: Cole, H. H. *Illustrations of Ancient Buildings in Kashmir*, 1869, p. 31.
38. See Villiers–Stuart, *op. cit.* p. 160.
39. The "floating gardens" of Lake Dal are artificial gardens consisting of a layer of soil and humus on broad waterlily leaves, fixed to the bed by a stake transfixing them like a large pin. Like rafts they can be moved, and are therefore liable to be stolen by neighbours.
40. This is demonstrated by the recurrence of the terms ending in -pur, -mar and *-khot* in village names; *-sar*, *-nambal* and *-nag* in the names of lakes and marshes; and *-kul* and *-khan* in the names of rivers and torrential streams.
41. See *Tuzuk-i Jahangir*, *op. cit.*, II, p. 150.
42. The octagon was always a privileged geometrical figure, continuously adopted in India starting with the Lodi (1450–1526) for tombs, kiosks and isolated buildings in general.
43. See: Jones, D. (ed.) *Lo Specchio del Principe. Mecenatismi paralleli: Medici e Moghul*, Rome, Edizioni dell'Elefante, 1991, and also therein my article entitled: *"La citta come teatro: Note in margine all'urbanistica delle grandi capitali moghul dei secoli XVI e XVII"*, p. 63–75.
44. See: Begley, W. "The Myth of the Taj Mahal and a New Theory of its Symbolic Meaning", in *Art Bulletin*, March 1979, p. 7–37.
45. *See:* Grimal, P. "Jardin des Hommes, Jardin des Rois", in *Traverses*, 5/6, 1976, p. 71-72.
46. See: *Tuzuk-i Jahangiri*, op.cit., II, p. 150.
47. See: Abu'l Fazl, *Akbarnama*, 3 vol., Calcutta, Royal Asiatic Society of Bengal, 1877–86, vol. I, p. 18.
48. *See:* Petruccioli, A. *Fatehpur Sikri. Citta del sole e delle acque*, Rome, Carucci, 1988, p. 20-21.
49. See: Abu'l Fazl, *Akbarnama*, op.cit.
50. See: Bernier, F. *Travels in the Moghul Empire: A.D.* 1656–1672, repr. New Delhi, Chand & Co., 1972.



Tulip flowers.

FLORAL AND GARDEN IMAGERY IN THE POETRY OF ALLAMA IQBAL

ANNEMARIE SCHIMMEL
Bonn University, Germany

In my first book on Pakistan some thirty years ago, I began the chapter on Lahore with the sentence, "From whichever corner you approach Lahore, it is as if you were coming into a big garden." That was my first impression in the spring of 1958 when my *kismet* led me to a city which I had loved long before I knew it. When I was a child, I tried to come to Lahore from Germany, but during the war that was impossible. So Lahore was a kind of earthly paradise for me, and it is quite natural that it should be a city of gardens.

We all know that Babur in his autobiography complained of the lack of gardens in India, remembering the beautiful gardens in his Central Asian home. It was Babur who first laid out a garden in Kallar Kahar in the Salt Range. His descendants followed up, and we should not forget the Mughal ladies, Zebunnisa and others who were very active in garden construction, especially here in the city of Lahore.

When we think that the description of Mountstuart Elphinstone of 1809 of the Wah garden in its sad beauty inspired Thomas Moore's garden scene in "Lala Rukh," then we can imagine that even two hundred years ago these gardens had a very strange and wonderful atmosphere about them. Not to forget Allama Iqbal's description of *Jahangir ka Maqbara in Bang-i Dara* where he speaks of the sad view of Jahangir's tomb near the Ravi, and while everything seems to be decaying and he sees a little boat on the Ravi, he remembers that life may be floating away like a fragile boat, but in reality it is everlasting. It is one of the great poems from the time of 1909 or 1910 in which his new hope for the survival and revival of his people can be felt.

This brings us to a topic I want to address very briefly, namely, what did Allama Iqbal say about flowers and gardens? It would be amazing if he had not used flower imagery in Persian poetry as it had developed from the 11th century onwards, and we should not forget that the first great poet of the city of Lahore that is Masud ibn Saad-i Salman (d. 1131) has a lovely garden poem, the only one extant in Persian at that time, which also described the joys of

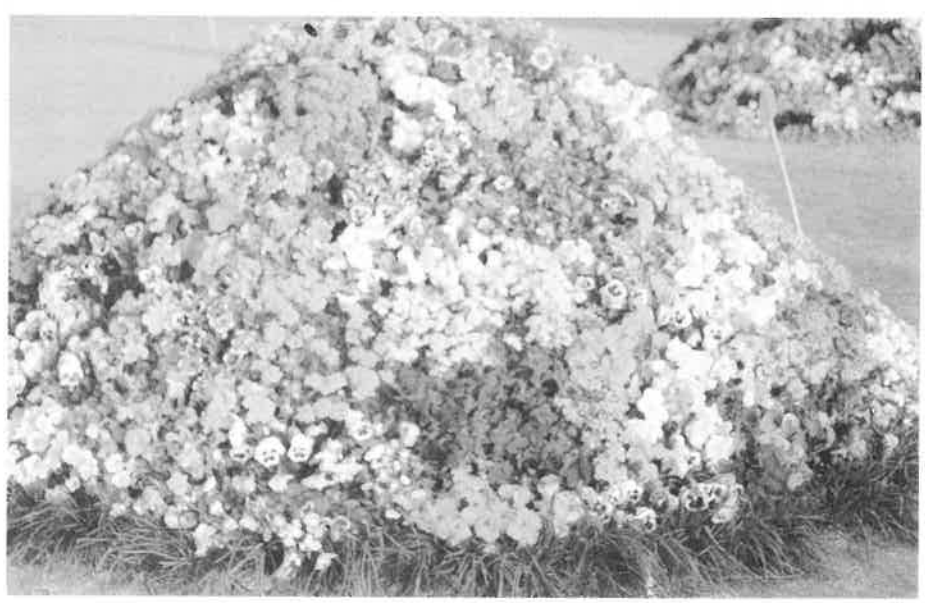


Fig. 1: Flowers in Blossom.

the landscape here (Fig. 1). We should also remember not only the poets of the courts but the rural poets such as Sultan Bahu whose famous *siharfi* in Punjabi has the unforgettable line, "God is a jasmine twig, which the master has planted in my heart." With the constant repetition of the profession of faith, the *dhikr*, this plant grows in the heart until the human being is completely filled with the fragrance of the divine flower.

Iqbal certainly knew these things, but he also knew something else which many poets before him had practiced without showing it perhaps so clearly as he did. It is a remembrance of the *Qur'anic ayah* that God said he would show humankind his *avat* in the world and in their own souls. It is the great art of the Persian, Turkish, Urdu and other poets in the Islamic World that they understood everything to be an *ayah*, a sign of God's greatness.

In the case of Iqbal this became clear to me when I first came to Lahore. I always loved his poems on the firefly, the firefly which in the darkness all of a sudden, shines out of itself and becomes as it were its own light. I always attributed this image to the influence of the idea of the upanishads that the human being who is absolutely perfected does not need any longer moon, sun or stars, but the world becomes radiant through its light. But when I cam to Lahore to the Canal Bank and saw the thousands and millions of fireflies dancing in the dark all of a sudden I knew that here was the real root of Iqbal's image and I understood how he, like the great poets of earlier times, was able to see a sign in everything.

It is natural that the gardens and the flowers belonged to these signs as well. You all know that classical Persian and Urdu poetry is filled with allusions to the rose and its fragrance, and you would expect Iqbal to write a great number of lovely poems on the roses. But it is amazing that in his poetry the rose plays not the same role as it does for Maulana Jalal ud Din Rumi, the *Lale-i Tur*, where he speaks as did Omar Khayyam and Mir Taqi Mir of the flightiness of the rose. The rose complains: The great creator, the great painter, who painted its lovely color– why did he decree that it should wither so soon? (Fig. 2)

Often there are the general allusions to *gul* and *bulbul*, the rose and the nightingale, with a certain emphasis on the nightingale because Iqbal, following Maulana Rumi, knows it is longing that makes someone very expressive. The things the lonely bird says the rose cannot say. The rose is sheer beauty but the bird is a soul that expresses his longing for the eternal beauty–and if this longing were fulfilled the bird would be silent. This is an idea found as I said in Rumi, and also in some other poets, but Iqbal has once more laid his finger on this truth – only by longing the human soul becomes expressive and creative (Fig. 3).



Fig. 2: Rose Flowers.

However, there are two wonderful Persian poems, both in *Peyam-i Mashriq*, *The Message of the East*, Iqbal's answer to *West–Ostlicher Divan*. Two wonderful poems on roses, one a more or less romantic description of the first rose of spring, its appearance, its loveliness, its fragrance. But the second one is, to my feeling, one of the most beautiful poems written in the Islamic world. It tells the story of a hour in paradise who wanted to know what life is, what it is today, tomorrow, and yesterday. "How can I know that in my eternal glory and rest?" So she descended from paradise and became a rose, and then comes the incredibly beautiful line when she withered, the petals fell down and the only thing that remained of the lovely one was her last sign which was called fragrance. The fragrance of the rose



Fig. 3: Rose Flowers.

can be seen as the last sign of a dying *hour* who dies with a smile as the great mystics always said, as does the rose.

The concept of fragrance brings us to Iqbal's other marvelous description of a rose in *Asrar-i Khudi* (Secrets of the self), his earliest Persian work of 1915 where he speaks of the Muslim *umma* and the *umma's* relation to the Prophet. He describes the *umma* again in an unforgettable image as a rose with a hundred petals, a true centifolia. All of the hundred petals form the real rose, but these petals have only *one* fragrance that keeps them together and this fragrance is the spirit of the Prophet. This is a unique image; I have never come across it in classical literature. I think that Iqbal very beautifully alludes here to the necessity of the *umma's* holding together and maintaining the fragrance of the Prophetic spirit. These are the poems in which the rose plays a major role.

But a flower which seems to be much dearer to Iqbal was the tulip, the *lale*, a flower which from the earliest days of Islamic and Persian poetry was connected with the desert, the steppes, because as you know in spring the mountains of Iran and the hills of Afghanistan used to be colored with millions of red, blood red, little tulips, wild tulips. It is this red color and the fact that the tulip lives in the desert which inspired Iqbal time and again. We have also to keep in mind that in classical Persian and Turkish



Fig. 4: Tulip Flowers.

poetry the tulip could be seen on the one hand as someone faithless, with a dark scar on his heart, or as a beautiful young man clad in red silk with his cap away (Fig. 4).

In the Shi'a tradition in Turkey and Iran the tulip is often connected with the shroud of the martyrs. Not only as in Jami and Nizami with the blood of Farhad who kills himself when listening to the wrong news of Shirin's death, but in the Shi'a environment of course particularly with the shrouds of the martyrs of Kerbela, which reappear as it were in the world every spring to remind human beings of the tragedy of Kerbela. I am afraid if Iqbal had to write today a poem upon Kashmir, he would use this image of the tulips, as shrouds.

But in his poetry when he sings of Kashmir it is always the "candles of the tulips", the tulips that illuminate as it were the hills and the meadows, that appear everywhere to show the greatness and the glory of spring as a sign of God. It is this image of the tulip, the fiery one, which is dearest to him because the tulip growing in the desert and the steppe comes out almost from nowhere, and works very hard until it slowly opens its wonderful red goblets. It is this hard work of the solitary tulip that makes Iqbal exclaim that the tulips and he himself are twins. They have the same fate: They have to work hard until they finally unfold into a beautiful red radiant flower.

Speaking of the flower as a radiant and fiery one, it is natural that he should use the tulip very frequently in connection with his favorite prophet of pre-Islamic era, Moses; *Lale-i Tur* is the title of his collection of ruba'iyat in *Peyam-i Mashriq*. It is the tulip that is a sign of the divine presence. Just as God spoke to Moses through the burning bush so he speaks to the modern man through the redness, the fire, of the solitary tulip in the desert. Therefore the tulip becomes Iqbal's favorite flower.

We could compare his use of the tulip motif with the use of the falcon, as well. The falcon is a bird that does not nest like the nightingale in the rose gardens of Shiraz but rather soars higher and higher because there are always new horizons before him. Nevertheless, we should not think that for Iqbal the planted gardens of Shiraz nicely (which he sometimes denigrates in his early work because they seem to be dangerous for him) or the desert, are the absolute ideal.

Rather, I think one of the key poems of Iqbal when we look at his view of nature and humanity is again in the *Peyam-i Mashriq*. It is the famous dialogue between man and God, a dialogue in which God reminds man that he has after all created everything while man has ruined it by using the pure steel to make weapons and by putting borders between the countries instead of letting people go free. But the human being, man, answers to assure his own im-

portance that "God has created the steppes, but man has created the garden".

These seem to be words that really fit our own seminar. Man's most noble work is to create a garden, to transform this world into a replica of paradise. Just as we can create by our efforts, out of this soil, a little paradise, so the roses in this garden will bring with their fragrance the *Nafas ar-Rehman*, the breath of the Merciful, to give us life and hope.

* *This paper was transcribed from the opening address to the International Symposium on Mughal Gardens in Lahore, Pakistan, November 5–10, 1993.*

AFTERWORD

Before concluding this volume we wish to acknowledge those who helped shape and create it. We also offer some brief notes on transliteration and dates (followed by a brief Chronology of Mughal history with an emphasis on Lahore). And we also wish to mention, for readers with further interest, a companion work on Mughal gardens published by Dumbarton Oaks, Washington D.C. U.S.A.

Acknowledgements

Many of those we would like to thank are already authors in this volume. We would like to thank all of the other persons who gave presentations or comments at the symposium, and the very large number who contributed to its success. Participation of scholars invited from India was unfortunately blocked by historical circumstances, so we hope for another opportunity to collaborate with them.

The Mughal Gardens Project benefitted from years of conversation and advice with Dr. Ahmad Nabi Khan, Dr. Rafique Mughal, Dr. Saifur Rehman Dar, and other scholars in Pakistan and Punjab Departments of Archaeology. Prof. Sattar Sikander of the University of Engineering and Technology helped launch the project and encourage its success. Dr. Michael Brand co-directed the project, along with Professor Naeem Mir at the University of Engineering and Technology, Lahore.

Dr. Milo Beach director of the Arthur M. Sackler Gallery first proposed the idea for a garden project in 1984 and has supported it ever since, as has the Smithsonian Foreign Currency program directed by Ms. Francine Berkowitz. American and Pakistani officers in the United States Information Service were crucial in encouraging the project, particularly Helena Finn. The late American ambassador to Pakistan, Arnold Raphael, also supported the gardens project for which we remember him with special gratitude. Officials in the Pakistan Ministry of Culture, notably Mr. Irfan Hussain, offered help, wisdom, and encouragement at every stage.

Business leaders in Lahore, led by F. S. Aijazuddin, generously hosted events at the symposium. Aijazuddin's contribution wove together scholarly, business, and personal interests in the garden arts and culture of Pakistan.

Scores of students from the University of Engineering dedicated their time, energy, and intelligence to documenting the gardens in Lahore and to making the symposium a success. Student team leaders such as Najmus Saqib, Maqsood Malik, Nauman Raza, and Majid Hussain have subsequently gone on to promising architectural, landscape architectural, and archaeological careers.

Chaudhury Muhammad Iqbal and other staff members of the University of Engineering and Technology gave tireless service to facilitate the Mughal Gardens Project, and in Iqbal's case, to numerous typewritten drafts of this book. To all of them, and to the many other interested citizens of Lahore, we give our heartfelt thanks.

Notes on Transliteration and Dates

It is common to indicate the conventions used for transliteration of Arabic, Persian, and Urdu words, as well as dates and references. Rather than use a single system throughout the text, which is often awkward for authors and readers, we simply asked each author to adopt a consistent system of dating and spelling in each chapter. References are more standardized, but not rigid. Because this book aims for a wide audience, we decided to sacrifice some of the scholarly formalities of diacritical marks and standardization for accessibility of the author's ideas and results. A brief chronology of Mughal historical events is included at the end of the book.

Related Research on Mughal Gardens

Each chapter cites literature for those with additional interest in Mughal gardens. However, we want to specifically mention a symposium sponsored by Dumbarton Oaks and the Arthur M. Sackler Gallery in Washington, DC in 1992 that is yielding a separate volume of essays on Mughal Gardens. The two symposia were designed to complement one another. For the readers' interest, we include a list of papers presented at the Dumbarton Oaks, many of which will be published in 1996:

"What a Happiness to Have Known Babur," Elizabeth Moynihan

"The Other World: Memory and Ideology in the Timurid Garden," Thomas Lentz

"Sanskrit Sources for Pre-Mughal Garden Traditions," Allen Thrasher

"Gardens that Babur did not Like: Landscapes and Architecture for the Delhi Sultans," Anthony Welch

"Mughal Gardens in Persian Poetry," Wheeler Thackston

"Plants and Gardens in Mughal Paintings," Ellen Smart

"The Garden of the Taj Mahal," Wayne Begley

"The Shahdara Gardens of Lahore," Michael Brand

"Gardens of Shahjahanabad, Delhi," Stephen Blake

"Gardens, Urbanization, and Urbanism in Mughal Lahore," James L. Wescoat Jr.

"Economic and Social Aspects of Gardens in Mughal India," Irfan Habib

"Recreation Gardens of the Mughals in Pakistan: Problems of Research and Conservation," Ahmed Nabi Khan

"The Historiographic Context of Mughal Gardens," John Richards

Taken with recently edited publications on Islamic gardens by Attilio Petruccioli, with many of the same contributors, these works mark a revival of interest and inquiry in gardens of the Indo-Islamic realm. These works point toward other fruitful lines of investigation and, perhaps more importantly, to some of the practical steps needed to draw upon these traditions of garden design in ways that speak to the needs of present and future generations.

CHRONOLOGY OF MUGHAL LANDSCAPE HISTORY IN LAHORE

1526 Babur captures Lahore.

1527 Mirza Kamran lays out a garden in Lahore.

1527–29 Babur constructed rock-cut Bagh-i-Nilufar 'Lotus Garden' at Dholpur

1530 Babur visits Lahore

Babur leaves Lahore on March 4

Babur dies in Agra on December 21

Humayun ascends throne in Agra on December 28.

1540 Humayun defeated by Sher Shah at Delhi

Mirza Kamran comes out to meet Humayun near the Dawlat Khan sarai near Lahore in June.

Humayun arrives in Lahore in July and takes up residence in garden of Khwaja Dost Munshi, "the most charming spot in Lahore"; Mirza Hindal set up quarters in garden of Khawaja Ghazi and Mirza Askari in house of Amir Wali Beg. According to Gulbadan Begum, Humayun "alighted in Khawaja Ghazi's garden near Bibi Haj-Taj" but she also says a daughter was born to Bibi Gunwar in the garden of Dost Munshi.

Humayun crosses Ravi with Mirza Kamran in flight from Sher Shah on December 1.

1542 Akbar born in Umarkot on October 15

1545 Sher Shah dies.

1554 Humayun sets out from Kabul to reconquer Hindustan in November.

1555 Humayun enters Lahore without opposition on February 23

Humayun re-ascends throne in Delhi in July

1556 Humayun dies in Delhi on January 21

Akbar ascends throne in Kalanaur on February 14

Akbar marches on Punjab from Delhi on December 7

1557 Imperial harem arrives in Lahore.

Akbar arrives in Lahore on August 7 and hunts for a few days before full camp arrives.

Akbar sets off from Lahore to Delhi on December 7

1560 Lahore handed over to Mir Muhammad Khan Kalan in place of Bayram Khan

1566 Akbar sets off from Agra to Punjab on November 17

1567 Akbar reaches Lahore in February

Mir Muhammad Khan re-appointed governor of Punjab and Akbar leaves Lahore for Agra.

1571 Akbar pays homage at tomb of Farid Shakar Ganj while encamped at Pakpattan at the beginning of 16th regnal year.

Akbar sets off from Lahore for Hisar on May 26.

1578 Akbar visits shrine of Farid Shakar Ganj at Pakpattan in February.

Said Khan appointed governor of Punjab in July

1581 Mirza Muhammad Hakim encamps again in garden of Mahdi Qasim Khan near Lahore and besieges the city on February 6.

Mirza Muhammad Hakim flees Lahore on February 27, crossing Ravi one kos above garden of Mahdi Qasim Khan.

1582 Akbar enters Lahore returning from Kabul on October 29.

Akbar leaves Lahore on October 30.

1583 Raja Bhagvant Das appointed governor of Punjab in January.

1586 Akbar reaches Lahore on May 27, having chosen it as his new capital, and selects for his residence the houses of Raja Bhagvant Das.

Lunar weighing ceremony in Lahore on June 12.

Kashmir captured for Akbar by Qasim Khan on October 6.

1589 Akbar leaves Lahore for Kashmir on April 25, spending first night across Ravi in sarai of Madhu Singh.

1590 Akbar returns to Lahore from Kashmir on March 13.

1592 Khawaja Shams ad-Din Khwafi awarded Punjab along with Multan, Kabul and Kashmir under Akbar's administrative reform on February 12.

Akbar arrives in Lahore in June.

Akbar sets off from Lahore for Kashmir on July 4, spending first night in the garden of Ram Das.

1597 Akbar sets off from Lahore for Kashmir on March 30 with Prince Salim, spending first night on the road in Dil-Amiz Garden.

Akbar arrives back in Lahore from Kashmir on November 15.

1598 Akbar sets off from Lahore for Agra on November 6, with intention of making an expedition to the south, Maryam Makani, the other begums, and Prince Khurram left in Lahore. Khawaja

Shams ad-Din left in control of Punjab.

1599 Akbar arrives in Agra in January which replaces Lahore as the capital.

1605 Jahangir ascends throne in Agra on November 2.

1606 Prince Khusrau sets off in rebellion from Agra towards the Punjab on April 6.

Dilawar Khan strengthens Lahore fort in expectation of Khusrau's attack in May.

Khusrau attacks fort and besieges it for nine days in May.

Jahangir takes up residence in Mirza Kamran's garden at Lahore on May 8.

Jahangir leaves Mirza Kamran's garden and enters Lahore fort on May 17.

Maryam Zamani and other ladies of the harem arrive within vicinity of Lahore; Jahangir goes by boat to meet them at village of Dahr before re-entering Lahore fort on August 17.

1607 Jahangir returns to Lahore from hunting on February 15.

Jahangir leaves Lahore fort on April 6, with intention of making a hunting tour to Kabul, spending the first four days in the Dil-Amiz Garden on the other side of the Ravi from Lahore.

Jahangir arrives at Sheikhupura on April 11, "one of my fixed hunting place". Mentions minar he had constructed "in this neighbourhood" in honour of an antelope, and orders a fort to be constructed in the village. This is presumably the time in A.H. 1015 when Jahangir created a new paragana here and renamed it Jahangirabad.

Jahangir halts at Dil-Amiz garden on December 2, "on the bank of the river Ravi" and waits upon his mother.

Jahangir enters Lahore on December 3.

1608 Jahangir sets off from Lahore for Agra on February 6.

1611 Murtaza Khan appointed governor of Punjab.

1913 Tomb of Akbar constructed at Sikandra Agra.

1614-15 Mosque of Maryam Zamani completed.

1616 Murtaza Khan dies in May, replaced as governor of Punjab by Ghiyas Beg "Itimad ad-Daula," father of Nur Jahan.

1620 Shah Jahan takes ten days' leave and rushes to Lahore to see the palace building lately erected on January 10.

Returning from Kashmir on November 9, Jahangir camps at Jahangirabad for two nights

Jahangir marches to the garden of Mumin Ishaqbaz on November 11, which is on the bank of the Lahore River (i.e. the Ravi) and sets up camp there.

1621 Shalamar Gardens, Kashmir Founded.

Jahangir sets off from Lahore for Agra on December 3.

Jahangir sets off from Srinagar for Lahore on August 22.

Ram Bagh (Bagh-i Nur Afshan) Agra, completed.

1625. Returning from Kabul, Jahangir halts in Lahore

Asaf Khan orders construction of new palace for himself, which will take ten years to complete.

1626–28 Tomb of Itimad Al-Daula constructed at Agra.

1627 Jahangir dies at Rajauri in Kashmir on November 8,.

Funeral ceremonies performed at Bhimbar on November 9, then Jahangir's corpse is sent to Lahore.

1628 Shah Jahan ascends throne in Agra on February 4.

Asaf Khan temporarily reappointed as governor of Punjab.

1631-32 Inscription on Hathi Pol at Lahore Fort records completion of Shah Burj.

1632 Wazir Khan appointed governor of Punjab on May 21.

1632–43 Construction of Tomb garden of Taj Mahal.

1633 Shah Jahan orders construction of new Ghusal Khana and Khwabgah in Lahore Fort under superintendence of Wazir Khan.

1634 Shah Jahan sets off from Agra for Kashmir in January.

Shah Jahan camps at the tank of Khwaja Hushiyar in environs of Lahore on April 5.

Shah Jahan rides into Lahore on April 6.

Shah Jahan entertained by Asaf Khan on April 20, in his new palaces near Fort, which had taken ten years to complete.

Shah Jahan orders repair and reconstruction of Lahore Fort while he proceeds to Kashmir. General supervision entrusted to Wazir Khan, with reconstruction of Jahangir's Shah Burj entrusted to Asaf Khan.

Shah Jahan crosses Ravi on his way to Kashmir on April 23.

Shah Jahan arrives in Kashmir on June 5.

Shah Jahan leaves Kashmir in September.

Shah Jahan arrives in Lahore on November 16.

Pavilion in the Centre of Bagh-i Fayz Bakhsh in Shalamar garden Kashmir completed.

1634-35 Wazir Khan's Mosque completed.

1635 Shah Jahan sets off from Lahore for Agra on January 16.

Shah Jahan arrives back in Agra on March 12.

Mian Mir dies in Lahore on August 21.

1635-36 Dai Anga's Mosque completed.

1637 Anguri Bagh and Khas Mahal in Agra fort completed.

1638 Zib an-Nisa born (daughter of Aurangzeb)

Ali Mardan Khan gave Qandahar Fort to the Mughals and enters Shah Jahan's service in February.

Shah Jahan sets off from Agra for first visit to Kabul in August.

1639 Shah Jahan arrives in Kabul on May 18, where he stays for four months.

Shah Jahan arrives in Lahore in September.

Wazir Khan replaced as governor of Punjab by Mu'tamad Khan on September 6.

Ali Mardan Khan proposes to Shah Jahan the construction of a canal to Lahore from the hills

Shah Jahan sets off from Lahore for Kashmir.

1640 Shah Jahan arrives in Kashmir in January.
Shah Jahan sets off from Kashmir for Lahore in October.
Shah Jahan arrives in Lahore in November, where he will stay for next two years.

1641 Foundation of Shalamar Garden was laid out on June 12.
Asaf Khan dies on November 11.

1642 Marriage ceremony of Prince Murad in Lahore in July.
Shah Jahan formally opens Shalamar Garden Lahore in October.
Shah Jahan sets off from camp in new Shalamar Garden for Agra on November 15.

1643 Shah Jahan arrives back in Agra in January.

1645 Shah Jahan sets off from Agra on a three-year trip to the western provinces.
Shah Jahan spends the summer in Kashmir..
Nur Jahan dies in Lahore on December 18.

1646-47 Chauburji completed in A.H. 1056 by "Zibinda Begum" (i.e. eight year-old Zib an-Nisa).

1647 Qazi Afzal appointed governor of Punjab on May 29.
Shah Jahan leaves Kabul in June.
Shah Jahan passes through Lahore on his way back to Agra.

1648 Inauguration ceremony for the new city of Shahjahanabad on April 8.
Shah Jahan sets off from Delhi for Kabul in November.

1649 Shah Jahan in Lahore on January 16.

1650 Shah Jahan arrives back in Delhi from Kabul on January 4.

1651 Prince Dara Shikoh spends three months in Lahore making preparation for an attack on Qandahar.
Shah Jahan sets off from Delhi on his last visit to Kashmir in February
Prince Dara Shikoh leaves Lahore on March 5.
Shah Jahan spends the summer in Kashmir.
Shah Jahan arrives in Lahore in September.

1652 Shah Jahan sets off from Lahore for Kabul on February 16.
Shah Jahan arrives back in Delhi on December 2, where he will remain for the next four years.

1655 Khwaja Mu'im Khan appointed governor of Punjab.
Ghulabi Bagh Complex was built.
Bahadur Khan appointed governor of Punjab.

1656 Sayyid 'Izzat Khan appointed governor of Punjab.

1657 Ali Mardan Khan dies in Kashmir on April 16 and is buried in Lahore.
Shah Jahan seized with illness in Delhi on September 17.
Shah Jahan reaches Agra, on November 26.

1658 Dara Shikoh defeated at Samugarh near Agra on May 29, and flees towards Lahore.
Shah Jahan made prisoner in Agra Fort on June 8.
Dara Shikoh arrives in Lahore Fort on June 8.
Aurangzeb ascends throne in Shalamar Garden in Delhi on July 21.
Dara Shikoh flees towards Multan on August 18.
Aurangzeb sends his son Prince Muhammad A'sam to take charge of Lahore.
Aurangzeb reaches Lahore with his army on October 22 and sets up camp in Shalamar Garden.
Aurangzeb visited by Prince Muhammad A'sam and other nobles from Lahore on October 23. Later he inspects fort with the prince: says prayers in Wazir Khan's Mosque on way back to Shalamar.
Aurangzeb sets off from Lahore for Delhi on October 28.

1659 Aurangzeb's second coronation ceremony begins on June 5 and runs until August 19.

1661 Famine in Lahore in March.

1662 Khalil Khan, governor of Punjab, dies on his way to Delhi on February 21.
Aurangzeb sets off from Delhi on his way to Kashmir via Lahore on December 8.

1663 Aurangzeb arrives in Lahore on February 8 and sets up camp for a week in Shalamar Garden (Fayz Bukhsh).
Aurangzeb sets off from Lahore for Kashmir on May 1, the first encampment being in the Dilkusha Garden on the other side of the Ravi, where a great feast was held.
Aurangzeb arrives back in Lahore on October 6 from first and last trip to Kashmir as emperor and sets up camp for a few days in Dilkusha Garden, where he is met by the governor of Punjab Ibrahim Khan.
Aurangzeb sets up camp at Shalamar Garden on November 19 (Fayz Bakhsh).
Aurangzeb sets off from Lahore for Delhi on November 22.

1666 Shah Jahan dies in Agra on January 22.
Aurangzeb orders Muhammad Amin Khan in December, to prepare Dilkusha Garden in Lahore for arrival of 'Abdullah Khan, deposed ruler of Kashgar.

1673-74 Badshahi Masjid completed.

1674 Aurangzeb sets up at Hasan Abdal on June 26 and stays for one and a half years while directing Afghan War.

1675 Aurangzeb sets off from Hasan Abdal on December 23.

1676 Aurangzeb arrives in Lahore on January 21.
Aurangzeb sets off from Lahore for Delhi on February 24.

1704 Zib an-Nisa dies in Delhi on May 26 and is buried outside Kabuli Gate.

1707 Aurangzeb dies on March 3.

1712 Jahandar Shah ascends throne at Lahore on March 29.
Jahandar Shah sets off from Lahore for Delhi on June 22.

1713 Jahandar Shah executed in Delhi on orders of Farrukh Siyar on February 13.
Farrukh Siyar ascends throne in Delhi, back

dating start of reign to April 8, 1712.

1719 Muhammad Shah ascends throne in Delhi on September 25.

1739 Nadir Shah sets off from Lahore for the conquest of Delhi on February 6.

In wake of Nadir Shah, Sikhs occupy country between Ravi and Beas.

1745 Zakariya Khan dies in Lahore on July 12.

Yahya Khan, son of Zakariya Khan, takes over governorship before being pushed out by his brother Shahnawaz Khan, who had set up his camp near Shalamar Garden.

1747 Ahmad Shah marches on Lahore.

Ahmad Shah defeats Shahnawaz Khan at Lahore; the latter flees to Delhi while the former sacks the "outer portions of the capital, particularly Mughalpura" the rest of the city is spared for a ransom of Rs: 30 lakhs.

1748 Jumla Khan appointed Ahmad Shah's governor of Punjab.

Ahmad Shah defeated on way to Delhi, and Punjab recaptured.

Ahmad Shah ascends the throne in Delhi on April 29.

1754 Mughal emperor Ahmad Shah blinded and deposed.

Alamgir II ascends throne in Delhi on June 2.

Punjab recaptured by Mughals and granted to Adina Beg Khan, formerly governor of Bet Jalandhar under Shahnawaz.

1756-57 Ahmad Shah Durrani returns for the fourth time and drives Adina Beg Khan out of Lahore.

1757 Upon returning from Delhi, Ahmad Shah appointed his son Timur Shah as governor of Lahore and Multan, with Jahan Khan as advisor.

1758 Adina Beg Khan dies in Batala.

1759 Ahmad Shah Durrani launches another attack on India in August, Sama flees Lahore.

Ahmad Shah enters Lahore and appoints Haji Karim Dad Khan as governor.

1761 Sikhs plunder environs of Lahore.

1762 Ahmad Shah marches on India for the seventh time in February.

Ahmad Shah reaches Lahore on March 3 and attacks Sikh forces there and elsewhere.

1763 Ahmad Shah sets off from Lahore for Qandahar, leaving Kabuli Mal as governor.

1764 Sikhs re-establish presence in Lahore.

Ahmad Shah returns to India and drives the Sikhs out of Lahore.

1765 Ahmad Shah returns to Qandahar.

1766 Lahna Singh and Gujjar Singh encamp with 2,000 troops near Baghbanpura while Kabuli Mal is away from Lahore; eventually they capture Lahore Fort for the Sikhs with the help of six residents of Baghbanpura who were employed as gardeners in the Fort. Later they are joined by Sobha Singh.

Troops of the three Sikh chiefs and local zamindars begin to plunder Lahore before the Chief's order the city gates closed.

The three-Sikh Chiefs divide up city, (a) Sobha Singh takes southern part as far as Niazbeg, including Mozang, Kot Abdullah Shah, Ichhra and Chauburji, with his headquarters in Zib an-Nisa's garden which he turns into fort named Nawankot (b) Gujjar Singh takes eastern part from Kabuli Mal's mansion to Shalamar (c) Lahna Singh takes central part of city including the fort.

1767-68 Ahmad Shah marches on Lahore again; Lahna Singh declines his offer of the governorship of Lahore and Dadan Khan is appointed instead.

1768 As soon as Ahmad Shah has returned to Afghanistan the Sikhs return to Lahore; the three-Sikh Chiefs encamp at Shalamar Garden; Dadan Khan is forced to surrender city.

The three-Sikh Chiefs and their sons rule Lahore for almost next 30 years.

1773 Ahmad Shah succeeded by Timur Shah.

1793 Timur Shah succeeded by Shah Zaman.

1799 Shah Zaman "grants" Lahore to Ranjit Singh, which he then captures.

1801 Ranjit Singh holds durbar in Lahore in April, assumes title of "Sarkar" and establishes a mint.



CAD LIBRARY PU LHR
Art&Design
10126